



# City of San Rafael

## BICYCLE/PEDESTRIAN MASTER PLAN

2011 Update



Prepared by

Alta Planning + Design



# City of San Rafael

Adopted by the San Rafael City Council April 4<sup>th</sup>, 2011.

## **San Rafael City Council**

Albert J. Boro, Mayor  
Greg Brockbank, Vice-Mayer  
Damon Connolly, Councilmember  
Barbara Heller, Councilmember  
Marc Levine, Councilmember

## **Bicycle and Pedestrian Advisory Committee (BPAC) Members**

Preston McCoy, Chair  
Tim Gilbert, Vice Chair  
“Rocky” (Noble) Birdsey  
Don Magdanz  
Jane Middleton  
Kate Powers  
Sara Sonnet  
William Curtis

## **San Rafael Department of Public Works**

Nader Mansourian, Director of Public Works  
Kevin McGowan, Assistant Public Works Director  
Leslie Blomquist, Associate Civil Engineer

## **Consultants**

Alta Planning + Design  
Michael G. Jones, Principal-in-Charge  
Eric Anderson, Project Manager  
Matthew Lasky, Planner  
Adrian Leung, Planner

Alta Planning + Design  
1410 Third Street  
San Rafael, California 94901  
(415) 482-8660 phone - (415) 482-8603 fax  
[www.altaplanning.com](http://www.altaplanning.com)

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# Preamble

The San Rafael Bicycle and Pedestrian Master Plan is the product of the collaborative effort between the City of San Rafael Department of Public Works, the San Rafael Bicycle and Pedestrian Advisory Committee (BPAC), consultant Alta Planning + Design and members of the public. The purpose is to integrate proposed bicycle and pedestrian infrastructure improvements into San Rafael's overall transportation plan. The Plan meets the requirements set forth in the California Bicycle-Transportation Act, section 891.2 of the Streets and Highway Code.

Upon adoption of the plan by the San Rafael City Council, each of the policies, programs, and infrastructure improvement projects described herein will be fully reviewed by City staff. The San Rafael Bicycle and Pedestrian Plan is a conceptual document in that the City Council will have ultimate discretion and authority to modify, reject, or implement any of the plan's elements.

# Chapter 1: Introduction

## ***Background***

This updated plan meets the requirements of the California Bicycle-Transportation Act (BTA). Those requirements are contained in the Streets and Highway Code, Section 891.2, which state that “A city or county may prepare a bicycle transportation plan, which shall include, but not be limited to [eleven specific] elements”. The eleven elements, (a) through (k), are addressed in this section of the plan.

## ***Public Involvement***

The San Rafael Bicycle and Pedestrian Advisory Committee (BPAC) was originally established with the purpose of preparing a bicycle and pedestrian plan for the City of San Rafael. Since its formation, the BPAC has continued to meet a minimum of two times per year and on an as-needed basis to address bicycle and pedestrian issues. The BPAC has met ten times in the past four years to discuss updates to the Plan. The BPAC meetings are open to the public and are properly agendized and noticed in compliance with the Brown Act.

In addition to BPAC meetings, public input was received at three countywide public meetings, the Central Marin Countywide Bicycle Master Plan Update Public Workshop (held on Monday, November 13, 2006 at the San Rafael Community Center, San Rafael) and two Nonmotorized Transportation Pilot Program (NTPP) public workshops (held on Thursday, November 29, 2006 at the Embassy Suites Hotel, San Rafael and on Monday, March 12, 2007 at the San Rafael Community Center, San Rafael).

## ***Goal of this Plan***

The ultimate goal of this plan is to provide a guide which will help build the best cohesive and connected bicycle and pedestrian network possible within the City of San Rafael.

## ***Persons Served***

This document addresses the needs of two types of bicycle riders to be served by the proposed system: a) Families, school children and casual riders, and b) More experienced bicycle commuters. Likewise, pedestrians fall into two groups: a) Families with young children, the elderly and disabled persons, and b) vigorous and alert walkers. This plan aims to support the needs of all users, but not always with the same facilities.

## ***Major Routes***

In addition to the numerous local routes described in the document, this plan refers to three main routes that travel through San Rafael and provide connectivity to neighboring cities. These include:

- **North/South Greenway** starts at the Golden Gate Bridge in Sausalito and generally follows the old Northwest Pacific (NWP) Railroad and Sonoma Marin Area Rail Transit (SMART) rights-of-way ultimately ending in Cloverdale in Sonoma County. This alignment is the major off road North/South pedestrian and bicycle facility in Marin County. Several key sections are located in San Rafael.
- **North/South Bikeway** is an on-road and off-road bicycle facility that diverges from the North/South Greenway at the top of Puerto Suello Hill and travels along Los Ranchitos Road and Las Gallinas Avenue through Terra Linda, Marinwood and Novato.
- **Cross Marin Trail** is a proposed bicycle alignment that will ultimately connect San Rafael with San Anselmo, Fairfax and west Marin County ending in Point Reyes.

## ***Relationship to Other Marin County Projects and Plans***

The studies or planning efforts listed below have been reviewed and consulted, studied for consistency, and where appropriate, incorporated into the San Rafael plan update.

### **1. Nonmotorized Transportation Pilot Program (NTPP)**

Marin County is one of four communities nationwide that has been selected by Congress to participate in a Nonmotorized Transportation Pilot Program (NTPP) and receive \$25 million for improvements for walking and bicycling. The purpose of the pilot program is to demonstrate “the extent to which bicycling and walking can carry a significant part of the transportation load, and represent a major portion of the transportation solution, within selected communities.”

The Marin County Department of Public Works, as local administrator of the NTPP, conducted an extensive outreach process in conjunction with this plan update to solicit project and program ideas. Through a screening and ranking process, the Board of Supervisors adopted a funding plan for all of the NTPP funds in April of 2007. The City received funding to design and build bicycle and pedestrian improvements as part of the following projects, which are currently in progress (these critically important projects are included in the detail of this plan, but are also listed here so they may be seen together as one group):

- **Francisco Boulevard East:** Design future bicycle and pedestrian improvements along Francisco Boulevard East between Vivian Street and the Grand Avenue Bridge. This design project was completed in 2010.

- **Puerto Suello Hill Path-Transit Center Connector:** Provide a bicycle and pedestrian connection on Hetherton Street from the terminus of the existing Puerto Suello Hill Multi-Use Path which currently ends at Mission Avenue to the San Rafael Transit Center.
- **Mahon Creek Path-Transit Center Connector:** Provide a bicycle and pedestrian connection between the current terminus of the Mahon Creek path to the Transit Center across Second Street with improved crosswalks and pavement markings through the intersection of Second Street and Tamalpais Avenue.
- **Northgate Gap Closure Bikeway Improvements:** Connection to fill a key gap in the bikeway network near the Northgate Mall Shopping Center. This project was completed in 2010.
- **Terra Linda-North San Rafael Improvements:** Improvements to provide bicycle and pedestrian connectivity from the Terra Linda neighborhood to the Northgate Mall and the Civic Center. This project was completed in 2010.
- **Medway Road/Canal Street Improvements:** Variety of improvements including traffic calming, sidewalk enhancements, development of new and improved bus stops and shared roadway bicycle stencils (sharrow). This project was completed in 2009.
- **East-West Bikeway Feasibility Study (Town of Fairfax Project):** Study of potential locations for bicycle facilities and connections between the Town of Fairfax and the City of San Rafael as part of the Cross Marin Trail. This study was completed in 2010 and the final report produced several ideas (not approved by the City of San Rafael and may not be feasible for implementation at this stage) that may be used as reference for future projects. A copy of this document is included in the Appendix.
- **Miller Creek/Las Gallinas Bike & Pedestrian Corridor Improvement Study:** Studies potential improvements to the bicycle and pedestrian facilities along a portion of the North-South Bikeway network in Marinwood including a Miller Creek Road from the Highway 101 interchange to Las Gallinas Ave., and along Las Gallinas Ave. from Miller Creek Rd. to Cedar Hill Dr. just past Lucas Valley Rd connecting to the City of San Rafael.

In addition, four countywide infrastructure project categories utilized NTPP funding:

- Bicycle parking
- Signing/stripping (Class II bicycle lanes, Class III bicycle routes including signs and stencils)
- Intersection improvements (safety improvements)
- Steps, lanes, paths (stairways, pedestrian pathways and connections)

## **2. Sonoma-Marín Area Rail Transit (SMART) Final Environmental Impact Report (FEIR) (2006)**

The SMART FEIR detailed plans to establish passenger rail service, as well as a bicycle and pedestrian pathway parallel to the rail line, for the seventy mile corridor between Larkspur Landing in Marin County to Cloverdale in Sonoma County. Rail stations were designed to optimize pedestrian and bicycle access, including on-site bicycle parking at all stations and space for staffed bicycle storage and maintenance facilities at the San Rafael and Santa Rosa station sites. With room being designed into rail cars for bicycle storage, passengers would be able take the train and ride their bicycles to work, school, shopping or for recreation.

Because SMART owns the railroad right-of-way from Corte Madera north, all proposals for projects in this plan update, located within the SMART right-of-way, must be coordinated with the SMART FEIR. Within San Rafael there are SMART proposed sections that would be in the railroad right-of-way or parallel to it, from Andersen Drive to Irwin Street, from the top of Puerto Suello Hill to North San Pedro Road, and continuing north to Civic Center Drive, to Smith Ranch Road, and finally to the northern City limits near Saint Vincent's School.

## **3. Marin County Transit District Short-Range Transit Plan (2006)**

The Marin County Transit District Short Range Transit Plan (S RTP) includes a complete assessment of the current Marin County transit system and its riders, as well as an identification of transit needs and alternative ways to meet those needs. In terms of bicycle access to transit, the plan includes a statement that higher capacity bicycle racks are recommended for new buses. This plan also includes bus stop amenity standards, which include the provision of appropriate bicycle storage and/or parking at all high use transit stops with usage of over one hundred passengers per day, including the San Rafael Transit Center.

## **4. Marin County Unincorporated Areas Bicycle and Pedestrian Master Plan Update (2008)**

This plan was completed for the Marin County Department of Public Works in 2001 and updated in 2006 through 2008. The plan outlines improvements to the unincorporated areas of Marin County and includes routes of countywide and regional significance, including the North/South Greenway, the North/South Bikeway, and the Cross Marin Trail, as well as highlighting key improvements from the unincorporated communities of Marin County.

## **5. Local Bicycle and Pedestrian Master Plans**

The following jurisdictions have adopted bicycle or bicycle/pedestrian master plans which are being updated concurrently. Special consideration has been given to locations where countywide and regional facilities cross jurisdictional boundaries in order to coordinate improvements among multiple jurisdictions.

Community	Year of Plan Adoption/Update
Novato	2007
Sausalito	2008
Tiburon	2008
Corte Madera	2008
Fairfax	2008
San Anselmo	2008
San Rafael	2011
Mill Valley	2008
Larkspur	2007
Ross	2010
Unincorporated Marin County	2008

## **6. Cal Park Hill Tunnel Rehabilitation and Pathway (completed)**

This project carries forward one of the key North/South Greenway gap closure projects proposed in the 2001 County of Marin Unincorporated Areas Bicycle and Pedestrian Master Plan (updated in 2008) and provides a key connection for San Rafael residents to the Larkspur Ferry Terminal. The overall cost of the project is estimated at \$24 million, including \$12.4 million for the multimodal bicycle and pedestrian facility and tunnel reconstruction and an additional \$11.6 million for work necessary to accommodate potential rail without disrupting the pathway. All rail-related costs are funded through SMART, the commuter rail agency. The project is fully funded, with the majority of funding coming from Regional Measure 2 funds earmarked to Transportation Authority of Marin (TAM) and SMART. Additional funding is secured through Marin County, State and Federal grants.

## **7. Ranchitos Road Bicycle Lanes (completed)**

The NTPP allocated funds to complete design and construction of this gap closure in an unincorporated County segment of the North/South Bikeway along Ranchitos Road between the top of Puerto Suello Hill and Golden Hinde Boulevard.

## **8. Countywide Bicycle Route Guide Signage Project (completed)**

As proposed in the 2001 County bicycle plan, the Marin County Department of Public Works has developed and is in the process of implementing a numbered countywide 'Bicycle Route Guide Signage Project'. The system will guide riders around the county between destinations, providing direction and destination information at decision points. As of this writing, signs had been installed throughout the County, including San Rafael.

## **9. Puerto Suello Hill Multi-Use Pathway Project (completed)**

This project was identified as a priority in the 2001 County bicycle plan as the 'Puerto Suello Gap Closure Project' and fills the remaining gap south of the Ranchitos Road bicycle lanes, completing the North/South Greenway between the areas of the City's downtown and north San Rafael. This project was constructed as

part of the 'Highway 101 HOV Gap Closure Project' and funded in part through Measure A and other highway construction funds.

### **10. North San Rafael Vision Plan**

This project calls for a "Promenade" suitable for bicycles and pedestrians connecting the Terra Linda Recreation Center/Scotty's Market area with Northgate One, the Northgate Mall and continuing to the Marin County Civic Center by way of the Civic Center SMART Station near Merrydale Road. The portion of the promenade around the Northgate Mall was completed in 2010.

### **11. Canal Transportation Plan**

In 2006, the City of San Rafael and the Transportation of Marin completed a Community-Based Canal Transportation Plan (CBTP) outlining thirteen needed transportation improvements in the Canal Neighborhood to facilitate nonmotorized circulation in the area.

### **12. San Quentin Area Bicycle & Pedestrian Access Study**

The County of Marin is currently studying East Sir Francis Drake Boulevard and I-580 for potential bicycle and pedestrian facility locations and treatments to connect the Richmond-San Rafael Bridge and the existing bicycle path at Remillard Park in Larkspur. Connections to East Francisco Boulevard and the existing southern segment of the Bay Trail Shoreline Park are also being studied.

### **13. Regional Bicycle and Pedestrian Plans**

#### **a. Regional Bicycle Plan (2001, Metropolitan Transportation Commission, MTC)**

The Metropolitan Transportation Commission's 2001 Regional Bicycle Plan is a component of the 2001 Regional Transportation Plan for the San Francisco Bay Area, which establishes the region's twenty-five year transportation investment plan. The plan identifies a bicycle network over 1,600 miles in length, which includes all 400 miles of the Bay Trail, the multiuse pathway that will ultimately ring San Francisco Bay. The creation of the Regional Bicycle Network will provide better access to the region's transit network and activity centers, as well as serving the goal of encouraging greater use of the bicycle as a transportation mode.

#### **b. San Francisco Bay Trail**

The Bay Trail Project is a nonprofit organization administered by the Association of Bay Area Governments (ABAG) that plans, promotes and advocates for the implementation of a continuous 500 mile bicycle, pedestrian and multi-use path around San Francisco Bay. When complete, the trail will pass through forty-seven cities, all nine Bay Area counties, and cross seven toll bridges. To date, slightly more than half the length of the Bay Trail alignment has been developed. 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 connections to existing park and recreation facilities, creating links to existing and proposed transportation facilities, and preserving the ecological integrity of the Bays and their wetlands. Major Marin County sections that have been completed include sections of the San Rafael Shoreline Park Pathway.

### ***Relevant Legislation and Policies***

The Federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU) provides bicycle and pedestrian funding opportunities, including funding for the NTPP.

The 1990 federal Americans with Disabilities Act (ADA) mandates that all transportation facilities be accessible to people with disabilities. The Americans with Disabilities Act Accessibility Guidelines (ADAAG), last updated in 2002, provide specific width and clearance requirements for wheelchair users as well as other design guidance. The ADAAG is available at <http://www.access-board.gov/adaag/html/adaag.htm>.

The City of San Rafael has an ADA Transition Plan which identifies a process to bring the City's facilities into compliance with the ADAAG. The City appointed its first ADA Coordinator in 1992. Since then, the ADA Coordinator has monitored implementation of the Transition Plan in conjunction with the City's annual budget process, which has allocated approximately \$100,000 per year to improve accessibility in the city. The City Self Evaluation and Transition Plan (1994) prioritizes barrier removal based on usage of the facility. Subsequent to the Transition Plan the City adopted a City Sidewalk Project, which has spent \$500,000 exclusively on curb ramp improvements.

On a State level, according to the California Bicycle Transportation Act (BTA) (1994), all cities and counties should have an adopted bicycle master plan. The Caltrans BTA requirements, and how this plan complies with them for Marin County, are detailed in Table 1-1 on the following page. The most current versions of Caltrans Highway Design Manual (HDM) and the California Manual on Uniform Traffic Control Devices (CAMUTCD) contain specific, mandatory design requirements for facilities recommended in bicycle and pedestrian plans. The basic design parameters of on-street and off-street bicycle facilities are defined in 'Chapter 1000: Bikeway Planning and Design' of the Highway Design Manual. Chapter 9 of the CAMUTCD provides details for signs, markings and signals applicable to bicycle and pedestrian facility design. In addition to BTA and design requirements, Caltrans Deputy Directive 64 (DD-64) also applies to projects within Caltrans jurisdiction or funded by Caltrans grants. The document states: "The Department fully considers the needs of non-motorized travelers (including pedestrians, bicyclists and persons with disabilities) in all programming, planning, maintenance, construction, operations and project development activities and products."

Assembly Bill 1358 requires cities and counties, when making a "substantial revision of the circulation element" of their General Plan, to plan for a "balanced, multimodal transportation network that meets the needs of all users...for safe and convenient travel." The City of San Rafael's current General Plan 2020 includes several elements

which plan for a balanced, multimodal transportation network including but not limited to Goal 13: Mobility for All Users, Goal 16: Bikeways, Goal 17: Pedestrian Paths as well as others. In addition, the City of San Rafael's Director of Public Works recently issued a directive to all Public Works Staff requiring incorporation of a multi-modal approach on all projects from the time of their inception forward. A copy of the directive is included as Appendix G.

The Metropolitan Transportation Commission (MTC) is the regional transportation funding agency in the San Francisco Bay Area and requires that pedestrian and bicycle facilities be routinely considered in roadway projects. In 2006, MTC passed Resolution number 3765, which states that "projects funded all or in part with regional funds (e.g. federal, State Transportation Improvement Program or STIP, bridge tolls) shall consider the accommodation of non-motorized travelers, as described in Caltrans Deputy Directive 64." MTC Resolution 875 details requirements for Bicycle Advisory Committees in the development and updating of local bicycle plans and the prioritization of Transportation Development Act (TDA) Article 3 funding.

Table 1-1 lists the locations within this Plan of the eleven BTA required elements, (a) through (k).

Table 1-1  
Bicycle Transportation Account (BTA) Compliance Checklist

BTA 891.2	Required Plan Elements	Location within the Plan
(a)	The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	Table 4-2, Page 37
(b)	A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	Page 32 Fig. 4-1, Page 32
(c)	A map and description of existing and proposed bicycle facilities.	Fig. 1-1, Page 10 Fig 1-4, Page 16 Fig 1-5, Page 17 Chapter 3, Page 23 Chapter 5, Page 40
(d)	A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	Fig. 1-4, Page 16 Fig 1-5, Page 17 Page 30 Page 31 Appendix B

Table 1-1  
Bicycle Transportation Account (BTA) Compliance Checklist

BTA 891.2	Required Plan Elements	Location within the Plan
(e)	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals.	Fig. 1-4, Page 16 Fig 1-5, Page 17 Page 30 Page 32
(f)	A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	Page 30 Appendix B
(g)	A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the most current version of the California Vehicle Code (CVC).	Appendix C
(h)	A description of the extent of citizen and community involvement in development of the plan.	Page 1
(i)	A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans.	Pages 1 thru 8
(j)	A description of the projects proposed in the plan and a listing of their priorities for implementation.	Chapter 6, Page 57
(k)	A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	Chapter 3, Page 23 Chapter 6, Page 57

## ***Summary of Bicycle Section of Plan***

### **Definitions**

This plan refers to various classes of bicycle facilities as defined by Caltrans in Chapter 1000 of the Highway Design Manual:

Multi-Use Bicycle Paths: These are described in Chapter 1000, Topic 1003.5 of the Highway Design Manual. This is a design standard that allows separated trails to be put into space-constrained areas.

**Single-Directional Bicycle Paths:** Single-directional bicycle paths are described in Section 1003.1 of the Highway Design Manual.

**Class I Bicycle Facility:** Referred to as a bicycle path. It provides for two-way bicycle travel on a paved right-of-way completely separated from any street or highway. These are described in Section 1003.1 of the Caltrans Highway Design Manual.

**Class II Bicycle Facility:** Referred to as a bicycle lane. It provides a striped and stenciled lane for one-way travel on a street or highway. These are described in Section 1003.2 of the Caltrans Highway Design Manual.

**Class III Bicycle Facility:** Referred to as a bicycle route. It provides for shared use with pedestrian or motor vehicle traffic and is identified by signing and (sometimes) 'Shared Roadway Bicycle Marking' or 'Sharrows' stenciling. These are described in Section 1003.3 of the Caltrans Highway Design Manual.

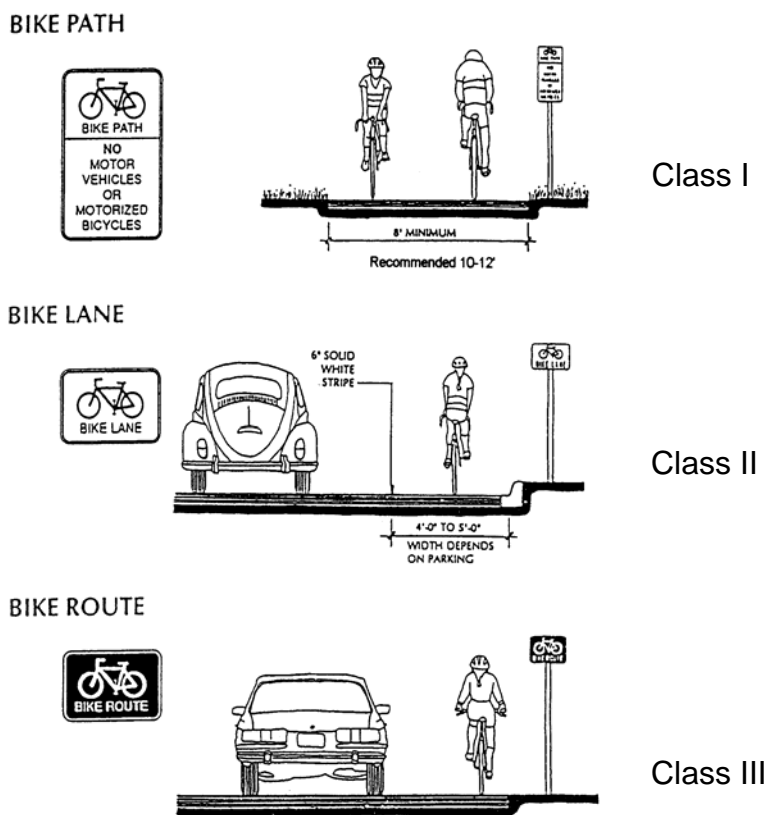


Figure 1-1  
Class I, II and III Bicycle Facilities

### **Overview of Proposed System Improvements**

This plan proposes a continuous network of bicycle facilities for travel within San Rafael and to surrounding communities. Routes are designated either "north-south" or "east-west." Two of the north-south routes connect San Rafael with other cities, as does one of the east-west routes. The other routes are primarily for travel within the City.

## North/South Greenway

The North/South Greenway is a separate facility for pedestrians and bicyclists that follows the old railroad right-of-way from Sausalito to Larkspur and then runs parallel to the railroad right-of-way from Larkspur to Novato. There are significant sections of the North/South Greenway within the City of San Rafael starting at the Cal Park Hill Tunnel at the southern City limits and running to the northern City limits near Saint Vincent's School, as depicted in Figure 1-2. The proposed route is as follows starting from south to north:

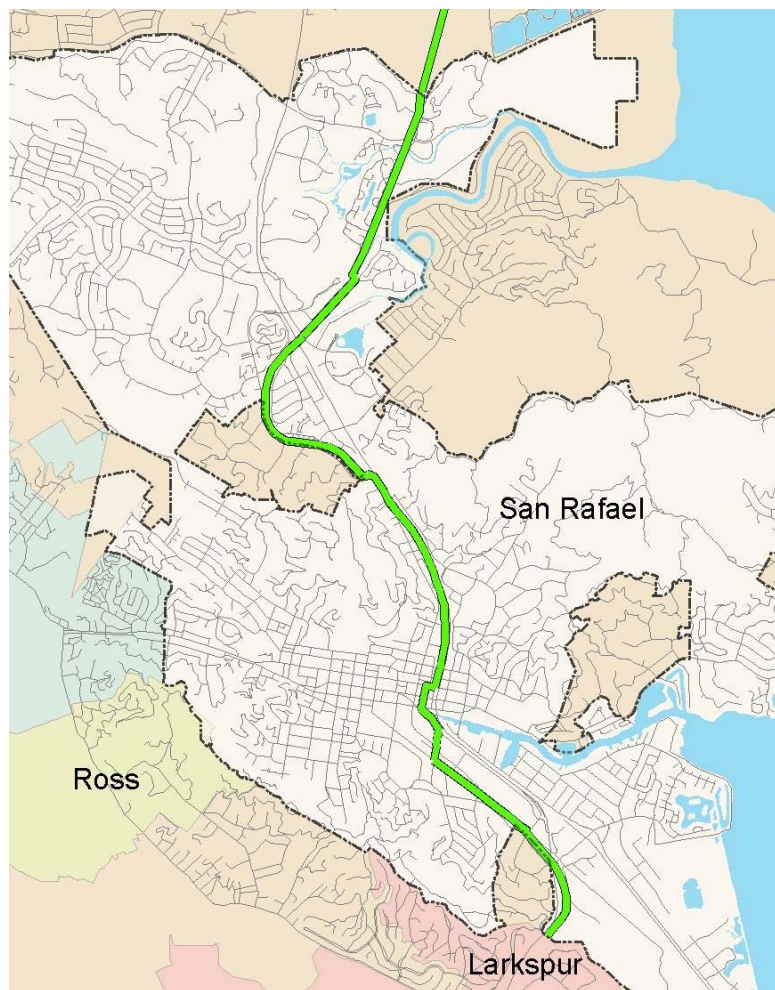


Figure 1-2  
North/South Greenway Alignment

- Class I facility through Cal Park Hill Tunnel from Larkspur to Andersen Drive in San Rafael
- Class II bicycle lanes on Andersen Drive to Irwin Street and on Irwin Street to Francisco Boulevard West
- Class II bicycle lanes on each side of Francisco Boulevard West between Irwin Street and Second Street
- The sections from Second Street to Mission Avenue are part of the NTPP Mahon Creek Path-Transit Center Connector project and the NTPP Puerto Suello Hill Path-Transit Center Connector project.

- Class I multi-use path from the corner of Mission Avenue and Hetherton Street to the top of Puerto Suello Hill recently built adjacent to US101 as part of the Highway 101 HOV gap closure project.
- Class II bike lanes along Los Ranchitos Road connecting to a Class I bike path which parallels the proposed SMART railroad alignment to the future SMART Civic Center station

- Class I bike path parallel to the SMART rail tracks from the future Civic Center Station to the northern City limits

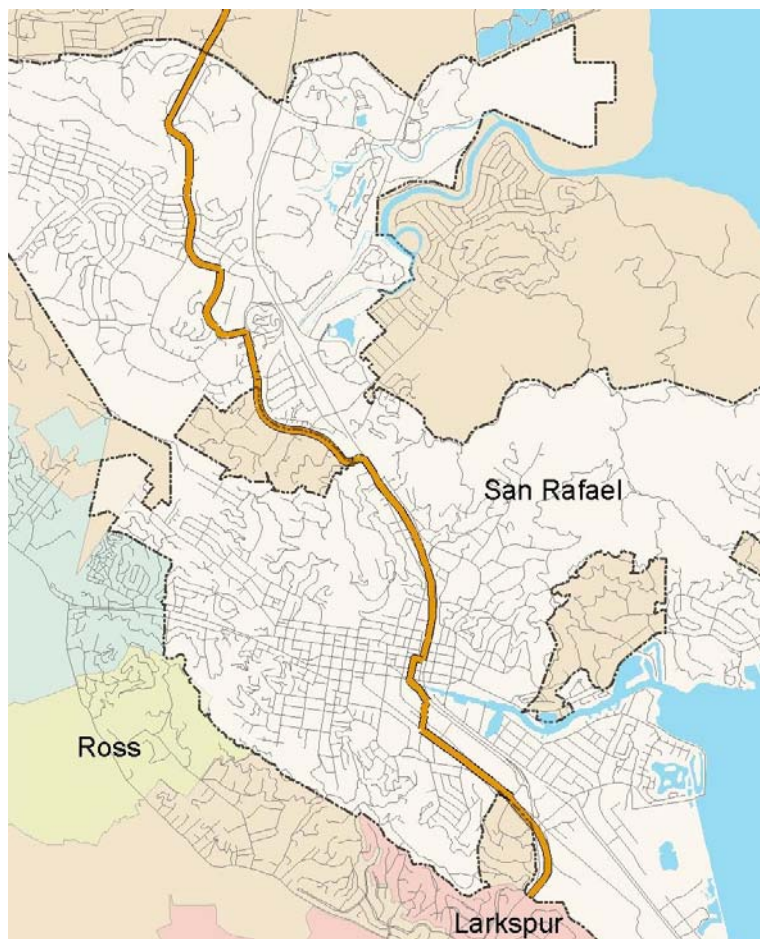


Figure 1-3  
North/South Bikeway Alignment

#### North/South Bikeway

The North/South Bikeway passes through San Rafael, deviating from the North/South Greenway at the top of Lincoln Avenue and ending at Las Gallinas Avenue in Marinwood. The route is as follows starting from south to north:

- Deviating from the North/South Greenway at the top of Lincoln Avenue, along class II bike lanes on Los Ranchitos Road to Northgate Drive
- Class II bike lanes along Northgate Drive from Los Ranchitos Road to Las Gallinas Avenue
- Class III bike route along Las Gallinas Avenue from Northgate Drive to Nova Albion Way
- Class II bike lanes on Las Gallinas Avenue from Nova Albion Way to Lucas Valley Road and north.

#### North-South Bicycle Facilities

The 2001 bicycle plan identified fifteen additional north-south bicycle facilities primarily within San Rafael. As noted below, since 2001 some of these connections have been completed or are partially complete. Within each corridor description, individual bicycle facilities segments are listed in order from south to north.

- Los Gamos Drive Class III bicycle facility from Lucas Valley Road to Manuel T. Freitas Parkway (completed).
- Redwood Highway frontage road and Civic Center Drive Class II and III, from Smith Ranch Road to North San Pedro Road (completed).
- From North San Pedro Road to the Richmond Bridge, via US 101 shoulder Class III (northbound only), Villa Avenue Class III (completed), Grand Avenue Class III

(completed) and Francisco Boulevard East Class III (this route is the proposed alternative to Lincoln Avenue and the Puerto Suello Hill Pathway which are on the west side of US 101)

- Shoreline Park Path and Bay Trail Class I (approximately 95% completed).
- From Spinnaker Point Drive to Andersen Drive via Baypoint Drive Class II (completed), Bellam Boulevard Class III (completed) and Bellam Boulevard Class I/Class II (Class II completed).
- Kerner Boulevard Class II from Bellam Boulevard to Grange Avenue (completed from Shoreline Parkway to Grange Avenue).
- Bay Trail Class I spur from City line near Hamilton Court to McInnis Parkway.
- Wolfe Grade/D Street Class III from Fourth Street to Larkspur (completed south City limits to Antonette Avenue).
- Irwin Street Class III from Lincoln Avenue south to the City limit (completed).
- Nova Albion Way and Golden Hinde Boulevard Class III from Las Gallinas Avenue to Los Ranchitos Road (completed).
- From Merrydale 101 Overcrossing to Merrydale Pathway to Los Ranchitos Road/Lincoln Avenue via Merrydale Class III, Merrydale Pathway/Bridge Class I, Merrydale Class II/III, Merrydale Pathway Class I (Merrydale Class I completed).
- Canal Neighborhood to Montecito Shopping Center at Third Street and Union Street connector via Third Street Class III (completed) to Grand Avenue Class III (completed) to Francisco Boulevard East.
- C Street Class III from Fifth Avenue to Antonette Avenue.
- A Street Class III from Fifth Avenue to First Street.
- Knight Drive Class III and Castlewood Drive Class III from 25 West Castlewood Drive to Point San Pedro Road (both completed).

Additional north-south bicycle facilities which would be beneficial to the City of San Rafael include the following:

- Civic Center Connector: North San Pedro Road Class I/II, from Los Ranchitos Road to Civic Center Drive and continuing north on Civic Center Drive as Class I/II (plus sidewalks) to connect with the North San Rafael Promenade at either the SMART station or the Merrydale Overcrossing.
- Nova Albion School Access: A multi-use path on Nova Albion Way from Arias Street (Vallecito Elementary School) to Montecillo Road as Class I/II, from Las Gallinas Avenue to 320 Nova Albion Way (Terra Linda High School) Class II/III.

### East-West Bicycle Facilities

The 2001 bicycle plan identified twelve east-west bicycle facilities in San Rafael. One connects San Rafael with San Anselmo to the west and with San Quentin and the

Richmond-San Rafael Bridge to the east. The remainders are important connections within the City. Within each corridor description, individual segments of bicycle facilities are listed in order from west to east.

East-west facilities that connect with San Anselmo and San Quentin:

- Greenfield Avenue Class III, West End Avenue Class III and Fourth Street Class III from west City limit to Grand Avenue (all completed).
- Grand Avenue and Francisco Boulevard East from Fourth Street to Main Street.

East-west facilities primarily within San Rafael are:

- Lucas Valley Road class I/II/III from to Redwood Highway frontage road (partially completed Class II in County unincorporated area), and Smith Ranch Road Class II/III to McInnis Park.
- Manuel T. Freitas Parkway Class II/III from city limit to Del Ganado Road (completed Class III), Manuel T. Freitas Parkway Class II from Del Ganado Road to Las Pavadas Avenue (completed), Manuel T. Freitas Parkway Class II/III from Las Pavadas Avenue to Las Gallinas Avenue (completed).
- North San Pedro Road Class I/II/III from Los Ranchitos Road to Civic Center Drive (completed portion of class II).
- Third Street Class III (completed) from Grand Avenue to Point San Pedro Road
- Point San Pedro Road Class II/III (completed Class III)
- Fifth Avenue Class III from Mount Tamalpais Cemetery to H Street (completed).
- Andersen Drive Class II from A Street to Sir Francis Drake Boulevard/Interstate 580 (completed).
- Taylor Street Class III and Woodland Avenue Class III from D Street to Irwin Street (completed).
- Gallinas Creek Pathway Class I from Redwood Highway Frontage Road to Smith Ranch Road (completed).
- Las Gallinas Avenue Class II/III from Los Ranchitos Road to Merrydale (pending access across SMART railroad right-of-way).
- Francisco Boulevard West Class III from the San Rafael Transit Center to the proposed US 101 overcrossing.
- Class I path from Mount Tamalpais Cemetery area to Sunny Hills Drive in San Anselmo. The City supports this connection; however this is outside of the San Rafael City limits and would require agreement by the cemetery property owners.

See Chapter 5 for more detailed descriptions of proposed specific bicycle improvements.

## ***Summary of Pedestrian Section of Plan***

The Pedestrian Improvements section encompasses two elements:

- Sidewalk, intersection, and crossing improvements.
- Multi-use paths (includes Class I bikeways).

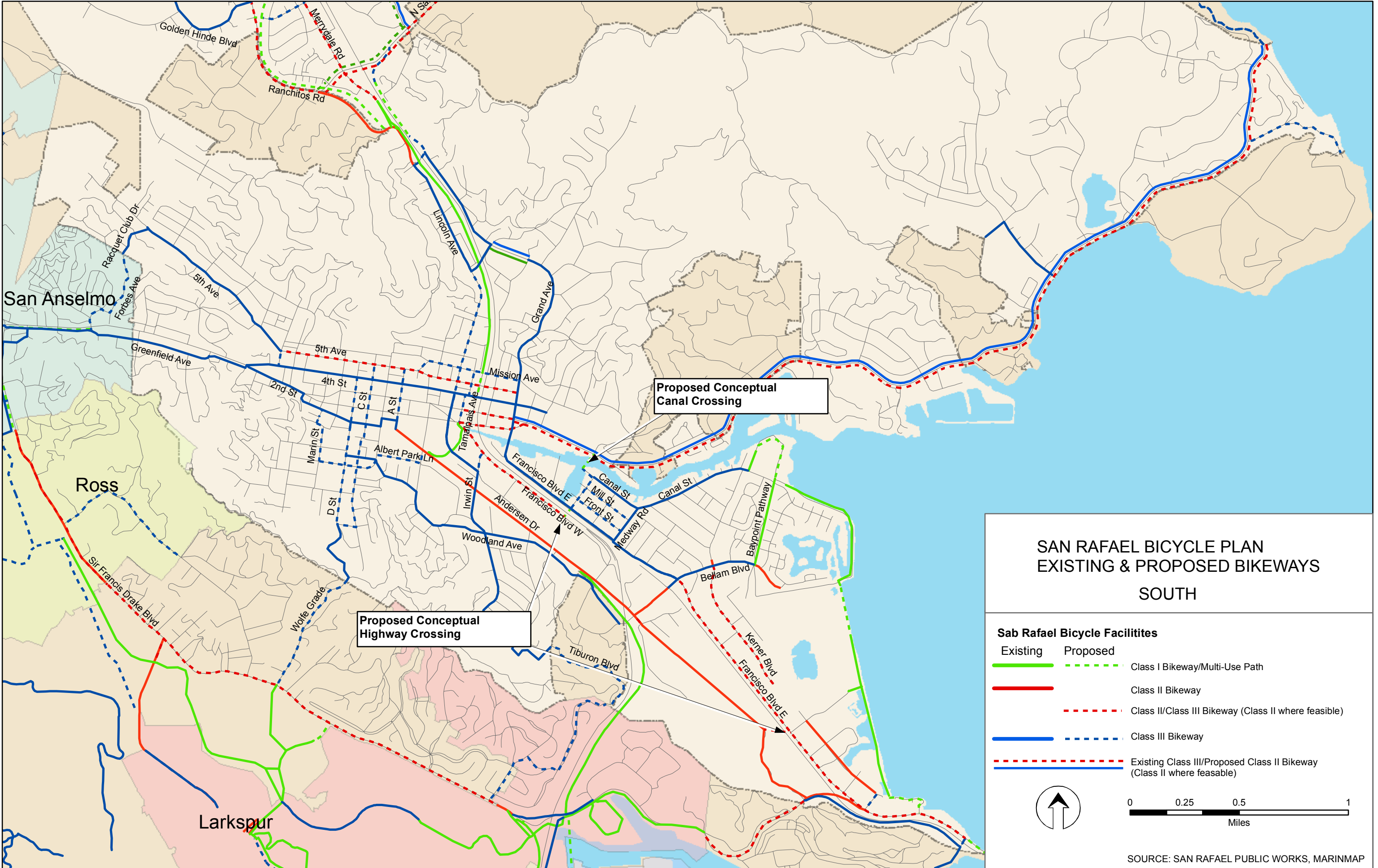
See Chapter 5 for descriptions of proposed site-specific pedestrian improvements.

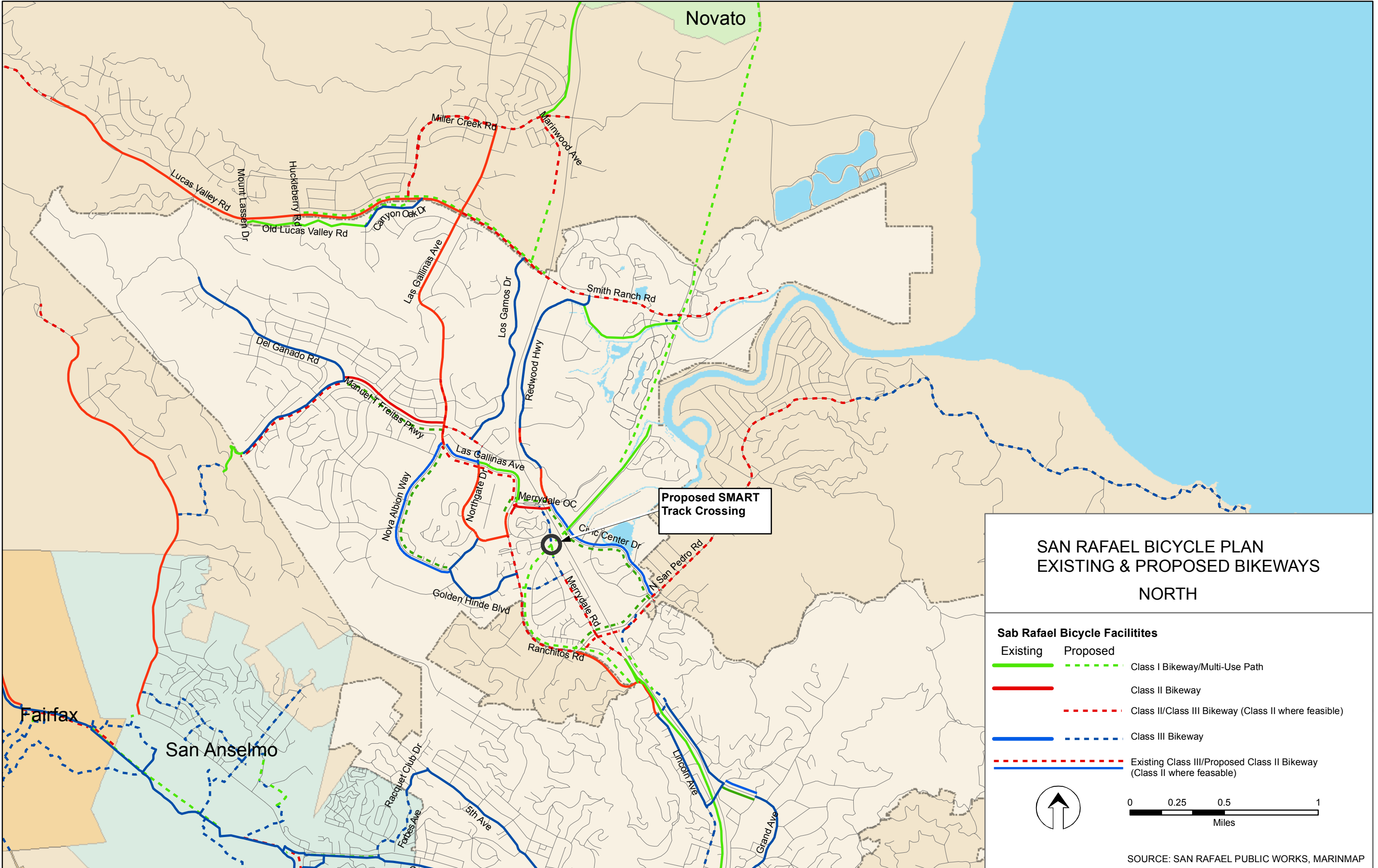
## ***School Commute***

This Plan prioritizes school commute safety, with many of the short to mid-term projects providing enhanced connections to schools, plus a separate School Commute Safety program. This program encourages more walking and biking to school through in-class activities, contests and events, and organized “school pools” of parents escorting children by foot, bike or carpool. Programs of this sort are known as “Safe Routes to School” and are being implemented throughout Marin County. Funding for such programs – including capital and program elements – has increased in recent years with dedicated Federal and State Safe Routes to School funding programs as well as committed Measure A “Safe Pathways” funding.

## ***Educational Programs***

This updated Plan calls for programs to educate all users of public rights of way and of each other’s respective rights and responsibilities in order to foster mutual respect and safety. More details are given in the Appendix.





## Chapter 2: Goals, Objectives and Policy Actions

This chapter describes the goals, objectives and policy actions that are recommended for the City of San Rafael.

### ***Goals, Objectives and Policy Actions***

The following goals, objectives, and policy actions will guide and facilitate the City in the implementation, maintenance, and upgrade of the bicycle and pedestrian infrastructure in San Rafael:

- Goals set a long-term vision and serve as a foundation to this plan.
- Objectives identify specific areas where effort is required.
- Policy actions guide day-to-day decision-making toward reaching the goals.

### ***Goals***

The following goals are similar to those in the Marin County Unincorporated Area Bicycle and Pedestrian Master Plan but are tailored for San Rafael. There are three major goals:

#### **Goal 1 - Bicycle Transportation**

Make the bicycle an integral part of daily life in San Rafael, particularly for trips of less than five miles, by implementing and maintaining a bicycle facilities network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer.

#### **Goal 2 - Pedestrian Transportation**

Encourage walking as a daily form of transportation in San Rafael by completing a pedestrian network that accommodates short trips and transit, improves the quality of the pedestrian environment, and increases pedestrian safety and convenience.

#### **Goal 3 - Model Community**

Make San Rafael a model community for nonmotorized transportation. Aim for an increase from the current estimated five percent mode share to a twenty percent mode share of all utilitarian trips to be made by bicycling and walking by the year 2030.

## ***Objectives and Policy Actions***

### **Objective A - Facilitation**

Facilitate the implementation of this updated San Rafael Bicycle and Pedestrian Plan, which identifies existing and future needs, and provides specific recommendations for facilities and programs on an ongoing basis.

Table 2-1  
Policy Actions for Objective A

What	Who <sup>1</sup>
1. Adopt this updated Bicycle and Pedestrian Plan.	City Council
2. Maximize coordination between the City and community to facilitate citizen review and comment on issues of mutual concern.	Staff
3. Retain the Bicycle and Pedestrian Advisory Committee.	City Council

### **Objective B – Bicycle Facilities**

Complete a network of bicycle facilities that provide bicycle-friendly connections through travel corridors and to important destinations, especially for travel to employment centers, schools, commercial districts, transit stations, parks, and institutions.

Table 2-2  
Policy Actions for Objective B

What	Who
1. Where feasible, include planning and design of bicycle and pedestrian facilities as an integral part of the process for all transportation improvements.	Staff
2. Seek funding for bicycle facility projects through regional, state, and federal funding programs.	Staff
3. Coordinate with multi-jurisdictional planning and funding applications, and system integration, when appropriate.	Staff

### **Objective C - Walkways**

Complete a network of walkways that serves pedestrian needs, especially for short trips to employment centers, schools, commercial districts, transit stations, and institutions.

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<sup>1</sup> Key to Abbreviations: Staff = City's Staff (various departments as appropriate), BPAC = Bicycle and Pedestrian Advisory Committee, DPW = Department of Public Works

Table 2-3  
Policy Actions for Objective C

What	Who
1. Complete missing connections to establish direct routes for walking	Staff
2. Identify and mitigate impediments and obstacles to walking to school, such as through a Safe Routes to Schools program.	Staff
3. Ensure accessibility of pedestrian facilities to the elderly and disabled.	Staff
4. Support the installation of appropriate pedestrian facilities as part of all new transportation improvements, development projects and transit facilities.	Staff
5. Identify funding for construction of ADA compliant curb cuts.	Staff
6. Identify funding for ongoing maintenance of sidewalks and pathways.	Staff

### **Objective D – Maintenance**

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

Table 2-4  
Policy Actions for Objective D

What	Who
1. Undertake routine maintenance of bicycle and walkway network facilities, such as sweeping bicycle lanes and trimming vegetation next to bicycle lanes and sidewalks.	Staff
2. Undertake major maintenance of bicycle and walkway facilities, such as restriping bicycle lanes and resurfacing paths and sidewalks. Pursue Objective C-6.	Staff
3. Consider bicycle and walking facilities in the repair and construction of roadways.	Staff
4. Provide an easy method (such as a hotline or email) for the public to report road/walkway hazards, and create an effective and appropriate response mechanism to correct reported hazards.	Staff

### **Objective E – Bicycle Parking**

Provide bicycle parking in employment and commercial areas, in multifamily housing, at schools and colleges, and at all transit facilities. Include covered and secure bicycle parking.

Table 2-5  
Policy Actions for Objective E

What	Who
1. Review existing zoning code ordinances that require bicycle parking spaces are built as part of development projects.	Staff
2. Encourage the installation of bicycle parking in the public right-of-way as appropriate.	Staff
3. Coordinate with local businesses and schools to offer improved bicycle parking.	City Council; staff
4. Explore the adoption of zoning requirements for lockers and showers to be added to new commercial buildings.	City Council
5. Upgrade bicycle parking at City recreation facilities.	City Council, staff
6. Consider that parking for bicycles is as essential as parking for cars.	City Council, staff
7. If feasible, require major City-sponsored community events to include convenient bicycle parking and publicize such accommodations.	City Council, Staff
8. Start a campaign that counts how many bicycle parking spaces are being created and setting quantifiable goals	Staff, BPAC

### **Objective F – Bicycle/Transit Coordination**

Increase the number of bicycle-transit trips.

Table 2-6  
Policy Actions for Objective F

What	Who
1. Support and promote improved bicycle access to all local transit facilities.	Staff
2. Encourage Golden Gate Transit District to add bicycle parking, including covered and secure, at transit facilities, and to use higher capacity racks on all buses.	Staff

**Objective G - Education**

Develop and implement plans for bicycle and pedestrian education aimed at youth, adult cyclists, pedestrians, and motorists. Increase public awareness of the benefits of bicycling and walking and of available resources and facilities.

Table 2-7  
Policy Actions for Objective G

What	Who
1. Plan for, support and promote implementation of traffic calming devices and techniques where feasible.	Staff
2. Work with the Police Department to implement enforcement and education programs.	Staff
3. Add a San Rafael Transportation page to the San Rafael website. The page should include a bicycle route map, plans, and a list of bicycle organizations and events.	Staff, BPAC
4. Develop adult and youth bicycle and pedestrian education, encouragement and safety programs with the help of available bicycle and pedestrian facility programs such as: <ul style="list-style-type: none"><li>• Safe Routes to Schools (federal, state and local)</li><li>• Public Service Announcements</li></ul>	Staff

**Objective H - Standards**

Continue to use the latest versions of the Caltrans Highway Design Manual, the California Manual on Uniform Traffic Control Devices (CA MUTCD), the American Association of State Highway and Transportation Officials (AASHTO) “Policy on Geometric Design of Highways and Streets,” and the AASHTO “Guide for the Development of Bicycle Facilities,” as applicable, for streets, roads, highway and pathways in San Rafael. Build all pedestrian facilities to the standards contained in the latest version of the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Seek to construct all bicycle and pedestrian facilities according to local, state and national best practices as documented in professional engineering reports and guidelines such as those published by the Institute of Transportation Engineers (ITE).

# Chapter 3: Existing Conditions

## ***Bicycle Facilities***

San Rafael's existing bicycle facility system consists of approximately 6.8 miles of multi-use pathways, 7.5 miles of bicycle lanes and 22.2 miles of signed on-street bicycle routes. While bicyclists are generally prohibited from using freeways, they are allowed on the northbound shoulder of US 101 between and including the Villa Avenue and North San Pedro Road off-ramps, and a short section of I-580 near San Quentin. Bicycles are not allowed on the Richmond-San Rafael Bridge; bicyclists must use a bus to make this crossing.

Route numbers in the tables in this chapter refer to the County of Marin's Bicycle Route Guide Sign project. See Appendix F for a map of signed numbered bicycle routes in the San Rafael area.

Table 3-1  
Existing Bicycle Facilities

Class	Bicycle Facility Type	Total Length (Miles)
I	Bike/Multi-Use Path	6.81
II	Striped Bicycle Lanes	7.52
III	Signed Bicycle Routes	22.19
	All Bicycle Facilities	36.52

### **Existing Bike Paths/Multi-use Pathways (Class I Facilities)**

Following is a description of existing pathways in the City of San Rafael. These pathways may not meet the criteria for classification as "Class I Pathways" per Caltrans standards.

**1. Baypoint Pathway:** This pathway starts at the intersection of Bellam Boulevard and Playa Del Rey and continues to Spinnaker Point Drive. The length is approximately 0.4 miles and the width varies between nine and ten feet. The primary uses of this path are recreational and school access.

**2. Cal Park Hill Tunnel Approach:** This pathway was recently constructed and connects Andersen Drive to the Cal Park Hill Tunnel. The length within the San Rafael City Limits is 0.8 miles.

**3. Grand Avenue Sidepath:** This short pathway parallels Grand Avenue for approximately 0.2 miles in the Dominican Neighborhood and was installed as a part of a new development.

**4. Mahon Creek Pathway:** This pathway extends approximately 0.2 miles between the bicycle lanes on Andersen Drive and the intersection of Second Street and Tamalpais Avenue at the San Rafael Transit Center.

The Bay Trail's current alignment is shown along Andersen Drive, A Street, and on Second Street and Third Street to the Transit Center, and then out Pt. San Pedro Road or across the Grand Avenue Bridge. A better alignment is already in existence in this area – from Andersen Drive to the Mahon Creek Pathway to the Transit Center. The Bay Trail Project has requested that Andersen north of the Mahon Creek Pathway, A Street, Second Street and Third Street between A Street and the Transit Center be removed from the Bay Trail alignment as these are busy roadways with no bicycle facilities and no recreational value. A map of the new Bay Trail alignment (utilizing Mahon Creek Pathway) is included in Appendix A.

**5. McInnis Parkway Sidepath:** This pathway starts at Civic Center Drive and parallels McInnis Parkway and the railroad right of way for approximately 0.7 miles. This facility is part of the Bay Trail.

**6. North San Rafael Promenade:** This side path starts at the intersection of Las Gallinas Avenue and Northgate Drive and continues around the Northgate Mall property to the intersection of Las Gallinas Avenue and Merrydale Overcrossing. The portion along the mall between Merrydale Overcrossing and Northgate Drive has yet to be completed. The length of the completed portion of the path is 0.3 miles in length.

**7. Old Lucas Valley Road Pathway:** This pathway starts at the intersection of Lucas Valley Road and Mount Lassen Drive continuing to the intersection with Lucas Valley Road and Canyon Oak Drive. The length of this path is approximately 0.6 miles. The City of San Rafael and Marin County Parks and Open Space District have jurisdiction of this pathway which is an alternate route to the existing Class II bicycle lanes on Lucas Valley Road developed by the County of Marin Department of Public Works.

**8. Pickleweed Park Pathway:** This recreational path starts in Pickleweed Park near Canal Street and connects to Shoreline Park and Bay Trail segments in item number 3 above and is approximately 0.1 miles in length. This facility is part of the Bay Trail.

**9. Puerto Suello Hill Path:** This paved pathway connects downtown San Rafael to North San Pedro Road and is an alternative north-south route to Lincoln Avenue. This Class I pathway is primarily a twelve foot wide paved path with a two foot wide shoulder on either side. This path is located within Caltrans right-of-way but is maintained by the City of San Rafael. The length of this pathway is approximately 1.4 miles.

**10. Redwood Highway to McInnis Park Pathway:** This pathway begins at Redwood Highway and continues east to McInnis Parkway. The path is about 0.6 miles long and is eight feet wide with a dirt shoulder on either side. This facility is part of the Bay Trail.

**11. Shoreline Park Path and Bay Trail:** This recreational pathway follows the shoreline from Pickleweed Park south to Francisco Boulevard East near Grange Avenue. The length is about 1.9 miles of which 1.5 miles are paved. The width varies.

**12. Sleepy Hollow Open Space Pathway:** This is a short segment of pathway that lies within San Rafael, part of a longer facility that connects the end of Manuel T. Freitas Parkway in San Rafael to Fawn Drive in unincorporated San Anselmo.

**13. Walter Place Pathway:** This short pathway connects Los Ranchitos Road to Las Gallinas Avenue across the SMART railroad right-of-way. This existing but sub-standard bicycle and pedestrian at-grade crossing is included in both the SMART Draft Environmental Impact Report (EIR) and Final EIR<sup>2</sup>. Due to its sub-standard width and surface condition it is noted here but not shown on the maps or in the project tables. Improvements to this segment are described in Chapter 5 and must be made in compliance with the SMART EIR documents, likely as a part of the SMART project.

**14. McInnis Park segments of the Bay Trail:** These are natural surface trails that connect to similarly surfaced trails at Las Gallinas Valley Sanitary District to the north. These trails are unlikely to be used for bicycle commute purposes at present and therefore are not shown on this Plan's maps or listed in the tables. However, once a link to the Hamilton community is provided via the Hamilton Wetlands Restoration Project, it is highly likely that these trails will be more heavily used, and will provide a commute function. The natural surface trails at McInnis Park are part of the Bay Trail and are incorporated into the San Rafael Bike and Pedestrian Plan by reference to Appendix A which shows the complete alignment of the Bay Trail in San Rafael.

Table 3-2  
Existing Bike Paths/Multi-Use Pathways (Class I Facilities)

Route #	Segment Name	Begin	End	Length (miles)
-	Baypoint Pathway	Shoreline Park Pathway	Bellam Boulevard	0.41
5	Cal Park Hill Tunnel Approach	Andersen Dr	San Rafael City Limit	0.77
-	Grand Ave Sidepath	Elm Street	Belle Avenue	0.17
5	Mahon Creek Pathway	Andersen Drive	Francisco Boulevard West	0.23
-	McInnis Pkwy Sidepath	Civic Center Drive	San Rafael City Limit	0.71
-	North San Rafael Promenade	Las Gallinas Ave / Northgate Drive	Las Gallinas Ave / Merrydale Overcrossing	0.30
-	Old Lucas Valley Road Pathway	Canyon Oak Drive	San Rafael City Limit	0.65

<sup>2</sup> SMART DEIR, pg. 2-23, Nov. 2005; SMART FEIR, pg. 3-127, June 2006.

Table 3-2  
Existing Bike Paths/Multi-Use Pathways (Class I Facilities)

Route #	Segment Name	Begin	End	Length (miles)
-	Pickleweed Park Pathway	Canal Street	Proposed Bay Trail	0.08
5	Puerto Suello Hill Path	Mission/Hetheron	Los Ranchitos Rd	1.26
-	Puerto Suello Hill Path Connector	Puerto Suello Hill Path	Merrydale Rd	0.14
-	Redwood Hwy to McInnis Park Pathway	Redwood Highway	Northwest Pacific Railroad	0.62
-	Shoreline Park Path and Bay Trail Section	Canal Street	Bay Point Drive	0.66
-	Shoreline Park Path and Bay Trail Section	North of Shoreline Parkway	Kerner Boulevard	0.78
28	Sleepy Hollow Open Space Pathway	Manuel T. Freitas Parkway	San Rafael City limit	0.03
TOTAL				6.81

### **Existing Bicycle Lanes (Class II Facilities)**

The following street segments in San Rafael currently have bicycle lanes:

**1. Andersen Drive:** Length 2.7 miles. This bicycle lane follows Andersen Drive from Lindero Street to East Sir Francis Drake Boulevard at I-580.

**2. Baypoint Village Drive:** Length 0.1 miles. This bicycle lane follows Baypoint Village Drive from Playa Del Rey to near Baypoint Drive.

**3. Bellam Boulevard:** Length 0.2 miles. This bicycle facility follows Bellam Boulevard beginning near Interstate 580 to Andersen Drive.

**4. Civic Center Drive:** Length 0.3 miles. This bicycle lane follows Civic Center Drive from the Highway 101 ramps at Manuel T. Freitas Parkway overcrossing south to approximately five hundred (500) feet south of the Merrydale Road overcrossing.

**5. E. Sir Francis Drake Boulevard:** Length 0.20 miles. This bicycle lane is only in the westbound direction and connects Francisco Boulevard East with E. Sir Francis Drake Boulevard across the freeway overcrossing.

**6. Kerner Boulevard 1:** Length 0.02 miles. This bicycle lane is provided for the southbound approach at the intersection of Kerner Boulevard and Bellam Boulevard.

**7. Kerner Boulevard 2:** Length 0.5 miles. This bicycle lane follows Kerner Boulevard from Shoreline Parkway to Grange Avenue.

**8. Las Gallinas Avenue:** Length 1.2 miles. This bicycle lane follows Las Gallinas Avenue from Lucas Valley Road to Nova Albion Way.

**9. Lincoln Avenue:** Length 0.2 miles. This bicycle lane follows Lincoln Avenue from the City/County line at the top of Puerto Suello Hill and runs south to northern intersection with Prospect Drive.

**10. Los Ranchitos Road 1:** Length 0.2 miles. This bicycle lane follows Los Ranchitos Road from Merrydale Overcrossing to Northgate Drive.

**11. Los Ranchitos Road 2:** Length 0.4 miles. This bicycle lane, recently installed by the County of Marin, follows Los Ranchitos Road from the top of Lincoln Avenue to N. San Pedro Road.

**12. Manuel T. Freitas Parkway:** Length 0.6 miles. This bicycle lane follows Manuel T. Freitas Parkway between Del Ganado Road and Las Gallinas Avenue.

**13. Merrydale Overcrossing:** Length 0.1 miles. This bicycle lane follows the Merrydale Overcrossing (US 101) from Civic Center Drive to Las Gallinas Avenue.

**14. North San Pedro Road:** Length 0.1 miles. This bicycle lane follows North San Pedro Road from the Highway 101 interchange to near San Pablo Avenue/Civic Center Drive.

**15. Northgate Drive:** Length 0.5 miles. This bicycle lane follows Northgate Drive from just south of Las Gallinas Avenue to just west of Los Ranchitos Rd.

**16. Redwood Highway:** Length 0.1 miles. This bicycle lane follows Redwood Highway Frontage Road from Professional Center Drive to Marin Center Drive.

Table 3-3  
Existing Bicycle Lanes (Class II Facilities)

Route #	Segment Name	Begin	End	Length (miles)
22	Andersen Drive	A Street	Sir Francis Drake Boulevard	2.65
-	Baypoint Village Drive	Windward Way / Playa Del Rey	Baypoint Drive	0.12
-	Bellam Boulevard	West of I-580 Southbound On-Ramps	Andersen Drive	0.24

Table 3-3  
Existing Bicycle Lanes (Class II Facilities)

Route #	Segment Name	Begin	End	Length (miles)
-	Civic Center Drive	Merrydale Overcrossing	Manuel T. Freitas Parkway	0.30
-	E. Sir Francis Drake Boulevard	Francisco Blvd East	E. Sir Francis Drake Boulevard	0.20
-	Kerner Blvd 1	Bellam Blvd	100' north of Bellam Blvd	0.02
-	Kerner Blvd 2	Shoreline Pkwy	Grange Avenue	0.46
5	Las Gallinas Avenue	Lucas Valley Rd	Nova Albion Way	1.35
-	Lincoln Avenue	Los Ranchitos Rd	Prospect Drive	0.21
5	Los Ranchitos Road 1	Merrydale Overcrossing	Northgate Drive	0.17
5	Los Ranchitos Road 2	Lincoln Avenue	N. San Pedro Rd	0.38
28	Manuel T. Freitas Pkwy	Del Ganado Road	Las Gallinas Avenue	0.59
-	Merrydale Overcrossing	Civic Center Drive	Las Gallinas Avenue	0.13
26	North San Pedro Road	Highway 101 Ramp	West of San Pablo Avenue	0.12
5	Northgate Drive	275' south of Las Gallinas Avenue	175' west of Los Ranchitos Road	0.50
-	Redwood Highway	Marin Center Dr	Professional Center Parkway	0.08
TOTAL				7.52

### **Existing Bicycle Routes (Class III Facilities)**

The following streets are signed shared roadway bicycle routes. As noted, some routes have Shared Roadway Bicycle Marking stencils ("Sharrow").

Table 3-4  
Existing Bicycle Paths (Class III Facilities)

Route #	Segment Name	Begin	End	Length (miles)
-	First Street	Miramar Avenue	A Street	0.46
-	Second Street	Fourth Street	Third Street	0.29
24	Third Street*	Grand Avenue	San Rafael City Limit	0.50

Table 3-4  
Existing Bicycle Paths (Class III Facilities)

Route #	Segment Name	Begin	End	Length (miles)
24	Fourth Street*	West End Avenue	Union Street	1.40
-	Fifth Avenue	Racquet Club Dr	H Street	0.84
-	B Street	First Street	First Street	0.04
-	Bellam Boulevard*	Francisco Blvd East	Windward Wy / Playa Del Rey	0.37
-	Canal Street*	Harbor Street	Shoreline Path	0.79
-	Canyon Oak Drive	Lucas Valley Rd	Old Lucas Valley Rd	0.37
-	Civic Center Drive	N San Pedro Road	Merrydale Overcrossing	0.80
-	D Street	Antonette Avenue	San Rafael City Limit	0.34
-	Del Ganado Road	De La Guerra Road	Manuel T. Freitas Parkway	1.02
-	Eastbound I-580	Main Street	Andersen Drive	0.78
-	Golden Hinde Blvd*	Los Ranchitos Rd	Nova Albion Way	0.49
-	Grand Avenue*	Villa Avenue	Francisco Blvd East	1.45
24	Greenfield Avenue*	San Rafael City Limit	West End Avenue	0.39
-	Irwin Street*	Lincoln Avenue	San Rafael City Limit	1.21
-	Knight Drive	Pt San Pedro Rd	W, Castlewood Drive	0.33
5	Las Gallinas Avenue	Nova Albion Way	Northgate Drive	0.21
-	Lincoln Avenue	Hammondale Ct	Linden Lane	0.56
-	Linden Lane Underpass	Grand Avenue	Lincoln Avenue	0.15
-	Los Gamos Drive	Lucas Valley Road	Manuel T. Freitas Pkwy	1.00
5	Los Ranchitos Road	Northgate Drive	Golden Hinde Blvd	0.21
-	Main Street	EB I-580	San Rafael City Limit	0.16
28	Manuel T Freitas Pkwy*	San Rafael City Limit	Del Ganado Road	0.67
-	Medway Road*	Francisco Blvd East	Canal Street	0.18

Table 3-4  
Existing Bicycle Paths (Class III Facilities)

Route #	Segment Name	Begin	End	Length (miles)
-	Miramar Avenue	First Street	Second Street	0.02
-	Northgate Drive	Las Gallinas Avenue	275' south of Las Gallinas Avenue	0.05
-	Northgate Drive	175' west of Los Ranchitos Road	Los Ranchitos Road	0.03
-	Nova Albion Way*	Northgate Drive	Las Gallinas Avenue	1.14
24	Pt San Pedro Road**	Marina Boulevard	San Rafael City Limit	0.21
24	Pt San Pedro Road**	Bayview Drive	San Rafael City Limit	0.79
24	Pt San Pedro Road**	Main Drive	San Rafael City Limit	1.81
-	Racquet Club Drive	Fifth Avenue	San Rafael City Limit	0.19
-	Redwood Highway	Marin Center Drive	Manuel T. Freitas Parkway	0.16
-	Redwood Highway	Smith Ranch Road	Professional Center Parkway	0.93
-	Taylor Street*	B Street	D Street	0.14
-	Villa Avenue	Grand Avenue	Lillian Lane	0.25
-	W. Castlewood Drive*	Knight Drive	North of Main Drive	0.12
24	West End Ave*	Greenfield Ave	Fourth St	0.18
-	Woodland Ave*	Bayview St / Taylor St	San Rafael City limit	1.16
TOTAL				22.19

\* Route includes sharrows

\*\* Several segments of Point San Pedro Road from Third Street to City limit near China Camp State Park are in the County's jurisdiction.

## ***Support Facilities for Bicycles and Bicyclists***

### **Classification of Bicycle Parking Facilities**

**Class I:** Class I bicycle parking facilities are provided in a secure, weather-protected manner and located at a bicycle locker, or a secure area such as a 'bike corral' that may be accessed only by bicyclists.

**Class II:** Bicycle racks provide support for the bicycle and usually do not have a locking mechanism. The cyclist provides his/her own lock(s). Appropriate Class II racks should meet the following standards:

- Allow bicyclists to securely lock the frame and at least one wheel,
- Support the bicycle frame at two points to prevent tipping,
- Secured to the ground,
- Located in highly visible areas.

Typically, variations on the “inverted U” rack meet these standards. Racks that only support the front wheel (i.e. “wheelbenders” or “schoolyard” racks) or the frame at one point do not meet these standards.

### **Bicycle Stations**

Bicycle Stations provide Class I bicycle parking and are attended bike-transit centers that offer secure valet bicycle parking and other transit amenities such as rental bikes, repairs, and snacks. Such facilities are currently in place at the Palo Alto Caltrain Station and Berkeley BART Station and are currently under development at other major transfer centers in the Bay Area and the United States of America including Long beach, Santa Barbara and Seattle. Please refer to the following website for more details: <http://www.bikestation.org/company.asp>.

### **Bicycle Parking and End of Trip Facilities – Existing Conditions**

A field review found several locations in San Rafael with bicycle racks. There are Class I parking facilities at two locations, the Caltrans Park-and-Ride lot under the Highway 101 flyover in downtown San Rafael and the Smith Ranch Road Caltrans Park-and-Ride Lot. Excluding schools and parks, Class II racks are at eleven locations, and sub-standard racks can be found at three locations. Most of the schools surveyed had sub-standard Class II racks. Showers and lockers were found at a minimum of three locations. See Appendix B for details.

### ***Multi-Modal Connections***

According to the 2000 Census Journey to Work data, approximately thirteen percent of San Rafael residents take transit to work on an average day. In San Rafael, Golden Gate Transit (GGT) provides local bus service, regional bus service to San Francisco, Santa Rosa and Richmond, and a shuttle to Larkspur to connect with Golden Gate Ferry service to San Francisco. The Golden Gate Transit *Existing Conditions System Levels Analysis Report 2005* reported that two percent of riders arrived at transit via bicycle countywide.

All Golden Gate Transit buses have bicycle racks. Buses under forty-five feet in length have front-mount bicycle racks. Those longer than forty-five feet have racks mounted “underfloor” in the baggage compartment. The bicycle racks can be used day and night and at the same fare as a regular passenger. Each rack holds two bicycles.

Bus route numbers 40 and 42, which link the San Rafael Transit Center with the City of Richmond, allow bicycles inside the bus as long as there is rear door wheelchair access and room (passengers and wheelchairs take precedence). The Golden Gate Transit ferries from Larkspur Landing also accommodate bicycles: Twenty-five bicycles are permitted on the regular ferry and fifteen are permitted on the high-speed ferry.

Class II parking for approximately forty bicycles exists at the San Rafael Transit Center, but more than forty bicycles are typically found at the center, many of them chained to posts or trees. Since almost the entire population of San Rafael is within a five mile bicycle ride of the Transit Center, the upper limit of the distance that a typical cyclist will ride according to League of American Bicyclists measurements, meeting bicycle parking demand there should be a high priority.

### ***Pedestrian Facilities***

This section briefly describes the general conditions that exist in San Rafael with regard to pedestrian facilities.

#### **Sidewalks**

While most of San Rafael has a continuous sidewalk network, there are some locations in the City where pedestrian facilities could be improved.

There are places where sidewalks do not exist or end abruptly in some areas of San Rafael. Examples are Redwood Highway and Francisco Boulevard East. Also, there is no sidewalk on Mission Avenue from the Library/City Hall area to Boyd Park. In some locations such as Francisco Boulevard East, from Bellam Boulevard north, sidewalks are used by both northbound and southbound bicyclists.

There are places where wheelchair ramps do not exist or are in conflict with sidewalk obstacles. Sidewalks are discontinuous in some places or are in need of repair. Pedestrians may conflict with vehicle movements at certain freeway on-ramps and off-ramps.

## Chapter 4: Needs Analysis

This section presents material that provides the basis for the recommendations made in Chapter 5.

As a community, we need to expand our transportation infrastructure in the most economical and sustainable ways available. As individuals, we should strive to commute to work, school and to businesses in our neighborhoods and by doing so, integrate exercise into our daily lives for improved health and well-being. This plan attempts to address these needs through sound transportation planning practice.

### ***Land Use Demand***

The “demand” for bicycle and pedestrian facilities can be difficult to predict. Unlike automobile use, where historical trip generation studies and traffic counts allow one to estimate future “demand” for travel, bicycle and pedestrian trip generation methods are less advanced and standardized. Land use patterns can help predict that demand and are important to bicycle and walking planning because changes in land use (and particularly employment areas) will affect average commute distance, which in turn will affect the attractiveness of bicycling and walking as a commute mode. Figure 4-1, the land use map from the San Rafael General Plan 2020, is included on the next page.

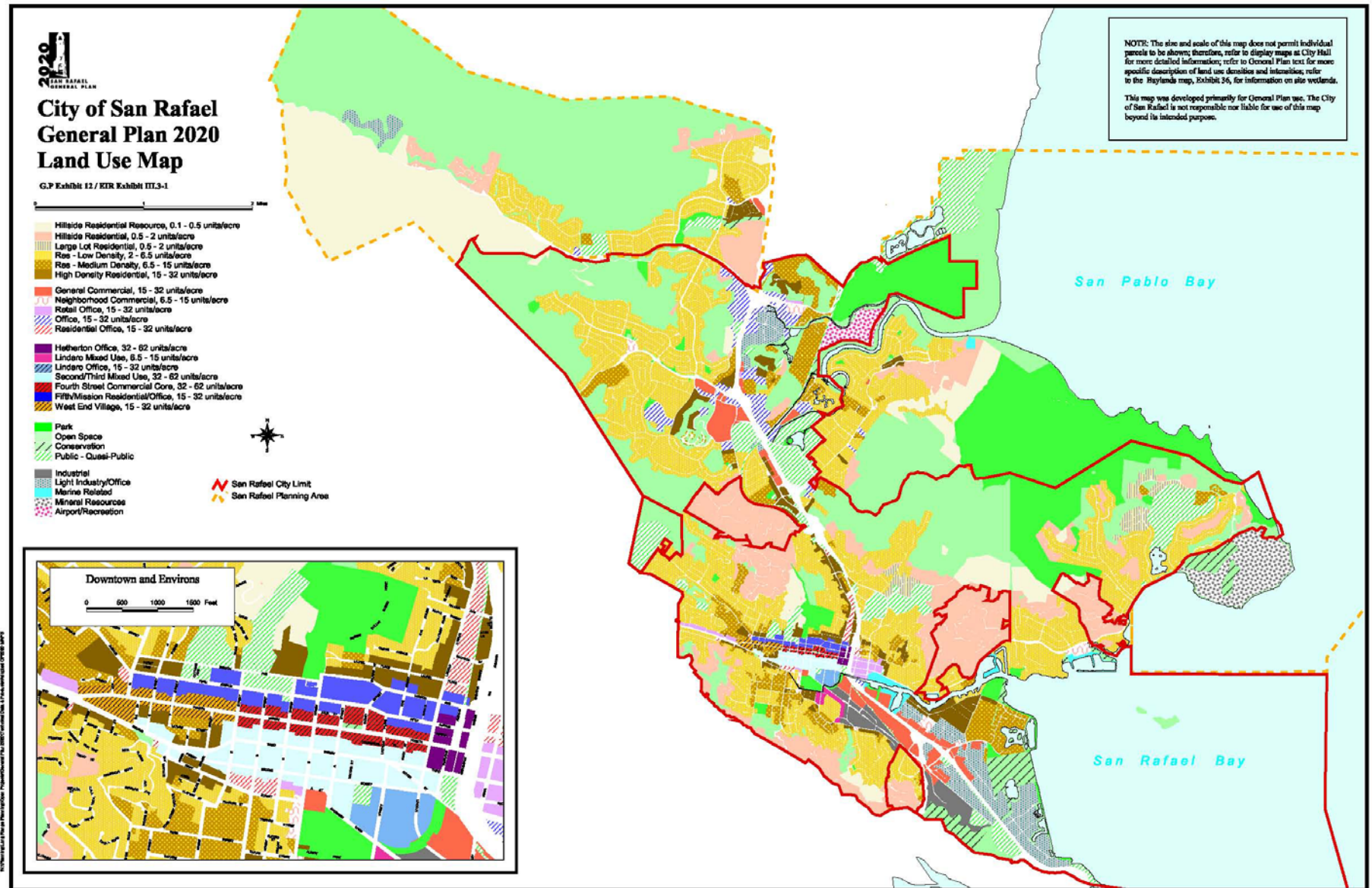
The San Rafael bicycle facilities and walking network will connect the neighborhoods where people live to the places they work, shop, engage in recreation, or go to school. An emphasis will be placed on regional bicycle facilities and transit connections and pedestrian improvements centered on the major activity centers in San Rafael, including the following:

- Downtown commercial district
- Civic buildings such as the community center, senior centers and the library
- Schools
- Transit hubs
- Neighborhood parks and regional recreational areas
- Shopping centers
- Major Employers

### ***Commuter Bicycle Needs***

An April 2003 national survey conducted by America Bikes showed that Americans want to bicycle more and support building infrastructure to achieve this: “Over half of Americans (52%) want to bike more than they do now and a majority of the public (53%) favors increasing federal spending to build more bike paths for easier and safer

Figure 4-1  
San Rafael General Plan 2020 Land Use Map



bicycling.” This suggests that there is a large reservoir of potential cyclists who do not ride (or do not ride more) due to a lack of appropriate facilities.

The parts of this plan that deal with bicycling focus primarily on the use of bicycles for commuting – utilitarian trips made for the purpose of getting to work or school, or for shopping, or other errands. It is therefore important to understand the specific needs of bicycle commuters. Bicyclists in San Rafael include employees who ride to work, children and adults who ride to school, and people running errands and shopping. While recreational cyclists often ride long distances and are not concerned with the time it takes, commuting bicyclists are more interested in shorter trips. Typically, they expect to ride less than three miles. Access to transit helps extend the commute range of cyclists.

Bicycle commuters usually seek the most direct and fastest route available, with regular adult commuters often preferring to ride on arterials rather than side streets or off-street facilities. Commute periods for bicyclists frequently coincide with peak auto traffic periods, increasing exposure to potential conflicts.

Rather than be directed to side streets, most commuting adult cyclists would prefer to use bicycle lanes or wider curb lanes on direct routes. Commuters generally prefer routes where they are required to stop as few times as possible, thereby minimizing delay and conflict with other vehicles.

Besides traffic congestion, major concerns for bicycle commuters include rain, riding in darkness, personal safety and security, and secure storage of their bicycle at the end of the trip.

### ***Commute Patterns***

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

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

As shown, about 1.2% of all employed San Rafael residents commute primarily by bicycle. Census data do not include the number of people who bicycle for recreation or for utilitarian purposes, students who bicycle to school, and bicycle commuters who travel from outside San Rafael, and are therefore likely to undercount true cycling rates. Recreational cycling is especially popular in San Rafael, with its easy access to popular recreational routes in West Marin and other areas.

San Rafael has a very high percentage of commuters who take public transit to work—over thirteen percent, compared with approximately five percent for the State. Two percent of Marin County Transit riders arrive at bus stops by bicycle.<sup>3</sup> If bicycle connections to Marin County Transit stops are improved, and especially if these connections are coupled with improved bicycle storage, it would be possible to shift some vehicle trips to the bus stops into bicycle trips. Improving connections to future proposed SMART stations would also encourage those who are arriving in San Rafael by SMART to bicycle from the station. It is assumed that a majority of transit riders are also pedestrians.

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

Mode	Nationwide	Statewide	Marin County	San Rafael
Bicycle	0.4%	0.9%	1.1%	1.2%
Walk	3.0%	3.0%	3.3%	3.4%
Public Transit	4.9%	5.3%	11.1%	13.2%
Drove Alone	78.2%	74.7%	71.8%	68.3%
Carpool	12.6%	15.1%	11.8%	12.6%
Other	0.5%	1.1%	0.6%	0.9%

Data from US Census 2000

### ***Potential Future Air Quality Improvements***

A key goal of the Bicycle and Pedestrian Master Plan is to maximize the number of local bicycle and pedestrian commuters in order to help reduce traffic congestion and air pollution.

San Rafael 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 of 2005, the air quality in the San Francisco Bay Area Basin did not meet the minimum State health-based standards for one-hour concentrations ground-level ozone and the State standards for Particulate Matter (PM<sub>10</sub>) and Fine Particulate Matter (PM<sub>2.5</sub>).<sup>4</sup> Currently, the Basin is classified as marginal non-attainment area for the Federal eight-hour ozone standard.

According to the BAAQMD, motor vehicles are responsible for approximately seventy-five percent of the smog in the Bay Area. Reducing vehicle miles traveled (VMTs) is a key goal of the BAAQMD, and fully implementing San Rafael's bicycle network will help

<sup>3</sup> Marin County Transit District. "Marin County Transit Short Range Transit Plan". March 2006

<sup>4</sup> BAAQMD. Ambient Air Quality Standards & Bay Area Attainment Status. Last updated July 15, 2005. [www.baaqmd.gov/pln/air\\_quality/ambient\\_air\\_quality.htm](http://www.baaqmd.gov/pln/air_quality/ambient_air_quality.htm)

to achieve this goal by providing residents safe and functional ways to get to work, school, or shopping without relying on motor vehicles. Based on data from the 2000 Census and estimates of bicycle mode share for students, the current number of daily bicycle commuters in San Rafael is estimated to be 1,659 riders, making 3,318 daily trips and saving an estimated 8,217 VMTs per weekday.

Table 4-2 quantifies the estimated reduction in VMTs in San Rafael and the estimated reduction in air pollutants based on the best available local and national data. It is estimated that the total number of bicycle commuters and utilitarian riders could increase from the current estimate of 1,659 to 2,037. This would result in an estimated decrease of 38 kg/day of hydrocarbons (HC), 286 kg/day of carbon monoxide (CO), and 19 kg/day of nitrogen oxides (NOX).

This improvement in air quality could be greater assuming that if conditions for bicyclists improve and attract new San Rafael-based riders, the same conditions may attract bicyclists to the City whose trips originate outside of San Rafael. San Rafael's mild climate and rising fuel costs will also encourage additional cycling as more attractive routes as gap closures are accomplished. Note that the methodology used to determine these projections is relatively new and that its accuracy will improve over subsequent years as it is refined and further developed.

Table 4-2  
Bicycle Commute and Air Quality Projections

Current Commuting Statistics		Source
San Rafael Population	56,132	2000 US Census
Number of Commuters	26,606	2000 US Census (Employed persons minus those working at home)
Number of Bicycle-to-Work Commuters	330	2000 US Census
Bicycle-to-Work Mode Share	1.24%	Mode share percentage of Bicycle to Work Commuters
School Children Grades K-8	5,664	2000 US Census, population ages 5-14
Estimated School Bicycle Commuters	453	Marin County Safe Routes to Schools 2004-2005 Program Report (Alta Planning + Design, 2006) (8%)
Number of College Students	2,808	2000 US Census
Estimated College Bicycle Commuters	562	National Bicycling & Walking Study, FHWA, Case Study No. 1, 1995. Adjusted to reflect Marin demographics and conditions (20%)

Table 4-2  
Bicycle Commute and Air Quality Projections

Average Weekday Golden Gate Ridership	15,703	Average of weekday system wide Golden Gate Transit boardings on Bus Routes serving San Rafael Routes (Marin Transit Data Request)
Number of Daily Bike-Golden Gate Transit Users	314	GGT Existing Conditions System Levels Analysis Report 2005, Page 4-24
Estimated Total Number of Bicycle Commuters and Utilitarian Riders	1,659	Total of bike-to-work, transit, school, college and utilitarian bicycle commuters. Does not include recreation.
Estimated Adjusted Mode Share	3.0%	Estimated Bicycle Commuters divided by population.
<b>Estimated Current Bicycle Trips</b>		
Total Daily Bicycle Trips	3,318	Total bicycle commuters x 2 (for round trips) plus total number of utilitarian bicycle trips
Reduced Vehicle Trips per Weekday	2,000	Assumes 73% of bicycle trips replace vehicle trips for adults/college students and 53% for school children
Reduced Vehicle Miles per Weekday	8,217	Assumes average one-way trip travel length of 4.6 miles for adults/college students and 0.5 mile for schoolchildren
<b>Potential Future Bicycle Commuters</b>		
Number of workers with commutes nine minutes or less	3,124	US Census 2000
Number of workers who already bicycle or walk to work	1,234	US Census 2000
Number of potential bicycle commuters	1,890	Calculated by subtracting number of workers who already bicycle or walk from the number of workers who have commutes 9 minutes or less
Future number of new bicycle commuters	378	Based on capture rate goal of 20% bicycle mode share
Total Future Daily Bicycle Commuters	2,037	Current daily bicycle commuters plus future bicycle commuters
Future Total Daily Bicycle Trips	4,074	Total bicycle commuters x 2 (for round trips)

Table 4-2  
Bicycle Commute and Air Quality Projections

Future Reduced Vehicle Trips per Weekday	2,974	Assumes 73% of bicycle trips replace vehicle trips
Future Reduced Vehicle Miles per Weekday	13,679	Assumes average one-way trip travel length of 4.6 miles for adults. Assumes 12 mph average bicycle speed; 23 minute average travel time. Travel time data from NHTS 2001 Trends, Table 26.
Future Reduced Vehicle Miles per Year	3,556,544	260 weekdays per year
<b>Future Air Quality Benefits</b>		
Reduced HC (kg/weekday)	38	(0.0028 kg/mile)
Reduced CO (kg/weekday)	286	(0.0209 kg/mile)
Reduced NOX (kg/weekday)	19	(0.00139 kg/mile)
Reduced CO2 (kg/weekday)	1,477,744	(0.4155 kg/mile)
Reduced HC (metric tons/year)	10	1,000 kg per metric ton; 256 weekdays/year
Reduced CO (metric tons/year)	73	1,000 kg per metric ton; 256 weekdays/year
Reduced NOX (metric tons/year)	5	1,000 kg per metric ton; 256 weekdays/year
Reduced CO2 (metric tons/year)	378,302	1,000 kg per metric ton; 256 weekdays/year

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

# Chapter 5: Proposed System and Improvements

This chapter begins with the overall priorities of San Rafael residents, and then describes the proposed infrastructure improvements that would meet these priorities.

## ***Community Priorities***

The following priorities list was developed based on input at two of the Marin County Bicycle Plan Update public meetings and one Nonmotorized Transportation Pilot Program (NTPP) public meeting (see Chapter 1 for public involvement details). Additional comments from the BPAC, residents, cyclists and pedestrians in San Rafael were also incorporated.

The most frequently requested improvements were for a continuous network of high quality north-south and east-west bicycle facilities through the County. This includes San Rafael where a number of routes are needed within the City. Other priorities of the community include the following:

- The 1994 North-South Bikeway Feasibility Study, the 2006 SMART FEIR and the 2008 Marin County Unincorporated Areas Bicycle and Pedestrian Master Plan describe the North/South Greenway following the old railroad right-of-way from Sausalito to Larkspur, then parallel to the railroad right of way from Larkspur to Novato. See Chapter 1 for more details of these plans.
- Facilities to support the San Rafael portion of the Cross Marin Trail are needed. Specifically, an equally high quality east-west bicycle facility is needed from San Quentin through San Rafael to San Anselmo and Fairfax using existing roads and paths, as well as paths proposed in this document. East-west bicycle facilities are also needed within San Rafael, where several are necessary to serve the local population. The bicycle facilities would be mostly on-street.
- Requests for new Class II bicycle lanes on many existing roads, such as Manuel T. Freitas Parkway, Las Gallinas Avenue, Los Ranchitos Road and North San Pedro Road.
- Improvements to existing bicycle lanes on Redwood Highway and Bellam Boulevard.
- Improved pedestrian and bicycle crossings.
- Allow bicycling over the Richmond-San Rafael Bridge.
- Alternatives to sub-standard sidewalk/path along streets like Francisco Boulevard East, Grand Avenue, near the San Rafael Transit Center, and along Redwood Highway in north San Rafael.

- Improve pedestrian access/safety and continuity on the main arteries feeding the town center.
- A bridge over San Rafael canal would make a much better connection between the Canal Neighborhood and Downtown, San Rafael High School, and major employment and shopping centers.
- A freeway overcrossing or undercrossing at Medway Road or Harbor Street would greatly improve connectivity between the canal area and the Woodland Avenue/Davidson Middle School area.
- Addition of curb cuts to meet ADA guidelines for pedestrians.
- Improve pedestrian crossings through traffic calming, better signage, enforcement, lighting and visibility, especially at crossings to bus stops, libraries, schools, and other frequent destinations.
- Encourage Marin County Transit to improve the San Rafael Transit Center to include increased bicycle parking and weather-protected storage.
- Two-way bicycle and pedestrian access to the Hammondale Court freeway undercrossing at the top of Lincoln Avenue.
- Encourage safe and more frequent bicycling and walking among school-age children.
- The addition of bicycle parking, including covered bicycle parking, according to national best practices, where feasible.
- When the SMART grade crossing of Andersen Drive is designed, it should include bicycle and pedestrian accommodations.

### ***Specific Bicycle Facility Improvement Projects***

As shown in Chapter 3 'Existing Conditions', San Rafael's current bicycle network provides some opportunities for safe travel both on-street and off-street. However, significant gaps remain in the system, which are critical to providing good connectivity for cyclists riding both within the City of San Rafael and attempting to travel to neighboring communities.

Proposed bicycle routes are described in this section and illustrated on the maps in Figures 1-1 and 1-2 in Chapter 1. Priorities are listed in Chapter 6.

### **Proposed Class I/II – Multi Use Paths/Bicycle Lanes**

Most of the Class I pathways recommended in this plan are elements of a larger future or in-progress project. Class I or Multi-Use Paths are the preferred bicycle facility for these projects. However where not feasible, Class II or Class III facilities may be installed. Most Class I facilities are elements of a larger future or in-progress project. Many will not be implemented by San Rafael or will be built in partnership with other agencies. However, in the interim, Class II or III may be installed, with possible upgrades later. Examples include the SMART pathway segments and existing at-grade

railroad crossings such as the Walter Place Pathway. Details of the proposed segments can be found in Table 5-1. Cost estimates for pathways not in progress, currently being studied or part of a larger project are provided in Chapter 6.

Please Note: When more than one class is indicated for a route such as Class I/II, the class with the higher degree of roadway separation is preferred. If Class I is unfeasible for financial, physical or other reasons, a Class II facility may be installed in the interim, but the roadway will remain in this document as a desired Class I. It is always desirable and the ultimate goal to build the better facility.

Table 5-1  
Proposed Class I/II Facilities

Route #	Segment Name	Begin	End	Class	Length
-	Canal Crossing*	Third Street	Canal Street	I	0.08
26	N. San Pedro Rd***	Los Ranchitos Road	Civic Center Dr	I/II	0.49
-	Civic Center Drive***	N. San Pedro Rd	Merrydale Overcrossing	I/II	0.78
-	I-580*	Main Street	Richmond-San Rafael Bridge	I	0.16
-	Lucas Valley Road*	Huckleberry Road	Miller Creek Road	I/II	0.60
-	Lucas Valley Road*	Miller Creek Road	Hwy 101 SB Ramps	I/II	0.79
-	Merrydale Road (includes grade separated crossing of the SMART tracks)*	Merrydale Rd north of SMART Tracks	350' south of SMART Path	I	0.07
-	North San Rafael Promenade 1*	Los Ranchitos Rd / Merrydale Overcrossing	Northgate Mall driveway	I	0.10
-	North San Rafael Promenade 2*	Merrydale Overcrossing / Los Ranchitos Rd	Merrydale Overcrossing / Civic Center Dr	I/II	0.17
28	North San Rafael Promenade 3	Manuel T. Freitas Pkwy / Del Ganado Rd	Manuel T. Freitas Pkwy / Las Gallinas Ave	I	0.59
-	Nova Albion School Path	Las Gallinas Avenue	Golden Hinde Blvd	I/II	0.89
-	Old Lucas Valley Road Pathway*	Lucas Valley Road	Old Lucas Valley Road	I	0.31

Table 5-1  
Proposed Class I/II Facilities

Route #	Segment Name	Begin	End	Class	Length
-	Pickleweed Park Pathway	Canal Street	Shoreline Park Pathway	I	0.39
5	Puerto Suello Hill Path – Transit Center Connector*	Mission Avenue / Hetherton Street	San Rafael Transit Center	I	0.11
-	Shoreline Park Pathway	Piombo Place	Francisco Boulevard East	I	0.22
-	Shoreline Park Pathway	Shoreline Path N	Shoreline Path S	I	0.20
-	SMART Pathway*	Civic Center Drive	Puerto Suello Hill Path	I	1.38
-	SMART Pathway*	North Avenue / City Limits	McInnis Parkway	I	1.17
-	US-101 Side Path*	Lillian Lane	N. San Pedro Rd	I	0.39
-	US-101 Overcrossing*	Harbor Street	Francisco Boulevard West	I	0.04
-	Walter Place Pathway*	Las Gallinas Ave	Los Ranchitos Rd	I	0.03
TOTAL					8.96

\* Requires coordination with other jurisdiction/entity

\*\* Section of segment is a one-way street

\*\*\* Segment of the 'Civic Center Connector'

### **Proposed Class II/III – Bicycle Lanes/Bicycle Routes**

The Class II/III bicycle facility designation indicates locations where the City is committed to developing a new on-street bicycle facility or improving an existing on-street bicycle facility. These are segments where further feasibility and engineering studies are required to determine whether a Class II Bicycle Lane or a Class III Signed Bicycle Route is appropriate. If bicycle lanes are found to be infeasible, the minimum treatment for these bicycle facilities is bicycle route signage, with Shared Roadway Bicycle Markings ("Sharrow") stencils used alongside on-street parallel parking. The majority of the proposed Class II/III bicycle facilities in this plan are located in the North San Rafael/Terra Linda area, where a number of wide streets present opportunities for improvement. The majority of the lanes are gap closures between existing facilities, either within the City or connecting segments of bicycle facilities as they pass from unincorporated areas to the City's jurisdiction and back again (e.g. Lucas Valley Road). Details of the bicycle facility proposals can be found in Table 5-2.

**Please Note:** When more than one class is indicated for a route such as Class II/III, the class with the higher degree of roadway separation is preferred. If Class II is unfeasible for financial, physical or other reasons, a Class III facility may be installed in the interim, but the roadway will remain in this document as a desired Class II. It is always desirable and the ultimate goal to build the better facility.

Table 5-2  
Proposed Class II/III Facilities

Route #	Segment Name	Begin	End	Class	Length
-	Fifth Avenue	H Street	Grand Avenue	II/III	1.11
-	Francisco Boulevard East**	Bellam Boulevard	Main Street	II/III	1.37
-	Francisco Boulevard West	Second Street	Irwin Street	II/III	0.15
-	Francisco Boulevard West	Irwin Street	Proposed US-101 Overcrossing at Harbor Street	II/III	0.49
-	Kerner Boulevard**	Bellam Boulevard	End of Kerner Boulevard	II	0.62
5	Las Gallinas Avenue	Nova Albion Way	Northgate Drive	II	0.21
-	Las Gallinas Avenue	Northgate Drive	Merrydale Overcrossing	II	0.30
5	Los Ranchitos Road	Northgate Drive	Golden Hinde Blvd	II	0.21
5	Los Ranchitos Road*	Golden Hinde Boulevard	N. San Pedro Rd	II/III	0.59
-	Lucas Valley Road*	Las Gallinas Avenue	Highway 101	II/III	0.58
28	Manuel T Freitas Pkwy	San Rafael City Limit	Del Ganado Road	II	0.67
-	Merrydale Road	Las Gallinas Avenue	Puerto Suello Hill Path Connector	II/III	0.57
26	N. San Pedro Road	Los Ranchitos Rd	Ex. Class II bike lanes	II	0.36
26	N. San Pedro Road	Ex. Class II bike lanes	Golf Avenue	II	0.07
24	Pt. San Pedro Road*	Marina Blvd	San Rafael City Limit	II	0.21

Table 5-2  
Proposed Class II/III Facilities

Route #	Segment Name	Begin	End	Class	Length
24	Pt. San Pedro Road*	Bayview Drive	San Rafael City Limit	II	0.79
24	Pt. San Pedro Road*	Main Drive	San Rafael City Limit	II	1.81
-	Second Street	Tamalpais Avenue	Third Street	II	0.32
-	Smith Ranch Road	Highway 101	McInnis Parkway	II/III	0.90
-	Third Street	Tamalpais Ave	San Rafael City Limit	II	0.74
TOTAL					12.07

\* Requires coordination with other jurisdiction/entity

\*\* Section of segment is a one-way street

\*\*\* Segment of the 'Civic Center Connector'

### **Proposed Class III – Signed Bicycle Routes**

Most of the existing and proposed bicycle facilities in San Rafael are Class III signed bicycle routes on streets shared with motor vehicles. The proposed bicycle routes in this plan consist mainly of gap closures, primary bicycle facilities along highly-traveled routes and quiet neighborhood routes. One key recommendation of this plan is to continue the use of sharrows, as appropriate, on segments noted in the table below, where on-street parking is present. Another recommendation is the design and implementation of a "Residential Bikeway" connecting the West End Neighborhood to the Andersen Drive bicycle lanes via a series of local streets as an alternative to the existing route on Fourth Street through downtown. This route would use shared roadway pavement stencils accompanied by bicycle route signs.

Table 5-3  
Proposed Class III Facilities

Route #	Segment Name	Begin	End	Class	Length
-	A Street	Fifth Avenue	First Street	III-Sharrows	0.24
-	Albert Park Ln**	B Street	Lindaro Street	III	0.27
-	Antonette Ave	C Street	D Street	III	0.09
-	Bayview Street	Marin Street	B Street	III-Sharrows	0.31
-	C Street	Antonette Ave	Fifth Avenue	III-Sharrows	0.75

Table 5-3  
Proposed Class III Facilities

Route #	Segment Name	Begin	End	Class	Length
-	Canal Street	Harbor Street	Canal Crossing	III	0.06
-	Cantera Way	San Rafael City Limit	Pt. San Pedro Rd	III	0.51
-	Clayton Street	Welch Street	Marin Street	III	0.04
-	Court Street	Mission Ave	Fifth Avenue	III	0.06
-	D Street	Fourth Street	Antonette Avenue	III-Sharrows	0.68
-	Francisco Boulevard East**	Grand Avenue	Bellam Boulevard	III	0.95
-	Front Street	Harbor Street	Medway Road	III-Sharrows	0.25
-	Grange Avenue	Francisco Boulevard East	Kerner Boulevard	III-Sharrows	0.09
-	H Street	Fifth Avenue	Fourth Street	III-Sharrows	0.06
-	Hammondale Undercrossing*	Lincoln Avenue	US 101 NB	III	0.19
-	Harbor Street	Francisco Boulevard East	Canal Street	III-Sharrows	0.18
-	US 101 NB Civic Center Off-Ramp*	US 101 NB	N. San Pedro Rd	III	0.19
-	US 101 NB Villa Ave On-Ramp*	Villa Avenue	US 101 NB	III	0.10
-	Las Gallinas Avenue	SMART Path	Merrydale Road	III	0.21
-	Lincoln Avenue	Linden Lane	Irwin Street	III-Sharrows	0.85
-	Main Street	WB I-580	EB I-580	III	0.05
-	Merrydale Road	Merrydale Overcrossing	SMART path	III	0.20
-	Merrydale Road	Merrydale Bridge	Las Gallinas Ave	III	0.12
-	Marin Street	Clayton Street	Bayview Street	III-Sharrows	0.16

Table 5-3  
Proposed Class III Facilities

Route #	Segment Name	Begin	End	Class	Length
-	Mill Street	Harbor Street	Medway Road	III-Sharrows	0.25
-	Mission Avenue	Grand Avenue	Court Street	III	0.44
-	Tamalpais Ave	Mission Ave	Fourth Street	III	0.12
-	Tamalpais Ave	Fourth Street	Second Street	III	0.13
-	Welch Street	Clayton Street	First Street	III-Sharrows	0.07
TOTAL					7.62
* Requires coordination with other jurisdiction/entity ** Section of segment is a one-way street *** Segment of the 'Civic Center Connector'					

### ***Proposed County-Wide and Inter-jurisdictional Projects***

In addition to the in-progress projects described in Chapter 1, the following section is a list of San Rafael area projects that are consistent with community priorities. These projects are not limited to San Rafael's jurisdiction and some will require partnering with other agencies to implement.

#### **1. Marin Pathway Maintenance Program**

**Jurisdiction(s):** Transportation Authority of Marin, County of Marin, local cities and towns, Caltrans.

Many residents and visitors have commented on the need to maintain and improve Marin's existing multi-use pathways. Maintenance of existing pathways in San Rafael is performed by the San Rafael Department of Public Works. Some of the existing pathways in and around San Rafael are maintained in partnership with other agencies (e.g. the County currently maintains the Mission Pass Path (Fawn Drive) and the City of San Rafael currently maintains the recently constructed Puerto Suello Hill Pathway).

The maintenance needs for these pathways typically fall into two categories – routine maintenance and major maintenance. The former consists of regular activities such as sweeping, debris removal, trimming vegetation and minor spot repairs to the pathway surface. The latter calls for extensive repaving overlays or full reconstruction of the path and the associated structures. This program would consist of a variety of improvements listed below, with each pathway and section requiring different improvements. As appropriate for the individual pathway, one goal of this effort would be to bring pathways up to Caltrans minimum standards where feasible regarding width and safety of entrances and exits, to invite a wider range of users to the facility.

Details of this program are to be determined based on whether a consistent local source of funds can be used for pathway maintenance. At this time no agency has officially developed a funding program or policy for pathway maintenance, and the recommendations in this plan are presented as concept-level, subject to further development. TAM has undertaken a pathway maintenance cost study whose purpose is to provide pathway maintenance practices and projected costs prior to further direction from the TAM Board on use of Measure A interest funds as matching funds for local maintenance expenditures.

## **2. Interchange and Intersection Improvements Projects**

**Jurisdiction(s):** Caltrans, local agencies

US 101 in Marin County poses challenges for bicyclists and pedestrians of all ages and abilities trying to cross from one side of the freeway to the other. This project recognizes both the complexity and the similar nature of the issue from interchange to interchange. Many interchanges share the same characteristics, meaning that prototype solutions probably have wide applicability. Caltrans itself has modified interchanges in Marin County, notably the southbound East Blithedale Avenue off-ramp in Mill Valley, partially to improve bicycle and pedestrian safety.

The City of San Rafael will continue to work with Caltrans to to build separate accommodations for walking and bicycling from one side of the freeway corridor to another, and to ensure that on- and off-ramps are as safe as possible for all users.

## **3. Bellam Boulevard Bicycle/Pedestrian Project**

**Jurisdiction(s):** City of San Rafael, Caltrans

Staff, the public, and others consistently identified the Bellam Boulevard corridor as needing pedestrian and bicycle upgrades. Specifically, it was noted that this area has a high number of people who are dependent on walking or bicycling as a primary mode of transportation, plus numerous people riding bicycles on sidewalks, and a combination of heavy traffic volumes, numerous driveways, and constrained roadway. Some surveys indicated specific problems with school children in the Canal Neighborhood reaching Davidson Middle School and all residents reaching the North/South Greenway because of the traffic on Bellam Boulevard at the I-580 ramps.

Recently, the sidewalk along the northern side of Bellam Boulevard between the I-580 EB ramps and Kerner Boulevard was widened as part of the I580/US101 Connector project.

#### **4. Bus Stop Access Improvement Program**

**Jurisdiction(s):** County of Marin, local cities and towns, Marin County Transit District, Golden Gate Transit District, Caltrans

Improving pedestrian, bicycle and ADA access through rehabilitation of bus stops in Marin County will improve the mobility for individuals through the county. High priority bus stops selected for this program will have one or more of the following: safety hazards, do not meet ADA accessibility standards, have more than one hundred (100) users a day, or are located near downtown areas or commercial cores. These access improvements will serve as models to the local jurisdictions, the County, Caltrans and the Marin County Transit District for demonstrating how improving the bus stop access can increase transit ridership, mobility, and the quality of life for the community.

The proposed program will provide funding to bring each of the selected bus stops to the minimum bus stop amenity standards that were established as part of Marin County Transit District's 2009 Short Range Transit Plan (SRTP).

#### **5. Regional Connection Projects**

##### **a. Bicycle Access across the Richmond Bridge**

**Jurisdiction(s):** Marin County, Caltrans, San Rafael, Bay Trail

Bicyclists have been advocating for access across the Richmond-San Rafael Bridge, which has been studied but not approved by Caltrans to date. Bicyclists can use Golden Gate Transit buses which serve the Richmond BART station, and carry up to two bicycles per bus.

Although the current configuration of the bridge is not ideal for cycling, this corridor is important for regional bicycle travel as the only connection between San Rafael and the communities of the East Bay. The exact nature of a potential bicycle facility on the bridge is the subject of ongoing study by Caltrans.

##### **b. San Francisco Bay Trail**

**Jurisdiction(s):** San Francisco Bay Trail

The San Francisco Bay Trail is a planned recreational corridor that, when complete, will be a continuous 500-mile recreational corridor that will encircle the entire Bay Area, connecting communities to each other and to the Bay. It will link the shorelines of all nine counties in the Bay Area and 47 of its cities. To date, 240 miles of the Bay Trail has been developed.

Implementation of the Bay Trail is being coordinated by the Bay Trail Project, a nonprofit organization housed at the Association of Bay Area Governments (ABAG). To carry out its mission, the Project raises funds for trail construction and maintenance, ensures consistency with the adopted Bay Trail Plan, provides technical assistance, enlists public participation in trail-related activities, and publicizes the Bay Trail and its benefits to the region.

## 6. Signals, Lighting Improvements and Upgrades

*Recommendation: Create a program to install and mark signal loop detectors that are responsive to bicycles at existing and new intersections.*

Such markings should show cyclists where to stand to trigger the detection at traffic signals. One suggested site for bicycle-sensitive traffic signals is North San Pedro Road at Merrydale Road.

The Nonmotorized Transportation Pilot Program project entitled “Countywide Projects: Intersection Improvements (#802)” includes the installation of bicycle detectors at key signalized intersections throughout the county, including the installation of new or improved signal loop detectors or video detectors for bicycles at several City of San Rafael traffic signals. Recently improvements to the traffic signal detection were installed at two locations including North San Pedro/Los Ranchitos Road and the Civic Center Drive/Merrydale Road.

### ***Pedestrian Improvements in San Rafael***

Accessibility, continuity, and connectedness of pedestrian facilities are key features of this element. Listed below are recommendations for pedestrian improvements identified in field surveys conducted by BPAC members. More improvements may be identified later by the Safe Routes to Schools programs and by neighborhood associations.

Note that unless otherwise noted, no official field surveys or engineering feasibility studies have been conducted for these proposed project areas. All improvements are subject to analysis as part of future project development.

Table 5-4  
Specific Pedestrian Improvements

No.	Location	Issue	Project
Canal Neighborhood and East San Rafael			
1	Francisco Boulevard East between Grand Avenue and Vivian Way	Sections of sidewalk are narrow (in some instances utilities reduce the width to less than four feet). Large cross slopes are present at driveway locations.	Improve, construct, widen sidewalk or install multi-use path and reduce cross slopes to meet current ADA regulations and work with various utility companies to have obstacles relocated.

Table 5-4  
Specific Pedestrian Improvements

No.	Location	Issue	Project
2	Grand Avenue between Francisco Boulevard East and Third Street	Sections of sidewalk are narrow. Large cross slopes are present at driveway locations.	Improve, construct, widen sidewalk or install multi-use path and reduce cross slopes to meet current ADA regulations, especially across the Grand Avenue Bridge. A study for this project has been funded by the Bay Trails Project.
3	Bellam Blvd from Andersen Dr to I-580 SB Ramps	Obstacles situated in narrow sidewalk. Cross slopes exceed allowable ADA.	Widen sidewalks and work with utility companies to relocate obstacles outside of the sidewalk. Modify islands at Andersen Dr / Bellam Blvd and Francisco Boulevard East/I-580 Ramps.
4	US-101 Overcrossing at Harbor Street	The freeway has been identified as an obstacle to pedestrians. Harbor Street is the midway point between the current access across the freeway to north and south. Canal residents indicated in the Canal Community Based Transportation Plan that this would improve their neighborhood.	Construct a pedestrian and bicycle over-crossing across the US 101 at the location of East Francisco Boulevard and Harbor Street connecting to West Francisco Boulevard (and/or to Andersen Dr).
5	Canal Bridge	The canal separates the pedestrians and bicyclists in the Canal neighborhood from San Rafael High School, Montecito Shopping Center, downtown and the Transit Center and forces them to use Francisco Boulevard East.	Construct a new canal crossing for easier and safer pedestrian and bicycle movement. The City recently completed a study detailing proposed locations and costs.

Table 5-4  
Specific Pedestrian Improvements

No.	Location	Issue	Project
6	Larkspur Street from Kerner Boulevard to Canal Street	There are few crosswalks and missing curb cuts. The sidewalk is lifted in locations and a portion is missing near Alto Street. Some utilities are located within the sidewalk reducing the affective width.	Add high visibility pedestrian crossing signage and curb cuts where needed. Work with various utility companies to have obstacles relocated outside of the sidewalk.
7	Francisco Boulevard East from Grange Avenue to Main Street (San Quentin Village access)	At approximately 2165 East Francisco Boulevard there is a bus stop sign, but no sidewalk, shelter or bus pad. There is a small business center here and this stop is a link to the Richmond Bridge and Sir Francis Drake Boulevard. Sidewalk ends at Bay Park.	Install sidewalk on the east side of the street along this segment. Improve the bus stop, including shelter, pad and ADA access.
8	Francisco Boulevard East from Pelican Way to Grange Avenue	Crosswalks lacking.	Add crosswalks across side streets along the east side of Francisco Boulevard East.
9	Intersection of Belvedere / Alto / Tiburon Streets	No sidewalk on north side of Tiburon Street. Ramp on southeast corner at Alto Street does not provide adequate room for ADA accessibility due to location of utility pole. Uncontrolled crossing located across Belvedere Street.	Construct missing sidewalk, install high visibility pedestrian crossing signage where needed and consider adding curb extensions to shorten crossing distance. Widen curb ramp to provide adequate width to meet current ADA regulations.

Table 5-4  
Specific Pedestrian Improvements

No.	Location	Issue	Project
10	I-580 crossing at Shoreline Parkway	Lack of an over/under crossing for vehicles, bicycles and pedestrians. Requires vehicles to travel on Kerner Boulevard and Bellam Boulevard in order to access west side of freeway.	Construct a pedestrian, vehicle and bicycle over or undercrossing of I-580 near the intersection of Shoreline Parkway to connect Francisco Boulevard East/Kerner Boulevard with Andersen Drive/East Sir Francis Drake Boulevard.
<b>Dominican/Black Canyon Neighborhood</b>			
11	Grand Avenue / Elm Street / Linden Lane	Crosswalks exist, but sidewalk and curb cuts are missing. No sidewalk on Elm Street (route children use to access Coleman Elementary School).	Construct missing sidewalk, provide curb cuts.
12	Grand Avenue from Acacia Avenue to Myrtle Avenue	Sidewalk is missing in multiple locations. Gravel side path currently used for pedestrian access.	Add sidewalks where missing in place of unpaved walkways.
<b>Downtown San Rafael</b>			
13	Francisco Boulevard West	Sidewalks are missing from San Rafael Transit Center to Rice Drive.	Construct a sidewalk or pathway along Francisco Boulevard West, connecting the San Rafael Transit Center to the Mahon Creek Pathway trailhead and to Rice Drive.
14	Grand Avenue and Second St intersection	On the southwest island, the traffic signal pole is located in accessible pedestrian path.	Relocate traffic signal pole.
15	Tamalpais Avenue at Mission Avenue	Missing curb cuts at crosswalk across the southern leg of the intersection (including large median island on Tamalpais Avenue).	Add curb cuts.
16	Mahon Creek Path at Andersen Drive	Curb cut missing and end of pathway onto Andersen Drive	Add curb cut

Table 5-4  
Specific Pedestrian Improvements

No.	Location	Issue	Project
17	Access on Mission Avenue from the Library / City Hall to Boyd Park	The sidewalk ends abruptly with steep drop-off and there is no sidewalk for the remainder of this section of the corridor.	Conduct a study to find the best solution in this area. A standard concrete sidewalk may not fit in well at this location.
18	West End and Second Street	Long crossing distance for pedestrians from west End to Fourth Street with multiple crossings.	On lower volume legs and crosswalks at end of West End, consider curb extensions and raised crosswalks. Also consider pedestrian push-button actuated advance warning signs and beacons to alert motorists where visibility is limited. Consider reconfiguring traffic islands to shorten crossing distances.
19	Hetherton Street and Second Street	Sidewalk and curb cuts are reported to flood in heavy rains. This intersection is in close proximity to the Transit Center.	Improve drainage.
20	Crossings of signalized intersections in the downtown vicinity	Many intersections do not have pedestrian signal heads and others do not have "count-down" heads.	Install "count-down" pedestrian signal heads at all signalized intersections.
21	D Street (Wolfe Grade)	No sidewalk on west side of the street.	Work with property owners to widen, upgrade, maintain and install sidewalks or shoulders, as feasible, on the east side of the street.
<b>North San Rafael and Terra Linda Neighborhood</b>			
22	Puerto Suello Hill to N. San Pedro Road, on east side of US-101	Narrow path next to busy freeway lane.	Work with Caltrans to construct a multi-use pathway. Existing shoulder should be maintained and swept.

Table 5-4  
Specific Pedestrian Improvements

No.	Location	Issue	Project
23	Merrydale Road to Civic Center Drive (under US-101)	Gap in Merrydale Road and an ungraded, unpaved access to Civic Center Drive under US Highway 101. This is a major bicycle and pedestrian gap closure and is a potential connection between the Northgate Promenade and the proposed SMART rail.	Construct new bicycle / pedestrian bridge over the creek to create continuous pedestrian and bicycle access along Merrydale Road and install a path parallel to the rail line from Civic Center Drive to the northern section of Merrydale Road.
24	Los Gamos Drive at Manuel T. Freitas Parkway	Long crossing for pedestrians across north leg of intersection and no crosswalk present.	Reduce curb return radii to provide shorter pedestrian crossing. Install crosswalk across north leg of intersection.
25	Vallecito Elementary School (Nova Albion School Path)	Large numbers of pedestrians (majority being children) observed during school hours on Nova Albion Way.	Consider widening the sidewalk along Nova Albion Way to accommodate the number of pedestrians present during peak hours.
26	Old Redwood Highway frontage road from Mitchell Drive to Professional Center Pkwy	Sidewalk is narrow and missing in many locations. Some utilities are located in the sidewalk.	Install sidewalk on the east side of the street to make one continuous sidewalk for pedestrians. Work with utility companies to have obstacles relocated outside of the sidewalk.
27	Los Ranchitos Rd from N. San Pedro Rd to Hammondale Ct and Lincoln Ave	Pedestrian facilities are lacking along this north-south corridor.	Consider a short-term option using Merrydale Pathway / Merrydale Road and long term construction of switchback multi-use pathway from the top of Lincoln Hill down to North San Pedro Road and proposed SMART pathway.

Table 5-4  
Specific Pedestrian Improvements

No.	Location	Issue	Project
28	Civic Center Drive from Manuel T. Freitas Parkway Overpass to North San Pedro Road	No sidewalk on the west side of the street from Merrydale Overcrossing to Peter Behr Drive. No sidewalk north of Merrydale Overcrossing on the west side of street. An existing bus stop sign (no other bus stop improvements) is located on the gravel side path just north of Merrydale Overcrossing.	Finish connecting missing gaps in the sidewalk and provide ADA access to existing bus stop north of Merrydale Overcrossing.
29	Hammondale Court and Lincoln Avenue intersection	Sidewalk is broken or missing on south-west corner. The Hammondale Court undercrossing has a very narrow sidewalk and is difficult to access.	Repair and complete sidewalk on the southwest corner of the intersection. Improve pedestrian access to the underpass and widen the sidewalk.
30	Los Ranchitos Road from Northgate Drive to North San Pedro Road.	No sidewalk. Segment has wide shoulders.	Add sidewalk on the east side of the roadway connecting to the existing sidewalk on N. San Pedro Road. Install high visibility pedestrian crossing signage where needed.
31	North San Pedro Road from City limit to Los Ranchitos Road	Sidewalks are missing at several locations. Uncontrolled, unsigned pedestrian crossing across the freeway ramps.	Work with Caltrans to add sidewalks on at least one side of North San Pedro Road and install high visibility pedestrian crossing signage where needed. Conduct a safety study if needed and further improve pedestrian safety at crossings of the freeway on and off ramps.
City Wide			
32	All actuated signalized intersections	Pedestrian push button heights vary, size of button varies, need audible indications	Upgrade all existing push buttons to current ADA standards with audible indications at a standard height.

## Chapter 6: Implementation

Improvements have been categorized by phase of implementation as near term, mid term and long term. Projects categorized as long term or mid term are no less important than short term projects. In some cases, preliminary work needs to start right away on mid and long term projects in order to assure completion within the ten or twenty year timetable. Therefore, the strategy is to do most or all of the short term priority improvements during the first five years and to start the planning and preliminary work on the top priority projects in the mid and long categories.

Individual bicycle facility segments are listed in Table 6-1 and pedestrian facilities are listed in Table 6-2. Within each phase, projects are listed in priority order.

### ***Near Term Priority Segments (1 to 5 years)***

Near term priority projects are typically relatively low cost and require only signing and striping and/or stenciling. These projects will also be able to be completed without extensive planning, design work, construction, or high-level decision-making. Some projects are more extensive, but the design of the projects is currently under way and construction is anticipated within the next five years.

Projects with a priority “A” are recommended for completion first, “B” second, and so on.

Proposed bicycle facilities have been given priority “A” if they are located on the main north-south and main east-west bicycle facility projects. Bicycle facilities that are centrally located, and/or heavily used are priority “B”, and the rest are “C”.

### ***Mid Term Priority Segments (1 to 10 years)***

Facility segments that will require more work or require further study are considered to be mid term priority. These projects require moderate to extensive planning and design work, minor to moderate construction and high-level approval and may involve coordination with other jurisdictions. Most do not have an unusually high cost, but may involve redesign of the median or intersections, the relocation of parking, etc.

The “A” projects are most likely to be easiest to implement and should be started right away, if feasible. Priority “B” and “C” projects should be implemented later within the ten-year period, if feasible.

Proposed bicycle facilities have been given priority “A” if they are located on the main north-south and main east-west bicycle facility projects. Bicycle facilities that are centrally located, and/or heavily used are priority “B”, and the rest are “C”.

### ***Long Term Priority Segments (1 to 20 years)***

All facility segments classified as “long term” have some characteristic that makes them potentially difficult to complete. Reasons may include high cost, lack of space, location outside of the City limits, and uncertainty about plans by other agencies or the need to build community support. These projects are very important but may be complicated, require extensive planning, design and engineering work. They involve major construction, road realignment, or other issues.

Priority “A” projects should be planned right away, and completed first. Priority “B” and “C” projects should be planned and implemented within twenty years, as feasible.

Proposed bicycle facilities have been given priority “A” if they are located on the main north-south and main east-west bicycle facility projects. Bicycle facilities that are centrally located, and/or heavily used are priority “B”, and the rest are “C”.

### ***Cost Estimates***

Cost estimates for construction of bicycle facilities are based on the following ‘per mile’ approximations unless otherwise noted, which have been adjusted for each individual segment based on the known length, condition and needs of that segment. These costs reflect concept-level project evaluation, since no feasibility or preliminary design has been completed, and actual costs may differ. Cost estimates were completed in 2008 and include a preliminary estimate of typical project activities such as survey, design, administration and contingency. Segments designated as “long term” may be built sooner if funding becomes available.

- Class I Shared Use Pathway is \$641,400 per mile
- Class II Bicycle Lanes is \$30,700 per mile
- Class III Signed Bicycle Route is \$12,600 per mile
- Class III Signed Bicycle Route with Shared Roadway Bicycle Markings (“Sharrow”) is \$17,500 per mile

Please note that estimated costs are a moving target as construction costs can escalate quickly over time. If a proposed facility is shown as multiple classes then its cost estimate is based on the higher class.

Table 6-1  
Near Term Priority Bicycle Facility Cost Estimates

Route #	Priority	Segment Name	Begin	End	Class	Length	Est. Cost
-	A	Albert Park Lane**	B Street	Lindaro Street	III	0.27	\$3,400
-	A	Antonette Avenue	C Street	D Street	III	0.09	\$1,150
-	A	Bayview Street	Marin Street	B Street	III-Sharrows	0.31	\$5,450
-	A	Clayton Street	Welch Street	Marin Street	III	0.04	\$500
-	A	Francisco Blvd West	Second Street	Irwin Street	II/III	0.15	\$4,600
5	A	Los Ranchitos Road	Northgate Drive	Golden Hinde Blvd	II	0.21	\$6,450
5	A	Los Ranchitos Road*	Golden Hinde Blvd	N. San Pedro Rd	II/III	0.59	\$18,150
-	A	Marin Street	Clayton Street	Bayview Street	III-Sharrows	0.16	\$2,800
24	A	Point San Pedro Rd*	Marina Boulevard	San Rafael City Limit	II	0.21	\$6,450
24	A	Point San Pedro Rd*	Bayview Drive	San Rafael City Limit	II	0.79	\$24,250
24	A	Point San Pedro Rd*	Main Drive	San Rafael City Limit	II	1.81	\$55,600
5	A	Puerto Suello Hill Path - Transit Center Connector*	Mission Avenue / Hetherton Street	San Rafael Transit Center	I	0.11	\$1,200,000 <sup>5</sup>
-	A	SMART Pathway*	Civic Center Drive	Puerto Suello Hill Path	I	1.38	\$885,150
-	A	SMART Pathway*	North Avenue / City Limits	McInnis Parkway	I	1.17	\$750,450
-	A	Walter PI Pathway*	Las Gallinas Ave	Los Ranchitos Road	I	0.03	\$19,250
-	A	Welch Street	Clayton Street	First Street	III-Sharrows	0.07	\$1,250
-	B	Francisco Blvd East	Grand Avenue	Bellam Boulevard	III	0.95	\$12,000

<sup>5</sup> Estimate taken from the NTPP – Puerto Suello Hill to Transit Center Connector Project

Table 6-1  
Near Term Priority Bicycle Facility Cost Estimates

Route #	Priority	Segment Name	Begin	End	Class	Length	Est. Cost
-	C	Canal Street	Harbor Street	Canal Crossing	III	0.06	\$800
-	C	Las Gallinas Avenue	Northgate Drive	Merrydale Overcrossing	II	0.30	\$9,200
-	C	Lincoln Avenue	Linden Lane	Irwin Street	III-Sharrows	0.85	\$14,900
-	C	Lucas Valley Road*	Las Gallinas Ave	Highway 101	II/III	0.58	\$17,800
-	C	US 101 NB Civic Center Off-Ramp*	US 101 NB	N. San Pedro Road	III	0.19	\$2,400
-	C	US 101 NB Villa Avenue On-Ramp*	Villa Avenue	US 101 NB	III	0.10	\$1,250
TOTAL						10.42	\$3,043,250

\* Requires coordination with other jurisdiction/entity

\*\* Section of segment is a one-way street

\*\*\* Segment of the 'Civic Center Connector'

Table 6-2  
Mid Term Priority Bicycle Facility Cost Estimates

Route #	Priority	Segment Name	Begin	End	Class	Length	Est. Cost
-	A	C Street	Antonette Avenue	Fifth Avenue	III-Sharrows	0.75	\$8,750
-	A	Front Street	Harbor Street	Medway Road	III-Sharrows	0.25	\$4,400
-	A	Harbor Street	Francisco Blvd East	Canal Street	III-Sharrows	0.18	\$3,150
5	A	Las Gallinas Avenue	Nova Albion Way	Northgate Drive	II	0.21	\$6,450
-	A	Merrydale Road	Las Gallinas Avenue	Puerto Suello Hill Path Connector	II/III	0.57	\$17,500

Table 6-2  
Mid Term Priority Bicycle Facility Cost Estimates

Route #	Priority	Segment Name	Begin	End	Class	Length	Est. Cost
-	A	Merrydale Road	Merrydale Overcrossing	SMART Path	III	0.20	\$2,550
-	A	Merrydale Road	Merrydale Bridge	Las Gallinas Avenue	III	0.12	\$1,550
-	A	Merrydale Road*	Merrydale Rd north of SMART tracks	350' south of Path	I	0.07	\$1,000,000
-	A	Mill Street	Harbor Street	Medway Road	III-Sharrows	0.25	\$4,400
-	A	Tamalpais Avenue	Mission Avenue	Fourth Street	III	0.12	\$1,550
-	A	Tamalpais Avenue	Fourth Street	Second Street	III	0.13	\$1,650
-	B	Court Street	Mission Avenue	Fifth Avenue	III	0.06	\$750
-	B	Fifth Avenue	H Street	Grand Avenue	II/III	1.11	\$34,100
-	B	Grange Avenue	Francisco Blvd East	Kerner Boulevard	III-Sharrows	0.09	\$1,600
-	B	H Street	Fifth Avenue	Fourth Street	III-Sharrows	0.06	\$1,050
-	B	Hammondale Undercrossing*	Lincoln Avenue	US 101 NB	III	0.19	\$2,400
-	B	Kerner Boulevard**	Bellam Boulevard	End of Kerner Blvd	II	0.62	\$19,050
-	B	Las Gallinas Avenue	SMART Path	Merrydale Road	III	0.21	\$2,650
-	B	Main Street	WB I-580	EB I-580	III	0.05	\$650
28	B	Manuel T. Freitas Parkway	San Rafael City Limit	Del Ganado Road	II	0.67	\$20,600
-	B	Mission Avenue	Grand Avenue	Court Street	III	0.44	\$5,550
26	B	North San Pedro Rd	Los Ranchitos Rd	Ex. Class II bike lanes	II	0.36	\$11,050
26	B	North San Pedro Rd	Ex. Class II bike lanes	Golf Avenue	II	0.07	\$2,150

Table 6-2  
Mid Term Priority Bicycle Facility Cost Estimates

Route #	Priority	Segment Name	Begin	End	Class	Length	Est. Cost
28	B	North San Rafael Promenade 3	Manuel T. Freitas Pkwy / Del Ganado Road	Manuel T. Freitas Pkwy / Las Gallinas Avenue	I	0.59	\$378,450
-	B	North San Rafael Promenade 1*	Los Ranchitos Rd / Merrydale Overcrossing	Northgate Mall driveway	I	0.10	\$64,150
-	B	Second Street	Tamalpais Avenue	Third Street	II	0.32	\$9,850
-	B	Third Street	Tamalpais Avenue	San Rafael City Limit	II	0.74	\$22,750
-	B	US-101 Side Path*	Lillian Lane	N. San Pedro Rd	I	0.39	\$250,150
-	C	A Street	Fifth Avenue	First Street	III-Sharrows	0.24	\$3,050
-	C	Cantera Way	San Rafael City Limit	Point San Pedro Road	III	0.51	\$6,450
-	C	Canal Crossing*	Third Street	Canal Street	I	0.08	\$4,000,000 <sup>6</sup>
-	C	Civic Center Drive***	N. San Pedro Road	Merrydale Overcrossing	I/II	0.78	\$500,300
-	C	D Street	Fourth Street	Antonette Avenue	III-Sharrows	0.68	\$11,900
-	C	Francisco Boulevard East**	Bellam Boulevard	Main Street	II/III	1.37	\$42,100
-	C	I-580*	Main Street	Richmond-San Rafael Bridge	I	0.16	\$102,650
26	C	N. San Pedro Rd***	Los Ranchitos Rd	Civic Center Drive	I/II	0.49	\$614,300

<sup>6</sup> Estimate taken from the San Rafael General Plan 2020

Table 6-2  
Mid Term Priority Bicycle Facility Cost Estimates

Route #	Priority	Segment Name	Begin	End	Class	Length	Est. Cost
-	C	Smith Ranch Road	Highway 101	McInnis Parkway	II/III	0.90	\$27,650
TOTAL						13.07	\$7,187,300

\* Requires coordination with other jurisdiction/entity

\*\* Section of segment is a one-way street

\*\*\* Segment of the 'Civic Center Connector'

Table 6-3  
Long Term Priority Bicycle Facility Cost Estimates

Route #	Priority	Segment Name	Begin	End	Class	Length	Est. Cost
-	A	Lucas Valley Road*	Huckleberry Road	Miller Creek Road	I/II	0.60	\$384,850
-	A	Lucas Valley Road*	Miller Creek Road	Hwy 101 SB Ramps	I/II	0.79	\$506,700
-	A	North San Rafael Promenade 2*	Merrydale Overcrossing / Los Ranchitos Road	Merrydale Overcrossing / Civic Center Drive	I/II	0.17	\$109,050
-	A	Pickleweed Park Pathway	Canal Street	Shoreline Park Pathway	I	0.39	\$250,150
-	B	Nova Albion School Path	Las Gallinas Avenue	Golden Hinde Boulevard	I/II	0.89	\$570,850
-	B	Shoreline Park Path	Shoreline Path N	Shoreline Path S	I	0.20	\$128,300
-	C	Francisco Boulevard West	Irwin Street	Proposed US-101 Overcrossing at Harbor Street	II/III	0.49	\$15,050
-	C	Old Lucas Valley Road Pathway*	Lucas Valley Road	Old Lucas Valley Road	I	0.31	\$198,850

Table 6-3  
Long Term Priority Bicycle Facility Cost Estimates

Route #	Priority	Segment Name	Begin	End	Class	Length	Est. Cost
-	C	Shoreline Park Pathway	Piombo Place	Francisco Boulevard East	I	0.22	\$141,100
-	B	US 101 Overcrossing*	Harbor Street	Francisco Blvd West	I	0.04	\$4,500,000 <sup>7</sup>
TOTAL						4.10	\$6,804,900

\* Requires coordination with other jurisdiction/entity

\*\* Section of segment is a one-way street

\*\*\* Segment of the 'Civic Center Connector'

<sup>7</sup> Estimate taken from the San Rafael General Plan 2020

Table 6-4  
Near Term Priority Pedestrian Facility Priorities

Priority	Pedestrian Project
A	All Actuated Signalized Intersections (Push Buttons)
A	Bellam Boulevard from Andersen Drive to I-580 SB Ramps
A	Crossings of signalized intersections in the downtown vicinity
A	Francisco Boulevard East between Grand Avenue and Vivian Way
A	Francisco Boulevard West
A	Grand Avenue between Francisco Boulevard East and Third Street
A	Larkspur Street from Kerner Boulevard to Canal Street
A	Tamalpais Avenue at Mission Avenue
B	Grand Avenue/Elm Street/Linden Lane
B	Hetherton Street and Second Street
B	Intersection of Belvedere/Alto/Tiburon Streets
C	Francisco Boulevard East from Pelican Way to Grange Avenue
C	Grand Avenue from Acacia Avenue to Myrtle Avenue
C	Grand Avenue and Second Street intersection
C	Hammondale Court and Lincoln Avenue intersection
C	Los Gamos Drive at Manuel T. Freitas Parkway

Table 6-5  
Mid Term Priority Pedestrian Facility Priorities

Priority	Pedestrian Project
A	Access on Mission Avenue from the Library/City Hall area to Boyd Park
A	Merrydale Road to Civic Center Drive (under US-101)
A	North San Pedro Road from City limit to Los Ranchitos Road
B	Francisco Boulevard East from Grange Avenue to Main Street (San Quentin Village access)
B	Los Ranchitos Road from Northgate Drive to North San Pedro Road
C	Civic Center Drive from Manuel T. Freitas Parkway Overpass to North San Pedro Road
C	D Street (Wolfe Grade)
C	Old Redwood Highway frontage road from Mitchell Drive to Professional Center Pkwy
C	West End and Second Street

Table 6-6  
Long Term Pedestrian Facility Priorities

Priority	Pedestrian Project
A	Canal Bridge
A	Los Ranchitos Road from North San Pedro Road to Hammondale Court and Lincoln Avenue
B	I-580 crossing at Shoreline Parkway
C	Puerto Suello Hill to North San Pedro Road, on East side of US-101
C	US-101 Overcrossing at Harbor Street
C	Vallecito Middle School (Nova Albion Way)