

Introduction

Purpose of the Plan

The Town of Yountville Bicycle Plan was developed as a component of the Napa County Transportation Authority's *Countywide Bicycle Plan Update*. The Plan is intended to guide and influence the development of bikeways, bicycle policies, bicycle programs and bicycle facility design standards to make bicycling throughout Yountville and Napa County more safe, comfortable, convenient and enjoyable for all bicyclists. The overarching goal of the Bicycle Plan is to increase the number of persons who bicycle throughout Yountville and Napa County for transportation to work, school, utilitarian purposes, and recreation. Bicycle Plan Maps including the The Town of Yountville Bikeways Map, Up-Valley Bikeways Map, and Countywide Bikeways Map are shown in Figures 1, 2, and 3 respectively.

Background

This Bicycle Master Plan is The Town of Yountville's first stand alone bicycle plan, although the Town does have an existing Pathways Plan that includes bicycles. Previous countywide bicycle planning efforts have also included Yountville.

Caltrans Compliance

The Town of Yountville Bicycle Plan was prepared in accordance with the California Bicycle Transportation Act. To be eligible for Bicycle Transportation Account Funds, the California Bicycle Transportation Act requires that cities and counties prepare and adopt a Bicycle Transportation Plan that addresses items a – k in Section 891.2 of the Streets and Highways Code. These items are outlined in Table I. To maintain eligibility with the Caltrans BTA, Bicycle Transportation Plans must be updated every five years. Information on the Bicycle Transportation Act, Bicycle Transportation Plan (BTP) preparation and processing and eligible Bicycle Transportation Account projects is available on Caltrans' BTA webpage: <http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm>

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Figure 1 Placeholder

Town of Yountville Bikeways Map

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Up-Valley Bikeways Map

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Countywide Bikeways Map

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**Table I
Required Bicycle Master Plan Elements**

California Bicycle Transportation Act (1994)	Bicycle Plan Reference
a. Estimated number of existing and future bicycle commuters	Existing – Table 4, Page 11 Proposed – Objective 1, Page 14
b. Map and description of land use settlement patterns	<i>Setting and Land Use</i> , Page 9
c. Map and description of existing and proposed bikeways	Map Figures 1, 2, 3 Existing – <i>Bikeways Inventory</i> , Page 29 Proposed – <i>Proposed Bikeway System</i> , Page 33
d. Map and description of bicycle parking facilities	Figure 1 – <i>Bikeways Map Bicycle Parking</i> , Page 30
e. Map and description of multi-modal connections	Figure 1 – <i>Bikeways Map Multi-Modal Connections</i> , Page 30
f. Map and description of facilities for changing and storing clothes and equipment	Figure 1 – <i>Bikeways Map Shower and Locker Facilities</i> , Page 31
g. Description of bicycle safety and education programs	<i>Safety, Education, and Support Programs</i> , Page 34
h. Description of citizen and community participation	<i>Public Participation</i> , Page 7
i. Description of consistency with transportation, air quality, and energy conservation plans	<i>Coordination and Consistency with Existing Plans and Policies</i> , Page 12
j. Description of proposed projects and implementation priorities	<i>Proposed Bikeway System</i> , Page 32 <i>Table 12 Proposed Bikeways and Project Priorities</i> , Page 33
k. Description of past expenditures and future financial needs for bicycle facilities	Table 17 Historical Expenditures on Bicycle Facilities , Page 66

Public Participation

The Bicycle Plan Update was developed over an 18-month period in 2010/11. The Plan was prepared by a consulting team working closely with NCTPA staff, a Project Steering Committee, local agency staff, Bicycle Advisory Committees or other responsible groups from the County and Napa’s cities, stakeholders, the bicycle community, and interested citizens. The 2011 Napa Countywide Bicycle Plan Update builds upon the efforts of the 2003 Plan and integrates new projects, partnerships, concepts, and programs. Public participation was an important component of the Countywide Bicycle Plan Update. The NCTPA and plan participants solicited public input on existing conditions for bicyclists, potential improvement projects and programs, and site-specific issues such as safety concerns, access, connectivity, bicycle parking, and other items needed to improve conditions for bicyclists in the Plan Area. The public participation process utilized an “advocacy” approach, where the general public and citizen representatives serving on advisory committees were instrumental in the development of a vision for bicycling in the community. The public participation process is summarized below.

- *Project Steering Committee* – A project steering committee comprised of local agency staff, citizen representatives, representatives from the Napa County Bicycle Coalition, Vine Trail Coalition, Napa County Safe Routes to Schools Program, Bay Trail Project, and Napa County Parks and Open Space, bicycle advocates, and others was established to oversee the development and progress of the Plan.

- *Advisory Committee Meetings* – The project consultant and NCTPA staff attended bicycle or other responsible advisory committee meetings in each participating jurisdiction to kick off the project, collect input on issues and opportunities, and develop a vision and goals for the project. A second round of advisory committee meetings was conducted to review draft plans and project and program proposals.
- *Public Workshop #1* – The initial public workshop for the Bicycle Plan Update was held on Saturday, October 23, 2010, from 10:30 a.m. to 12:30 p.m. at the Yountville Community Center. Approximately 65 people attended the workshop, including local agency staff, elected officials, NCTPA board members, local bicycle advocates, and members of public. The purpose of the workshop was to collect input on issues, opportunities, and constraints throughout the Plan Area. Attendees were led through a series of small and large group exercises designed to solicit their input using a slide presentation, mapping exercise, issues discussion, and a visioning exercise.
- *Staff Interviews* – Members of local agency staff responsible for bikeway implementation and maintenance were interviewed to solicit their input on existing conditions, issues, opportunities, and constraints regarding Napa’s bikeway system and programs.
- *Public Workshop #2* – *Public Workshop #2* was held on Saturday, September 24, 2011, from 1:00 to 4:00 PM at New Technology High School in the City of Napa. Approximately 50 people attended the workshop including local agency staff, elected officials, NCTPA board members, local bicycle advocates, and members of public. The purpose of the meeting was to give the public an opportunity to comment on the draft Bicycle Plan Update. The draft Plan was presented and attendees participated in group discussions and mapping exercises. Public comments were recorded and incorporated into the Bicycle Plan Update.
- *Council Hearings* – In early 2012, the Plan will be presented to the Town Council for review and adoption

Setting and Context

Setting and Land Use

The Town of Yountville in Napa County is close to the center of the Napa Valley, approximately 55 miles northeast of San Francisco. Incorporated in 1965, Yountville is located on the western side of the valley floor along SR 29 between St. Helena to the north and the City of Napa to the south. The California Veterans Home of Yountville has approximately 1200 veteran residents which make up a large segment of the town population.



Table 2
General Info – Town of Yountville

Total Population		3,297
2035 ABAG Population Projection		3,600
Land Area	1.5	sq. mi
Average Population Density	2,198	persons/sq. mi.
<i>2035 ABAG Projections '09</i>		

Demographics and Commute Patterns

Demographics and travel information for The Town of Yountville were analyzed to identify *mode split* and to evaluate travel time to work. The analysis establishes base data on the existing number of bicycle commuters, and also provides an indication of the number of potential bicycle commuters in the Plan area. This information can then be used by staff and local officials to develop improvement plans and set priorities, with the objective of increasing the percentage of people who choose to bicycle rather than drive a car or be driven.

A review of available demographic and commute statistics was performed in order to better understand the level of bicycling in The Town of Yountville and Napa County as a whole. Several data sources were reviewed, including California Department of Finance Population Estimates, the Bay Area Travel Survey, and Journey-to-Work (JTW) Data from the US Census Bureau.

Every ten years the US Census Bureau attempts to count every person throughout the nation. As part of this survey process, the agency collects information on the primary mode of transportation used by employed people over the age of 16 to get to work. The collective responses to the Census Bureau's question "How did you usually get to work last week?" form a set of data known as Journey-to-Work (JTW). JTW data is considered the most reliable source of transportation mode choice information available. However, while the JTW provides a glimpse of how Yountville residents travel to and from work, the data source only provides a partial understanding of the travel characteristics of bicyclists within the community. This is particularly true since it does not reflect multi-modal or non-work trips. For example, survey respondents who typically use more than one method of transportation are instructed to mark the mode used for "most of the distance," thus overlooking bicycling and walking trips to transit. For commuters who do not use the same mode every day, the survey wording leaves the response up to the respondent; and the survey takes place in the month of March, which can be rainy in Napa County and a deterrent to bicycling. Further, the JTW data does not include school, shopping, and recreational trips, which constitute much of the bicycle and pedestrian travel by Yountville's student and senior populations, and others. Given the growth that has occurred over the last decade in Yountville, data from the 2000 US Census does not provide an accurate account of current journey to work statistics. However, the 2000 US Census represents the most comprehensive data set available to analyze how Yountville's residents travel to work. To address this data shortfall, it is recommended that this Plan be amended once the 2010 Census data is released, which typically occurs 18 to 24 months after the Census is completed.

The 2010 California Department of Finance Population Estimates indicates that Yountville has a population of 2933 persons. Based on this estimate, the Town's population has declined by approximately 364 persons since the 2000 US Census. Population projections from the Association of Bay Area Governments anticipate that Yountville will add approximately 303 additional residents by the year 2035. According to the 2000 US Census, (the most current Census for which data is available) there are 974 workers in Yountville 16 years old or older. Of these, 908 work outside the home. Thirty-six percent or 351 workers, have a travel time to work of 15 minutes or less. Yountville has a higher than average rate of workers with a commute time of less than 15 minutes, 19 percent, when compared to the state and nation which are at 25 percent and 30 percent respectively. This indicates that a moderate portion of the Town's

Circulation and Mobility Framework for St. Helena

Draft St. Helena General Plan Update

Transportation planning in California is undergoing a broad transformation. A changing demographic, the growing movement to combat climate change, and an increasing focus on the public health benefits of biking and walking all highlight the need to provide greater choice in local and regional travel mode. Multimodal transportation and the integration of land use and transportation planning, while always important, are central components of this paradigm shift. These concepts are widely accepted as essential to creating lasting circulation and mobility improvements. As municipalities and agencies plan for change, individuals too seek to minimize travel costs, and learn more every day about how decreasing their reliance on the automobile can reduce their carbon footprint and improve their physical health and well-being. Mobility is no longer only about the private automobile and public transit. Increasingly, it is defined by how community members can use alternate modes of transportation efficiently. The size, topography and climate of Yountville make it an ideal place for both walking and biking.

Mode Split is a term that describes the number of trips or the percentage of travelers using a particular type of transportation, e.g., walking, bicycling, taking a bus, driving, etc.

workers are employed within the community. Travel time to work in Yountville is shown here:

Table 3
2000 US Census – Travel Time to Work for Yountville

Total Employed Persons	100.00%	974
Worked at home	8.04%	66
Less than 15 minutes	50.69%	351
15 to 29 minutes	19.72%	344
30 to 44 minutes	13.21%	111
45 or more minutes	8.33%	102

Source: *United States Census 2000*

As shown in table 4, JTW data indicates that 79 percent of workers in Yountville, or 766 persons, drive to work alone. Approximately 0.7 percent or 7 workers, commute by bicycle, a rate that is lower than the Countywide and statewide averages of 0.8 percent, but consistent with the national average of 0.4 percent. About 3.2 percent (32 persons) of work trips are taken on foot, the second lowest walk-to-work rate in Napa County. While approximately 9 percent of workers in Yountville (94 persons) carpool, the majority of workers drive to work alone. Given Yountville’s climate, topography, and percentage of commuters with a travel time to work of 15 minutes or less compared to the number of existing bicycle and pedestrian commuters, a moderate opportunity exists to achieve a greater bicycle mode split. Every motor vehicle trip or vehicle mile traveled that is eliminated results in less air pollution, reduced green house gas emissions, and lessened traffic congestion.

Table 4
2000 US Census – Mode Split Data for Yountville

	Yountville		Napa County		California	
Population (2000 US Census)	2,916		124,279		33,871,648	
Employed persons 16 years of age +	974		58,501		14,525,322	
Mode Split	Percent	Number	Percent	Number	Percent	Number
Mode Split	100.00%	974	100.00%	57,393	100.00%	14,525,322
Drove Alone	78.6%	766	72.65%	41,698	71.82%	10,432,462
Bike	.7%	7	0.83%	479	0.83%	120,567
Walk	3.2%	32	4.14%	2,378	2.85%	414,581
Public Transit	.9%	9	1.40%	803	5.07%	736,037
Carpool	9.6%	94	14.84%	8,519	14.55%	2,113,313
Motorcycle	0.00%	0	0.22%	127	0.25%	36,262
Other	0%	0	0.83%	474	0.79%	115,064
Worked at Home	6.7%	66	5.08%	2,915	3.83%	557,036

Source: *United States Census 2000*

Visitors and Tourism

Visitors are another important existing and future user group. The Napa Valley is renowned as a grape growing region making it an international tourist destination. Aside from its scenic qualities, wineries, spas, and restaurants, the Napa Valley is known for its temperate climate, making it ideal for walking and bicycling. The area was one of the first to attract bicycle touring groups, and continues to draw residents and visitors committed to an active lifestyle. Bicycle adventure tourists are a match for the Napa Destination Council's Targeted Visitor Profile. Other studies have shown that with safe bicycle/pedestrian trails such as the Vine Trail, cycle tourists stay longer, spend more and participate in more activities than non-cycle tourists, including in the shoulder seasons. Ongoing surveys among visitors continue to indicate that bicycling is one of the top 10 reasons tourists choose Napa Valley as their destination.

For several years, the Napa Valley Vine Trail Coalition has been working on developing a 44-mile continuous, Class I trail from Vallejo to Calistoga, including an alignment through the Town of Yountville. The organization identified the importance of such a trail in providing transportation options, tourism opportunities and to enhance the quality of life for residents throughout the Napa Valley. The trail will offer transportation, recreation, education and healthy lifestyle benefits to residents and the 4.7 million visitors who come to the Valley each year while potentially replacing the need for 150,000 automobile trips in the process. As it provides these benefits, the Vine Trail is expected to generate \$75 million per year in ongoing economic impact as well as providing jobs for 60 people per mile built during construction. The Greenway Feasibility Study projected over 3 million uses per year of a completed regional Vine Trail with about half being residents; half visitors.

Existing Circulation Network

Yountville's street network is situated on a north-south axis. SR 29, a regional highway, is at the western edge of the Town's transportation network and provides access from The Town of Yountville to the Cities of Napa and American Canyon to the south, and St. Helena and Calistoga to the north. SR 29 connects the Town with the greater San Francisco Bay Area and the greater Northern California region. The Town's street network consists of a modified grid of north-south and east-west residential collector streets that provide access to residential streets and neighborhoods. **The existing street network is displayed in Figure 5.**

North-South Streets

Major north-south streets in Yountville include:

State Route 29 (SR 29) which runs along the west side of the town and is the primary highway to areas north and south within the county. Two other main north-south collectors are Washington Street and Yount Street. Washington Street is the primary collector running north-south through the town and links to Yount Street just north of Mulberry Street which runs to the east. Yount Street is the primary connector to Yountville Cross Road, a two lane rural arterial is the only east-west collector.

Future Road and Transportation Projects

Coordination and Consistency with Existing Plans and Policies

There are a number of federal, state, regional, and local plans, policies and standards that govern bikeway development. Preparation of the Bicycle Plan included an extensive review of pertinent planning documents and policies. Brief summaries of these relevant efforts are provided in Appendix A.

The Bicycle Plan update was undertaken in context with the policies and standards of the following documents resulting from local efforts.

Vision, Goals, Objectives and Policies

The vision, goal, objectives, and common policies are meant to function as a mutually agreed upon framework applicable to both the primary countywide bicycle system and local bicycle networks. The policies are designed to guide the development and maintenance of a bicycle system throughout Napa County and express the intent of Yountville, the NCTPA, and its member agencies to enhance bicycle mobility and to improve safety, access, traffic congestion, air quality, and the quality of life throughout Napa County for residents, workers and visitors. In addition to common policies that are mutually agreed to, local policies and implementing programs are included that address issues in Yountville and complement the common policies.

It is important to note that as projects advance or are developed, local and countywide bicycle policies should be referenced to ensure that both private development and public works projects are consistent with the mutually agreed upon countywide policies, and that plans and development projects in Yountville implement the full measures of the bicycle plan elements. The common countywide policies were a focal point of the Bicycle Plan effort and appear in the Overview Section of the plan as well.

Definitions

For context, definitions of terms used in this report are provided below.

- *Bicycle “System”* – the whole of all of the components, including both physical and programmatic
- *Bicycle “Network”* – the physical improvements that establish bikeways (Class I, II, or III routes)
- *Goal* – the destination or where we want to be at the end of the planning journey. Goals are usually broad, optimistic and expressive of a long-term vision.
- *Objective* – mileposts along the way to achieving the goals. They are specific, measurable steps to be achieved if the overall goals are to be met.
- *Policy* – a principle or rule to guide decisions by the local agency with regard to a particular issue or set of issues.
- *Program* – a specific action to accomplish the policy or objective

Bicycling Vision for the Region

A comprehensive, connected bicycle system is achieved through supportive development patterns and programmatic practices, and will provide people with safe, convenient and enjoyable access throughout all Napa County jurisdictions and to destinations beyond. Bicycling is common for everyday trips and recreation, contributing to the quality of life in Napa and the health, safety and welfare of its residents, workers and visitors. Napa is known as a bicycle friendly community with a “world class” bicycling system.

Principal Goal: *To develop and maintain a safe and comprehensive countywide bicycle transportation and recreation system that provides access, opportunities for healthy physical activity, and reduced traffic congestion and energy use. Policies, programs and projects work together to provide safe, efficient and enjoyable opportunities for bicyclists of all types, ages, and abilities to access public transportation, school, work, recreation areas, shopping and other activity centers, and residential neighborhoods, and to connect Napa jurisdictions to each other and the region.*

Countywide Objectives

Objective 1.0: The Countywide Bicycle Network

Establish a comprehensive, safe, connected countywide bicycle transportation and recreation system to support increases in bicycle trips made throughout the County to 10 percent of all trips by 2035.

Policies

- I.1 Develop and maintain a local and countywide bicycle transportation and recreation network that connects Napa's neighborhoods and communities, and provides access to public transportation, school, work, recreation areas, shopping and other activity centers, and to regional routes according to the maps and recommendations in this plan. [NCTPA, cities, towns, County]
- I.2 Develop and maintain contiguous north-south and east-west Class I pathways to provide inter-city connections and serve as primary bikeways in the Countywide Bikeway System. [NCTPA, cities, towns, County]
- I.3 Consistent with federal, state and regional directives for "routine accommodation and complete streets"¹, ensure that all transportation projects on designated bicycle routes include, enhance or maintain bicycle transportation facilities. [NCTPA, cities, towns, County]
- I.4 Seek opportunities to work cooperatively with all responsible departments and agencies (for example, transportation agencies, flood districts, utility agencies, parks and open space districts) to close existing gaps in facilities and ensure the network is funded, designed, constructed, and maintained. [NCTPA, cities, towns, County]
- I.5 Consider the needs of all types of bicyclists (commuters, recreational riders, children, and families) in planning, developing, and maintaining a bikeway network that is safe and convenient. [NCTPA, cities, towns, County]
- I.6 Establish and/or maintain local and countywide bicycle advisory committees to advise staff on bicycle network issues. [NCTPA, cities, towns, County]

Summaries of Federal, State, and Regional policies regarding the importance and consideration of non-motorized modes are provided in Appendix A.

Yountville Policies/Programs

- Y-1.a Create a bicycle and pedestrian friendly and convenient community. This includes the development of bicycle and pedestrian paths,
- Y-1.b Provide for safe and efficient pedestrian and bicycle routes to local schools.
- Y-1.c Create regional access – Connect to other Napa and Sonoma County destinations, including access to Regional transit. Complete the San Francisco Bay Trail through Yountville as close to wetlands and Napa River as possible.
- Y-1.d Communicate and coordinate with the NCTPA Bicycle Advisory Committee, NCTPA,

¹ US DOT Policy Statement: Integrating Bicycling and Walking into Transportation Infrastructure, 2000; Assembly Concurrent Resolution 211, 2002; Caltrans Deputy Directive 64, 2001; Caltrans Director's Policy 22 (Director's Policy on Context Sensitive Solutions), 2001; Metropolitan Transportation Commission Resolution No. 3765, (Routine Accommodations), 2006

Napa Valley Vine Trail Coalition, Napa County Bicycle Coalition, Napa County Regional Park and Open Space District and other related agencies and organizations to work collaboratively on projects that enhance connectivity for commuter and recreational bicyclists and pedestrians. Objective 2.0: Design

Utilize accepted design standards and “best practices” to facilitate completion of a connected bicycle system that is safe, convenient and enjoyable to use.

Policies

- 2.1 Utilize Chapter 1000, "Bikeways Planning and Design," of the *California Highway Design Manual*, the *California Manual of Uniform Traffic Control Devices*, and the American Association of State Highway Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*, as well as evolving “best practices” for the development of bicycle facilities. [NCTPA, cities, towns, County]
- 2.2 Consistent with Assembly Bill 1581 (Fuller) and Caltrans Policy Directive 09-06, assure that all approaches to signalized intersections include bicycle detection devices that are operational and properly marked. [NCTPA, cities, towns, County]
- 2.3 Provide consistent enhanced crossing features at uncontrolled intersections with Class I trails. [NCTPA, cities, towns, County]
- 2.4 Where standard Class II bike lanes are infeasible under current conditions, consider innovative approaches to safely accommodate bicycles. (Approaches may include but are not limited to: striped edge lines, signs, shared lane markings, “road diets,” eliminating parking, etc.) [NCTPA, Caltrans, cities, towns, County]
- 2.5 Install way-finding signage, markers, and stencils on off-street paths, on-street bikeways, local Class III routes, and State Routes to improve way finding for bicyclists, assist emergency personnel, and heighten motorists’ awareness. [NCTPA, Caltrans, cities, towns, County]
- 2.6 Improve safety and access for bicyclists at all at-grade railroad crossings by providing appropriate enhancements such as proper track structure, safe crossing angles, track fillers, lighting, and adequate warning and guidance information among other features. [NCTPA, Caltrans, cities, towns, County]

European Design

European cities employ a variety of bikeway designs generally known as “Cycle Tracks” that protect or separate bikeways from vehicle traffic where possible. These engineering efforts combined with a comprehensive approach to safety, encouragement, and awareness have helped to establish mode split rates with up to 40 percent of all trips made by bicycle. Where appropriate, similar practices should be tested or employed to determine if significant mode split shifts can be achieved within the Napa Valley.

Yountville Policies/Programs

- Y-2.a Establish and post rules related to bicycle speed limits on mixed-use trails.

Objective 3.0: Multimodal Integration

Develop and enhance opportunities for bicyclists to easily access public transit and other transportation resources.

Policies

- 3.1 Require transit providers to provide and maintain convenient and secure bike parking facilities and related amenities at major transit stops and transportation centers. [NCTPA, cities, towns,

County]

- 3.2 Require local and regional transit agencies to accommodate bicycles on all transit vehicles that serve the general public. [NCTPA]
- 3.3 Plan for additional bicycle storage capacity on transit vehicles to ensure capacity keeps up with demand. [NCTPA]
- 3.4 Consider a “Safe Routes to Transit” program that prioritizes bicycle and pedestrian access to transit stops and centers. [NCTPA, cities, towns, County]
- 3.5 Encourage the development of “staging areas” as a component of trail development and other bikeway projects where appropriate to accommodate recreational bicycling needs. [NCTPA, cities, towns, County]
- 3.6 Develop strategies and work with private landowners/businesses to provide bicycle parking at strategic locations. [NCTPA, cities, towns, County, NCBC]

Objective 4.0: Comprehensive Support Facilities

Ensure development of comprehensive support facilities for bicycling such as short- and long-term bicycle parking, end of trip amenities, bicycle staging areas, repair stations, and other resources such as bicycle maps, guide information, and on-line tools.

Policies

- 4.1 Require adequate short-term (i.e. bike racks) and long-term (i.e. bike lockers) bicycle parking for non-residential uses as required in local standards. Nonresidential uses include private commercial and industrial uses, as well as hospitals, clinics, gyms, parks and other civic facilities. [Cities, towns, County]
- 4.2 Provide adequate short-term bicycle parking and long-term bicycle storage for transportation centers including transit transfer centers, park-and-ride lots, train stations, transit stops, etc. [NCTPA, Caltrans, cities, towns, County]
- 4.3 Work with businesses and private property owners to provide bicycle parking at existing employment, retail, and commercial sites. [NCTPA, cities, towns, County]
- 4.4 Encourage employers to provide secure indoor and/or covered bicycle parking for their employees. [Cities, towns, County]
- 4.5 Encourage major employers to provide shower and locker facilities for workers. [Cities, towns, County]
- 4.6 Encourage local school district to provide well located, secure bicycle parking at schools. [NCTPA, cities, towns, County]
- 4.7 Design Class I Trails to incorporate high-visibility crossing treatments, pedestrian scale lighting, street furniture, drinking fountains, interpretive elements, and other amenities where appropriate. [NCTPA, cities, towns, County]

Objective 5.0: Safety and Security

Create a countywide bicycle system that is perceived to be safe for bicyclists of all types and age groups, and work to reduce collisions involving bicyclists by 50 percent by the year 2035. (Use 2008 collision data as the baseline for analysis and perform periodic progress evaluations at 5-year intervals to benchmark progress.)

Policies

- 5.1 Coordinate the delivery of bicycle Safety Education Programs to schools utilizing assistance from law enforcement agencies, bicycle advocacy groups, local bicycle shops, Napa County Office of Education, Napa County Health and Human Services, and other appropriate organizations. [NCTPA, cities, towns, County, NCBC]
- 5.2 Focus on improving safety at intersections by using or installing routine pedestrian signal cycles; pedestrian push buttons; high-visibility crosswalk markings; appropriate warning and directional signs; and reassurance or directional markings for bicyclists such as shared lane markings, skip lines, etc.; and through the use of focused education.
- 5.3 Focus on improving safety at railroad crossings by providing safe track crossing angles for bicyclists, using concrete panels and flangeway fillers to avoid surface irregularities, and through the use of quad crossing gates and warning signs. [Caltrans, cities, towns, County, Napa Wine Train]
- 5.4 Safety improvements in the vicinity of schools, major public transit hubs, civic buildings, shopping centers, and other community destinations shall be given a high priority for implementation. [NCTPA, Caltrans, cities, towns, County]
- 5.5 Improve ongoing collection and analysis of collision data to assist in the identification of problem areas which may require immediate attention. [Cities, towns, County]
- 5.6 Promote targeted enforcement of violations that focus on primary collision factors such as riding on the wrong side of the road, riding without proper safety equipment including lights at night, and right-of-way violations, etc.

Objective 6.0: Land Use

Support and strengthen local land use policies for compact, mixed use development in appropriate areas, and for designing and constructing bicycle facilities as part of new development projects.

Policies

- 6.1 Condition discretionary projects to provide needed bicycle improvements on Class I, II or III routes designated in this plan, assuming a nexus is established. Improvements include easements or land dedication and route construction, maintenance or enhancement, including support facilities. Construction may be deferred until a connection to an existing route can be made at the discretion of the jurisdiction. [Cities, towns, County]
- 6.2 In accordance with CEQA Guidelines, projects that could result in the loss of existing bicycle facilities or jeopardize future facilities included in this Plan must be mitigated.
- 6.3 Encourage school districts to participate in providing safe and continuous bicycle and pedestrian connections from surrounding neighborhoods when constructing new or improving existing school facilities. [NCTPA, cities, towns, County]

Objective 7.0: Education and Promotion

Develop programs and public outreach materials to promote safety and the positive benefits of bicycling.

Policies

- 7.1 Develop and implement a multimedia countywide bicycle and pedestrian safety and education campaign to increase knowledge of riding rules, improve etiquette between motorized and non-motorized modes, promote bicycle tourism, and increase the awareness of the benefits of bicycling and walking as transportation modes. [NCTPA, cities, towns, County – potentially jointly]
- 7.2 Expand the delivery of Safe Routes to Schools curriculum to all elementary and middle schools annually. [NCTPA, cities, towns, County, School Districts, NCBC]
- 7.3 Educate law enforcement personnel, agency staff, elected officials, and school officials about the benefits of non-motorized transportation, and the safety needs of bicyclists and pedestrians. [NCTPA, cities, towns, County, School Districts, NCBC]
- 7.4 Develop and maintain a public bikeway map and user guide that provides bike route, education, safety, and promotional information. [NCTPA, cities, towns, County- potentially jointly]
- 7.5 Distribute bicycle and pedestrian safety, educational, and promotional materials at drivers training and citation diversion programs, school orientations and community and civic events. [NCTPA, cities, towns, County, law enforcement agencies, schools, advocacy organizations]
- 7.6 Encourage events that introduce the public to bicycling and walking such as bike-to-work, commuter challenges, bike/walk-to-school days, elected official bike rides, etc. [NCTPA, cities, towns, County, schools, advocacy organizations]
- 7.7 Encourage major employment centers and employers to facilitate commuting by bicycle, including the use of flex-time work schedules to support non-rush hour bicycle commuting. [NCTPA, cities, towns, County, advocacy organizations]

Objective 8.0: Planning

Continue to update and integrate bicycle-related transportation projects into land use and recreation plans and roadway improvement projects.

Policies

- 8.1 The countywide and/or local Bicycle Advisory Committee (BAC) shall be responsible for advising staff and decision makers on the ongoing planning and coordination of the countywide bicycle transportation system. [County, city and town BACs]
- 8.2 Update and adopt the Bicycle Plan in accordance with the California Bicycle Transportation Act, and to coordinate with Regional Transportation Plan updates. [NCTPA, County, participating cities and towns]
- 8.3 Participating jurisdictions shall update their general plans to incorporate the key contents of this Bicycle Plan. [County, participating cities and towns]
- 8.4 Consider local and the Countywide BAC as a resource to review roadway improvement projects, particularly on designated bicycle routes, for bicycle safety and compatibility and

consistency with this plan. “Roadway improvements” include widening, resurfacing, rehabilitation, capacity improvements, traffic calming improvements, etc. Note that MTC’s Regional Bicycle Plan for the San Francisco Bay Area recommends that local agencies form and maintain Advisory Committees to advise staff on bicycle and pedestrian issues. [NCTPA, cities, towns, County]

- 8.5 Proactively seek new opportunities for acquisition of abandoned rights-of-way, natural waterways, flood control rights-of-way, utility rights-of-way, and other lands for the development of new Class I multi-use pathways that integrate with the planned system. [NCTPA, cities, towns, County]
- 8.6 Recognize the varied needs of bicyclists by striving to maintain on-street bikeways where off street pathways or alternative routes are proposed. Existing bikeways should not be altered or eliminated without consulting local bicycle advisory committees. [NCTPA, cities, towns, County]
- 8.7 NCTPA and local jurisdictions are encouraged to assign staff to assume bicycle coordination duties to oversee implementation of the Countywide Bicycle Plan and coordinate activities between affected departments and jurisdictions. [NCTPA, cities, towns, County]

Yountville Policies/Programs

- Y-8.a Develop connections wherever possible between pedestrian/bicycle circulation corridors and parks and open space opportunities.
- Y-8.b Ensure that all new development provides bicycle and pedestrian connectivity through the use of sidewalks, Class I multi-use paths and Class II bike lanes.
- Y-8.c Complete and adopt a Bicycle Master Plan for the Town of Yountville to supplement the existing Town Pathways Plan (adopted in July 2003) pursuant to Section 891.2 of the Streets & Highways Code.

Objective 9.0: Maintenance

Maintain and/or improve the quality, operation, and integrity of bicycle infrastructure.

Policies

- 9.1 Maintain geometry, pavement surface condition, debris removal, markings, and signage on Class II and Class III bikeways to the same standards and condition as the adjacent motor vehicle lanes. [Cities, towns, County]
- 9.2 Develop or retain a maintenance reporting system with a central point of contact to report, track, and respond to routine bicycle maintenance issues in a timely manner. [NCTPA, NCBC, cities, towns, County]
- 9.3 Require that road construction projects minimize their impacts on bicyclists through the proper placement of construction signs and equipment, and by providing adequate detours. [Caltrans, cities, towns, County]
- 9.4 Consider bicycle safety in the routine maintenance of local roads and seek to, at a minimum, include the following activities [Caltrans, cities, towns, County]:
 - Trim vegetation to provide a minimum horizontal clearance of 4 feet from the edge of pavement and a minimum vertical clearance of 8 feet.

- Clear debris from road shoulder areas to provide a clean surface for bicycling.

Objective 10.0: Funding

Work to maximize the amount of funding to implement bicycle projects and programs throughout the county.

Policies

- 10.1 Seek varied sources of funding, including but not limited to federal, state, and regional programs, partnerships with local non-profits and other local agencies, and local sources such as assessments to improve the bicycle system. [NCTPA, cities, towns, County]
- 10.2 Encourage multi-jurisdictional funding applications to implement the primary network and countywide bicycle system. [NCTPA, cities, towns, County]
- 10.3 Promote the availability of adequate regional, state and federal funding sources for bicycle transportation projects. [NCTPA, NCBC, cities, towns, County]

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Bicyclists and Bicycle Facilities

Operation of Bicycles/Rules of the Road

In California, the *California Vehicle Code* (VC) is the set of traffic laws that govern the behaviors of vehicle drivers. VC 231 defines a bicycle as “a device upon which any person may ride, propelled exclusively by human power through a belt, chain, or gears and having one or more wheels.” The VC does not define bicycles as vehicles, but states that persons riding bicycles have all the rights and responsibilities of the drivers of vehicles (Division 11, “Rules of the Road”). Additionally, the VC includes several sections specific to bicyclists. In general, bicyclists are required to ride according to the basic traffic laws that all drivers follow including but not limited to the following:

- Drive on the right-hand side of the roadway
- Obey traffic control devices (signs, signals)
- Yield to cross traffic
- Yield when changing lanes

Duty of Bicycle Operator: Operation On Roadway (VC 21202)

- a) Any person operating a bicycle upon a roadway at a speed less than the normal speed of traffic moving in the same direction at such time shall ride as close as practicable to the right-hand curb or edge of the roadway except under any of the following situations:
 - When overtaking and passing another bicycle or motor vehicle proceeding in the same direction.
 - When preparing for a left turn at an intersection or into a private road or driveway.
 - When reasonably necessary to avoid conditions (including, but not limited to, fixed or moving objects, vehicles, bicycles, pedestrians, animals, surface hazards, or substandard width lanes) that make it unsafe to continue along the right-hand curb or edge. For purposes of this section, a "substandard width lane" is a lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the lane.
- b) Any person operating a bicycle on a one-way street or highway with two or more marked traffic lanes, may ride as near the left-hand curb or edge of such roadway as practicable.

Permitted Movements from Bicycle Lanes (VC 21208)

- Whenever a bicycle lane has been established on a roadway, any person operating a bicycle upon the roadway at a speed less than the normal speed of traffic moving in the same direction shall ride in the bicycle lane, except under the following situations.
 - When overtaking or passing another bicycle, vehicle, or pedestrian within the lane or about to enter the lane if such overtaking and passing cannot be done safely within the lane.
 - When preparing for a left turn at an intersection or into a private road or driveway.
 - When necessary to leave the lane to avoid debris or other hazardous conditions.
- No operator of a bicycle shall leave a bicycle lane until it can be done safely and then only after giving an appropriate hand signal in the event that any vehicle might be affected by the movement.

Intersection Positioning

At intersections, bicycles should travel in the right-most lane that leads to their destination. This means that if a bicycle is preparing for a left-hand turn, they may leave the right side of the road even if a bike lane is provided.

Types of Bicyclists

Understanding the needs and preferences of the various types of bicyclists in the Plan Area is an important part of the process of evaluating existing usage, projecting future demand, and planning for improvement projects. While bicyclists' skills, confidence, and preferences can vary significantly amongst the various bicyclist types, concerns about the safety of bicycling remain paramount for all bicyclists. According to the Portland Office of Transportation, "riding a bicycle should not require bravery, yet all too often, that is the perception among bicyclists and non-bicyclists alike." The common denominator for cities around the world that have achieved a high share of bicyclists in their mode splits is that they have essentially removed the element of fear associated with bicycling in an urban environment. In regard to travel choices, it is unfortunate that fear currently exists in our society. In many cities, bicycling is often the most logical, enjoyable and cost effective choice for short trips for a substantial portion of the community, if not the majority of their populace.

Bicyclists can be categorized in a variety of ways, including age, skill, trip purpose, i.e. transportation or recreation, and even by type of bicycle ridden such as road, mountain, or recumbent bicycle. For the purpose of this Plan, bicyclists have been classified in the following categories: "Advanced Bicyclists," "Average Bicyclists," and "Novice Youth/Adult Bicyclists."

Advanced Bicyclists are typically comfortable riding anywhere they are legally allowed to operate a bicycle, including space shared with cars and trucks along arterials or rural highways. *Less advanced or Average Bicyclists* are typically more comfortable on roadways that provide space separated from motorists and/or along separated pathways. *Novice Bicyclists*, including children and new adult riders, may be confident and have some level of bicycle handling skills; however, they often do not have the experience of seasoned riders, nor the training or background in traffic laws necessary to operate safely on the road. Bicyclist types and their preferences and needs are defined further in Table 5.

**Table 5
Bicyclist Types, Preferences and Needs**

Bicyclist Type	Rider Preferences	Rider Needs
<p>Advanced Bicyclist Experienced riders who can operate under most traffic conditions</p>	<ul style="list-style-type: none"> • Direct access to destinations • Operate at maximum speed with minimum delays • Sufficient roadway space or shoulder so that bicyclists and motorists can pass without altering their line of travel 	<ul style="list-style-type: none"> • Establish and enforce speed limits • Provide wide outside lanes (urban) • Provide usable shoulders (rural)
<p>Average Bicyclist Casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles</p>	<ul style="list-style-type: none"> • Comfortable access to destinations • Direct route, but on low-speed, low traffic-volume streets or on designated bicycle facilities • Well-defined separation of bicycle and motor vehicles or separate multi-use paths 	<ul style="list-style-type: none"> • Ensure low speeds on neighborhood streets • Traffic calming • Provide network of interconnected designated bicycle facilities (lanes, multi-use paths, well marked bike routes) • Usable roadway shoulders
<p>Novice Bicyclist Young children, students, and pre-teen riders whose roadway use is initially monitored by parents, and/or adult bicyclists just beginning to ride</p>	<ul style="list-style-type: none"> • Access to schools, recreation facilities, shopping, or other residential areas • Residential streets with low motor vehicle speed limits and volumes • Well-defined separation of bicycles and motor vehicles or separate multi-use paths 	<ul style="list-style-type: none"> • Ensure low speeds on neighborhood streets • Traffic calming • Provide network of designated bicycle facilities (lanes, multi-use paths, well marked bike routes) • Usable roadway shoulders

Source: Hawaii DOT, Minnesota DOT

Bikeway Types

The *California Vehicle Code* permits bicycling on all roads in California with the exception of access controlled freeways and expressways. Chapter 1000 of the Caltrans *Highway Design Manual* recognizes this when it states that “the needs of non-motorized transportation are an essential part of all roadway projects.” Although not all streets are designated as bikeways, they are all important facilities that ensure access and connectivity for bicyclists.

Effective bikeways encourage the use of bicycles as an alternative to the automobile. The bikeways identified in this Plan include standards and designations established by Caltrans. The *Highway Design Manual* identifies three distinct types of bikeways: Class I Off-Street Bike Paths (Multi-Use Path), Class II On-Street Bike Lanes, and Class III On-Street Bike Routes. These facilities are described below and design details for each facility type are provided in Appendix B. In addition to these three basic facility types, hybrid bikeways and facility enhancements are also described below and recommended for use in appropriate locations. Each class of bikeway has its appropriate application.

Standard Bikeways

Class I Multi Use Path

Class I facilities, typically known as bike paths, are multi-use facilities that provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.

Class II Bike Lane

Class II facilities, known as bike lanes; provide a striped and signed lane for one-way bicycle travel on a street or highway. The minimum width for bike lanes ranges between four and five feet depending upon the edge of roadway conditions (curbs). Bike lanes are demarcated by a six-inch white stripe, signage and pavement legends.

Class III Bike Route

Class III facilities, known as bike routes, provide signs for shared use with motor vehicles within the same travel lane on a street or highway. Bike routes may be enhanced with warning or guide signs and shared lane marking pavement stencils. While Class III routes do not provide measures of separation, they have an important function in providing continuity to the bikeway network.

Class III Bike Route Enhancements

Bicycle Boulevard

A bicycle boulevard is a roadway that gives priority to bicycle traffic at intersections along the route. The boulevard may also include traffic calming features that reduce the total number of vehicles that use the roadway to make the roadway more bicycle-friendly. By definition, bicycle boulevards are Class III facilities, but are not typically signed with just the basic “Bike Route” sign.

Bikeway Types



Class I Multi Use Path



Class II Bike Lane



Bicycle Boulevard



Shared Lane Marking



Cycle Track

Shared Lane Marking

Shared Lane Markings (SLM), known “Sharrows,” are pavement legends which may be placed in the travel lane adjacent to on-street parking. The purpose of the marking is to provide positional guidance to bicyclists on roadways that are too narrow to be striped with bike lanes. SLM do not designate a particular part of the street for the exclusive use of bicyclists. They simply guide bicyclists to the best place to ride on the road to avoid the “door swing” of parked cars, and to warn motorists that they should expect to see and share the lane with bicyclists.

Non-Standard Bikeways

Cycle Track

A cycle track is a bikeway that is separated from adjacent traffic flows through the use of a visible grade change or other physical buffer between the bikeway and the roadway. Cycle tracks may provide for one- or two-way travel. Additionally, cycle tracks may be placed outside the parking lane, but in front of the sidewalk. There are no federal or State standards for cycle tracks, and they are not currently approved for use in California.

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The Local Bicycle Transportation Network

Existing Conditions

This section describes existing conditions for bicyclists in Yountville, including opportunities and constraints, a safety analysis, existing programs, bicycle counts, origins and destinations, schools and safe routes, bicycle parking, and a map and inventory of existing bikeways.

Opportunities and Constraints

A variety of issues and opportunities related to bicycling have been identified through the review of existing documents, maps, aerial images, and public input. A discussion of broad opportunities and constraints, such as funding, regional access, and public support and perception, to name a few, are detailed in the NCTPA Overview Plan. Various physical and operational constraints specific to Yountville are listed below.

Safety Analysis

The following section addresses safety conditions for bicyclists in Yountville and includes a review of the California Office of Traffic Safety's (OTS) collision rankings, the Statewide Integrated Traffic Records System (SWITRS), Seasonal Trends in Napa County, an understanding of the limitations of bicycle collision reporting, an analysis of bicycle collisions in Yountville for the more recent 10-year period for which collision data was available, a summary of collision findings, a location map of bicycle collisions in Yountville, and a review of urban and rural bicycle crash types.

Collision Rankings

The California Office of Traffic Safety (OTS) conducts ongoing research of traffic safety statewide. OTS prepares an annual traffic safety ranking of all California cities and counties. Cities are broken into groups based on population, while all 58 counties are grouped together; however, the grouping does not take into account other local demographics or characteristics. With the exception of the City of Napa, all cities within Napa County experience a lower number of annual bicycle collisions than the average for their population group. Because these cities have populations of less than 25,000, any small increase or decrease in annual collisions can result in a dramatic shift in their ranking. Therefore, these rankings were used for a generalized look at collision performance, not as an exact metric.

Seasonal Trends

Seasonally, Napa County experiences the most bicycle collisions during the summer and early fall months, which corresponds to periods with more tourism. Additionally, most crashes occur on Friday through Monday with generally fewer collisions midweek. This also corresponds to increased tourism activity on weekends. The vast majority of collisions reported occurred during daylight and with clear weather conditions.

Collision Reporting

Collision records provided in SWITRS only include collisions reported by an involved party. In cases where there is no significant damage or injury, especially if the collision only involved a single bicyclist, the collision often is not reported. When a collision is reported, the level of detail provided can vary depending on the reporting styles and/or policies of the responding law enforcement agency or even the individual officer.

Bicycle Collision Analysis

The bicycle collision history for Yountville was reviewed to determine any trends or patterns that could indicate safety issues for bicyclists. Collision data for a ten-year period from January 1, 1999, through December 31, 2008, was obtained from the California Highway Patrol (CHP) as published in their State Wide Integrated Traffic Records System (SWITRS) reports. The collected SWITRS data was verified for location references, duplicate reporting, and inconsistencies. It is important to note that SWITRS data only includes collisions that were reported, so does not necessarily reflect all incidents that occurred.

Statewide Integrated Traffic Records System

The California Highway Patrol (CHP) Accident Investigation Unit maintains SWITRS, which was developed as a means to collect and process data elements from a collision scene. The program ensures that local police departments and the CHP utilize and maintain uniform tools and methods to collect and compile meaningful data and statistics which can be used to improve roadway conditions and monitor the effectiveness of enforcement efforts.

A comprehensive review of the data was performed to help understand the nature and factors involved in reported bicycle collisions. A better understanding of these factors may help planners and engineers address some of the physical environments that contribute to these incidents. For example, if it is determined that a high incidence of collisions is occurring in the evening, lighting improvements may help to correct the situation. Conversely, a high incidence of collisions attributed to riders traveling in the wrong direction or those involving children may be addressed through education and/or enforcement activities.

The following types of data were reviewed with an emphasis on the conditions indicated to better understand the factors that may have contributed to the reported collisions:

- Collisions:** This information includes an analysis of the major causes of each collision, the locations of collisions, and the seasonal variation of collisions.
- Conditions:** Environmental conditions at or near the collision site at the time of each crash were examined. This included an analysis of weather conditions, lighting conditions, and types of traffic control devices present.
- Demographics:** This included a determination, by gender and age, of collision rates for bicyclists.
- Locations:** This portion of the analysis includes a map of reported bicycle collisions and spatial analyses of different collision types.

During the ten-year review period more than 26,000 collisions were recorded throughout Napa County. Analysis of the data for all jurisdictions combined revealed a rise in the number of collisions per year from 1999 to 2002 to a high of 3,082 collisions annually, and then a steady decline to 1,789 collisions in 2008. Of this total number, 725 bicycle collisions were recorded throughout the County. Similarly, a general decline in the number of bicycle collisions recorded occurred over the ten-year review period. There were six bicycle fatalities during the review period.

For the ten-year period of 1999 through 2008 the Town of Yountville experienced 192 collisions, none of which involved bicyclists. This shows a long term trend of positive bicycle safety within the Town. Because of the lack of reported bicycle collisions, use of collision ranking for the Town is not appropriate.

Existing Bicycle Safety, Education, and Encouragement Programs

Currently, there are no formal safety or education programs for bicyclists in Yountville that are delivered by the Town.

Safe Routes to School is a national movement with a variety of programs that are designed to improve safety and encourage students to walk and bicycle to school. Such programs work to reduce traffic congestion and improve the health of both children and the environment. The City of St. Helena may pursue funding for these efforts through the state and federal Safe Routes to School programs and can work with the Napa County Office of Education to implement safety and education programs which are currently offered to elementary and middle schools throughout Napa County when requested.

Safe Routes to School (SR2S) is a national movement with a variety of programs that are designed to improve safety and encourage students to walk and bicycle to school. Such programs work to reduce traffic congestion and improve the health of both children and the environment. .

Origins and Destinations

The following sections identify Yountville's major origins and destinations for bicycle trips. It is important to identify these facilities in order to understand access needs and existing and potential travel patterns when considering alignments for both the local and primary bikeway networks. Brief descriptions and/or lists of origins and destinations are provided below. Major facilities are mapped on Figure I, the Yountville Bikeways Map, to show their relationship to existing and proposed bikeways.

Primary and Secondary Schools

The Napa Valley Unified School District oversees the Town's public school system. The District consists of 32 schools located on 28 sites serving approximately 17,000 students in grades K-12 and

includes schools in Yountville and the communities of Napa and American Canyon . Yountville’s public elementary school serves approximately 160 students.

Community Facilities and Parks

There are a variety of civic destinations and community facilities located in Yountville that can be reached by bicycle or on foot. The Town of Yountville prides itself on having a beautifully maintained park system and state of the art community center.

Major community facilities include:

Park	Number of Acres	Characteristics
Yountville Park	1.8	Mowed grass; restroom, picnic tables; handicapped-accessible, playground
Hopper Creek Park	.1	Pocket park” with picnic tables
Forrester Park	.5	Mowed grass; with picnic tables; handicapped-accessible, playground
Van de Lear Park	.33	Picnic tables; handicapped-accessible
Vineyard Park	1.0	Picnic tables; play equipment
Veterans Memorial Park	3.3	Mowed grass; Picnic tables; Bocce Ball Courts
Community Center		
Community Pool		Open summer, on grounds of the Yountville Veterans Home
TOTAL	7	

The Community Center contains a wide variety of rooms, outdoor spaces and amenities including two large event areas, a kitchen, board room for small meetings, art room, outdoor patio / lawn area for gatherings and an outdoor town square.

Bikeways Inventory (Maps, Database, Description)

Existing bicycle facilities in Yountville were inventoried through a GIS survey, field reconnaissance, staff questionnaires and interviews, consultation with the Yountville Town staff, which oversees bicycle and pedestrian issues in Yountville, and through outreach to the public. Currently, there is a mile long Class I multi-use pathway that is located along the western side of Washington Street, east of SR 29..

**Table 6
Existing Bikeways**

Project Corridor/Street	Begin Point	End Point	Class	Length (Miles)	Primary Route	SF Bay Area
Class I						
Yountville Mile	Madison	California	I	1	yes	yes
Mid-town loop path	Yount St. near Mount St.	Yount St. at Finnell	*	0.2	yes	yes
California St - Veterans Home approach	Washington St.	President's Circle	I	0.5	yes	yes
Class II						
Yountville Cross Road	SR29	Town Limit	II	0.5	yes	yes
California St	Washington	Solano Ave.	II	0.1	yes	yes
Solano Ave	California	Town Limit	II	0.4	yes	yes
* - 8' wide separated path						

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Multi-Modal Connections

Bicycles are often used in combination with other modes of transit (such as bus, carpool, ferry, or train) as part of a multimodal trip. Convenient multi-modal connections that are well-integrated into the transportation system are a vital component of a balanced transportation network. Transit has the potential to extend trip ranges for bicyclists to both nearby communities, and destinations outside of Napa County. Multi-modal connections are especially important in Napa County, considering existing barriers to bicycle travel such as distances between communities, existing gaps in the bicycle network between urban areas, heat during summer months, and rain during winter months. While these obstacles likely serve as deterrents to existing and potential trips by bike, convenient multi-modal access can help to address these issues and extend trip ranges. Front loading bicycle racks, which typically accommodate two bicycles, are provided on all fixed route transit buses that operate in Napa County. Bicycle rack spaces are available on a first come, first served basis. When the front loading racks are full, drivers can accommodate bicycles inside the bus at their discretion, however, in the event that it is the last scheduled bus of the day, bicycles are permitted inside the vehicle.

Park and Ride Lots

One formal Park and Ride lot currently exists in Yountville, at California Drive and Solano Ave, adjacent to the entrance ramp to SR-29

Bicycle Parking

Currently, bicycle parking is provided at schools, civic destinations and some commercial locations. The Town's Zoning Ordinance includes the following bicycle parking requirements:

19.21.050: Bicycle parking requirements

- A. Bicycle parking shall be provided in commercial and employment areas according to Table 19.21.050.

**Table 7
Required Bicycle Parking**

Total Automobile Parking Spaces	Minimum Number of Bicycle Spaces
1-4	0
5-14	1
15-29	2
30-44	3
45-59	4
60-74	5
75-99	6
100-199	7
200-299	8
300-399	9
400 and greater	10

- B. Bicycle parking should be located in highly visible locations and should be lockable.

- C. The bicycle parking requirement may be phased for parking areas containing sixty or greater spaces depending on accessibility of the area to bicycle routes. (Ord. 2004-10 Exh. 3 (part), 2004)

Shower and Locker Facilities

The Town of Yountville does not require employers to install shower and locker facilities for employees. Large employers often provide these facilities. Public input indicated that additional shower and locker facilities are desired by commuter bicyclists, however, none are proposed at this time.

Proposed Improvements

Proposed bikeway improvements consist of a network of Class I multi-use paths, Class II bike lanes, and Class III bike route projects to complete both the local and primary countywide bikeway networks in Yountville, along with various safety enhancements and bicycle support facilities and programs designed to improve safety and encourage bicycling.

The local and primary bikeway networks have been planned to link residents, visitors, and bicyclists of all ages and types between residential areas and community destinations including schools, parks, shopping, civic buildings, employment centers, and regional trails and bikeways. Recommended bicycle support facilities and programs include increasing short- and long-term bicycle parking supplies, improving multi-modal integration, maintenance and monitoring programs, strategies to develop a bicycle counting program, safe routes to school programs, public education, signing and marking enhancements, and a communitywide traffic safety education campaign.

Criteria for Route Selection and Evaluation

The methodology for developing a bikeway network for any community begins with input from the local bicycling community, local planning and engineering staff familiar with the community and the public. Based on input received, existing conditions, project goals, and opportunities and constraints, a network of proposed facilities and programs was prepared. Next, a ranking methodology based on general planning criteria was developed with the Project Steering Committee to prioritize the recommended bikeway projects and programs. A Decision Matrix was used to attach weights to each criterion and determine which recommendations meet the highest number of criteria listed. It is important to note however, that over time changes will occur that may impact project implementation opportunities, and thus projects that may not be heavily weighted could be implemented in the short term due to opportunity, funding availability, political will, or other reasons.

Project ranking criteria include:

Land Use: A project that provides or promotes connections or access to multiple land uses (e.g. primary generators such as dense residential neighborhoods with high numbers of bicycle commuters with areas of dense employment) will rank favorably according to the land use criteria. Facilities that provide intra- or inter-neighborhood access to schools, for shopping trips, access to transit, access to public open space/parks would also rank favorably according to the land use criterion. Longer corridor projects that “connect” more land uses will tend to rank higher as they are assigned greater points over shorter projects that do not connect generators with destinations, or vice versa.

Current and Latent Bicyclist Demand: Higher points are awarded to those projects that currently have significant usage or latent demand, that is they are likely to generate significant usage based on land uses, population, corridor aesthetics, etc. Justification for this criterion is that corridors or spot locations currently receiving high demand may or may not be optimally designed for safety and functionality and additional improvement would benefit a large number of existing bicyclists. Under latent demand, existing corridors or spot locations may be viewed by a high percentage of potential users as

undesirable from a safety or operational perspective, and if safety or functionality is improved, even high use facilities may experience an increase in use levels.

Technical Ease of Implementation: Technical ease of implementation focuses on the actual engineering challenges of a project, emphasizing the point that typical physical requirements of bicycle projects such as parking removal, traffic lane removal, or lane re-striping are not technically challenging from an engineering perspective. Physical solutions are often readily apparent but may require development of political support, addressed under "Political Ease of Implementation," or that specific operational issues be addressed to demonstrate that no negative impacts will occur to other modes. These criteria specifically address the technical and physical aspects of an engineering solution.

Non-Technical Ease of Implementation: Maximum points are assigned for an easy, popular project. If significant neighborhood opposition is a known factor, if support of elected officials is not anticipated, or if other political opposition to a particular aspect of the assumed engineering solution (such as parking removal or agricultural issues) is anticipated, then the project would receive fewer points under this criterion.

Note: *Projects that are supported by current or adopted planning efforts by regional or local agencies receive points under these criteria, for example, projects that are identified in Bay, Ridge, or Vine Trail Studies that have the potential to serve both pedestrians and bicyclists. In addition, projects that are supported by existing or anticipated funding would receive points under this criterion.*

Overcomes Barrier/Connectivity (Safety): Maximum points should be assigned to projects that address a major safety concern for bicyclists using bridges, interchanges, and/or negotiating other environments difficult for bicyclists to navigate. Higher points should be assigned to roadways with high speed, high traffic volume, wide road width, difficult intersections or other obstacles to bicycle travel. Maximum points should be assigned for filling a gap in the existing network.

Public Input: This criterion is based directly on public input received during workshops, results from the surveys, indirect public input through agency staff, and an informal survey of local elected officials. Points are assigned in correlation to the number of comments and perceived interest of workshop attendees.

The ranking matrix is located in Appendix E.

Proposed Bikeway System

This section describes proposed bicycle improvements in Yountville including both physical and programmatic improvements. A range of users must be considered in building a bicycle system. Whereas an experienced rider or bicycle commuter might prefer the shortest and fastest on-road route, a young or inexperienced rider will likely prefer a Class I, separated bicycle facility. Bicycle riders of all ages and abilities, and those who are riding for both recreation and transportation to destinations like work and school, must be considered in system improvement and implementation. The proposed bikeway network consists of an interconnected network of Class I pathways, Class II bike lanes, and Class III bike routes that will close gaps, connect existing facilities, and provide access to areas that are not currently served by bicycle facilities.

Primary Bikeway Network

Bikeway System

The whole of all of the components including both physical and programmatic.

Bikeway Network

The physical improvements that establish bikeways (Classes I, II, III).

Primary Bikeway Network

A continuous countywide network of on- and off-street bikeways that extend between and through communities along with connections to other transportation modes, major destinations, jobs, neighborhoods, recreation, and local bikeway networks.

A new element of this planning effort has been the designation of a Primary Bikeway Network – a continuous countywide network of on- and off-street bikeways that extend between and through communities. The Primary Bikeway Network consists of a combination of existing and proposed Class I, Class II, and Class III bikeways that provide inter-city and inter-county routes along with connections to other transportation modes, major destinations, jobs, neighborhoods, recreation, and local bikeways. The network typically includes one or more north-south and east-west routes through each community. The intention of the Primary Bikeway Network is to focus and collaborate on a set of basic routes that will provide access to major destinations and activity areas. Primary Bikeway Network routes are identified on the bikeway map using a colored highlight around their route designation, Primary Bikeway Maps have been prepared to show how the network connects between communities, and proposed project lists identify bikeway segments on the Primary Bikeway Network. The Primary Bikeway Network has been further coordinated with “routes of regional significance” that comprise the Bay Area’s Regional Bicycle Network identified in the Metropolitan Transportation Commission’s Regional Bicycle Plan for the San Francisco Bay Area.

Proposed Bikeways (Maps, Database, Description)

The proposed bicycle network includes Class I paths, Class II bike lanes, and Class III bike routes in order to maximize connectivity throughout the community and to destinations beyond Yountville. The proposed network has been planned to provide safe and convenient bicycle access to parks, open spaces, commercial areas, residential neighborhoods and community facilities. Once completed, the network will play a key role in bolstering the Town’s efforts to increase the use of bicycles as non-auto modes of transit, and to reduce overall vehicle miles traveled in the Town.

Approximately 1 mile of additional Class II Lanes and Class III bike routes are proposed. Class II Bike Lanes are set aside on city streets exclusively for bikes and Class III bike routes provide for shared use of travel lanes with vehicle traffic.

Table 7 - Proposed Bikeways										
	Project Corridor/Street	Begin Point	End Point	Class	Length (Miles)	Primary Route	Bay Area Route	Use	Cost	Priority
Class II Bike Lane										
1	Finnell Rd.	Yount	Town Limit	II	.2	no	no	R		medium
Class III Bike Route										
2	Finnell Rd.	Town Limit	Yountville Cross Rd.	III	1	no	no	R	\$2,500	medium
3	Vista/Heritage/Heather/Mulberry	Finnell Rd	Washington	III	.3	no	no	R	\$1,000	medium
4	Washington/Yount	California	Yount Mill Rd.	III	1	no	no	R	\$2,500	medium
5	Webber	Washington	SR 29	III	.1	no	no	R	\$50,000	medium

Regional Trails

San Francisco Bay Trail

Existing Conditions

Vision for Route

Needed Improvements

- Complete the Town of Yountville's portion of the Bay Trail.
- Connect with "Napa to Yountville River and Bay Trail Phase I" (Napa County Regional Park and Open Space District)

Major Destinations along the Route

- Napa River
- City of Napa

Napa Valley Vine Trail

Existing Conditions

One mile segment complete.

Vision for Route

- Support creation of route through Yountville with connectivity from Vallejo Ferry Terminal to Calistoga.

Needed Improvements

- Class I bicycle commute route from Yountville south to Vallejo and north to Calistoga

Major Destinations Along the Route

- Vallejo
- American Canyon
- Napa
- St. Helena
- Calistoga

River to Ridge Trail

Vision for Route

- Safe alternative to SR 29.

East-West Routes

Yountville Crossroad

Existing Conditions

Between Silverado Trail and SR 29 Class II bike lanes marked from Silverado Trail to Yount Street. Vision for Route

Needed Improvements

- Upgrade striping and stencils Signage and striping

Bicycle Parking and Support Facilities

Every bicycle trip has two main components: the route selected by the bicyclist and the “end-of-trip” facilities at the destinations. The availability of safe bicycle routes and secure and convenient facilities is critical to promoting greater bike usage in Yountville. Bicycle facilities can include short- and long-term bicycle parking, showers, lockers and lighting of bicycle parking areas.

Providing short- and long-term bicycle parking at key destinations, such as parks, schools, community facilities, transit stops and shopping areas, will be essential to the development of a complete bicycle system. Parking should be highly visible, accessible and easy to use. In addition, facilities should be located in well-lit areas and covered where possible.

Support facilities for bicyclists should also be provided. Showers are an important amenity for those bicycle commuters with a rigorous commute and/or formal office attire. Lockers provide a secure place for bicyclists to store their helmets and other gear.

Safety, Education, and Support Programs

For all of the programs listed here, the Town of Yountville will participate in countywide initiatives and programs responsive to the local level of need where feasible on a volunteer basis.

The Napa County Sheriff's Department enforces the California Vehicle Code and traffic laws in The Town of Yountville including bicycle violations.

The bikeway network has been planned to provide safe, convenient access for all types of bicyclists to destinations throughout Plan Area. Like all other modes of transportation, the system and its network of facilities must be used appropriately to maximize the safety of all users: bicyclists, pedestrians, and motorists alike. To help minimize safety risks, it is imperative that bicyclists and motorists follow basic traffic laws. For bicyclists, this includes activities such as riding in the correct direction, stopping at stop signs and traffic signals when the light is red, riding predictably, and taking proper measures to be visible day and night; and for motorists yielding to turning bicyclists, passing with care, and not driving or parking in designated bicycle lanes, to name a few behaviors for both.

Efforts must be made to encourage a culture of respect and shared usage among motorists and bicyclists alike. The safety, education, encouragement, and enforcement programs recommended in this section are intended to help grow the number of bicyclists in the Plan Area, while also increasing safe and appropriate behavior by bicyclists and all other roadway users.

Bicycle Safety Education for Students

Action: Provide bicycling/walking safety education to all students in Yountville from second grade through fifth grade on an annual basis.

The Napa County Office of Education Safe Routes to School Program currently provides bicycling/ walking safety education to approximately eight (8) schools throughout the County annually. The City and Napa Valley Unified School District should work together to ensure Safe Routes to Schools programs are delivered to Yountville's school.

- *Expected Result:* Decrease the number of bicycle crashes among school age children and increase the number of students bicycling/walking to school through increased Safe Routes to School safety education delivery efforts.
- *Measure:* Collision analysis and bicycle and walking counts performed regularly by agency staff.

Action: Develop a sustainable Walking School Bus/Bicycle Train Program for interested schools.

Safety is a primary concern when parents decide whether to allow their children to bicycle/walk to school. Walking school busses and bicycle trains are organized groups of students who walk or bicycle to school under the supervision of one or more adults. The Program's formal organization and adult supervision can provide peace of mind for parents wanting to let their child walk or bicycle to school. The City, Napa Valley Unified School District, and individual schools should work with the Napa County Office of Education to develop a formal program identifying school commute routes and establishing a roster of volunteer parent or staff "bus drivers" from each participating school.

- *Expected Result:* More students will bicycle and walk to school on a regular basis.
- *Measure:* The Napa County Office of Education Safe Routes to School Coordinator will track the number of children walking and biking to school and survey participating schools to track the success of walking and bicycling school busses.

Bicycle Safety Education for Adults

Action: Develop and deliver bicycle safety education to adult bicyclists throughout the community using a variety of media (print, radio, web, and hands-on instruction) targeted toward specific user groups: migrant workers, college students, commuter bicyclists, recreational bicyclists, families, senior citizens, and large employers.

Adult bicyclists account for the majority of bicyclists in the Plan Area. A variety of rider types comprise the "adult bicyclist" category, and as such appropriate safety education information should be developed to target focused issues for each user group. Safety information is widely available from FHWA, AAA, the League of American Bicyclists, and a variety of local and regional transportation agencies. Existing resources should be used and adapted to meet the needs of the local community. Safety education should stress the importance of following the rules of the road and how doing so plays a role in the prevention of collisions. Educational messages should be targeted at addressing common violations, issues, and/or collision types such as: wrong-way riding, no lights or other required night-riding equipment, running stop signs or red lights, bicyclists that are careless or disobey traffic laws, proper helmet use, riding with children, sharing trails and roads, riding two abreast or in groups, yielding to pedestrians, etc.

- *Expected Result:* Bicyclists will employ safe bicycling techniques and etiquette on streets and pathways, parents will serve as role models for safe bicycling techniques for their children, bicycle conflicts along streets and pathways will decrease, and annual bicycle collisions will be reduced.
- *Measure:* Traffic citations, bicycle crash data, and bicycle/traffic complaints will be analyzed on an annual basis to determine trends. Surveys may be conducted on trails and/or as a component of regular bicycle counts to determine the effectiveness of the outreach and if bicycle/vehicle/ pedestrian interactions have improved.

Bicycle Safety Education and Encouragement Campaign for Tourists

Action: Develop and deliver bicycle safety education information to tourists throughout the Plan Area to make bicycling more attractive and available to short-term tourists.

Findings from the 2005 Napa Valley Visitor Profile Study document the profound significance that tourism has on the Napa Valley's economy and transportation system. In order to help

alleviate traffic congestion, improve traffic safety, reduce vehicle miles traveled, and make bicycling more attractive and available to tourists, a focused tourist information, safety, and education campaign should be developed. The campaign would require collaboration from multiple entities including NCTPA and local agencies, and tourism, winery hospitality, agricultural, and visitor serving interests. Marketing will be critical to inspire tourists of all levels, abilities, and desires to tour the Valley's many attractions by bicycle. Materials should be developed in multiple languages, and focus on issues such as bicycling safety and etiquette, tips to improve comfort and convenience, route planning and wayfinding, bike rental services, and information on both guided tours and unguided routes.

- *Expected Result:* The number bicycle trips by made by short-term tourists visiting the Napa Valley will increase substantially. Both bicycle and traffic safety will improve as a greater understanding of the bicycle system is developed and vehicle miles traveled are reduced. Targeted reductions in Greenhouse Gas Emissions will be achieved as fewer "short" tourism trips are made. Touring the Napa Valley's vineyards, wineries, and attractions by bicycle, and experiencing Napa's "healthy lifestyle" will be central to the Valley's tourism industry and an active destination choice for tourists worldwide.
- *Measure:* Traffic citations, bicycle crash data, and bicycle/traffic complaints will be analyzed on an annual basis to determine trends. Visitor serving businesses including bicycle tours and rental establishments, wineries, and lodging will be surveyed to determine trends and the effectiveness of the campaign.

Law Enforcement Activities

Police officers are responsible for enforcing traffic laws and improving safety for bicyclists and motorists on Yountville's highways, streets and pathways. Traffic officers interact with bicyclists and motorists on a daily basis, which puts them in a unique position to add credibility to efforts to encourage bicycling and to improve bicycle safety. Coordination with law enforcement agencies and an improved understanding of bicycling issues by officers can lead to better enforcement, heightened awareness of safety issues, and recognition of "teachable moments" for both bicyclists and motorists.

Action: Provide bicycle specific training for law enforcement personnel and establish a community policing agreement.

Training of law enforcement personnel, including on-bike enforcement techniques, is critical to keeping officers up to date on current bicycle laws and issues, and will help officers to understand the behaviors, rights, and traffic safety concerns associated with bicycling. A community policing agreement engages members of the community, including agency engineering and planning staff, local elected officials, non-profit community advocates, schools, and others, to ensure the coordination of enforcement goals and strategies, and to develop a balanced approach to address traffic safety issues that includes education, engineering, and enforcement. A community policing agreement amongst local law enforcement agencies in the Plan Area will help to ensure specific and consistent consideration of enforcement efforts as well as consistent investigation techniques of collisions for on-going monitoring purposes.

- *Expected Result:* Bicycle specific training for police officers will familiarize enforcement personnel with bicycle issues and the bicyclist's perspective. A community policing agreement will ensure a collaborative approach to traffic safety that includes enforcement, engineering, and education efforts to improve traffic safety.

- *Measure:* Trained enforcement officers may be required to complete post training evaluation forms. Community policing agreements would result in regular committee meetings and a reduction in bicycle-related citations and collisions.

Action: Establish a bicycle diversion program for bicycle traffic offenders.

Bicycle diversion programs are provided in a variety of jurisdictions throughout the nation. Diversion programs allow persons cited for eligible bicycle-related traffic violations to attend a bicycle safety course sponsored by law enforcement and the Court in lieu of paying a fine. Courses are typically free of charge, and successful completion results in the dismissal of the fine and all charges. Eligibility is determined by the Court. Diversion courses range from one to four hours in duration and include the delivery of instructional videos, bicycle safety materials, a review of state and local laws, and hands on safety skill training.

- *Expected Result:* Court administered bicycle diversion program for bicycle traffic offenders which would provide bicycle safety training in lieu of a fine.
- *Measure:* Bicycle safety training delivered to (number) of residents through the program.

Action: Provide focused law enforcement operations at high collision locations.

The Bicycle Plan Update has identified the top collision locations for bicyclists throughout the community. Increased law enforcement efforts at these specific locations may help to decrease collisions between motorists and bicyclists. The City's planning and engineering staff should work with law enforcement (community policing) to develop a strategy to address safety concerns at these locations. Strategies may include increased patrols during peak periods, crosswalk(s), signal compliance, etc.

- *Expected Result:* Increased law enforcement patrols at top collision locations throughout the County.
- *Measure:* Reduction in bicycle collisions at high collision locations.

Implementation

Introduction

This section identifies the activities and actions that are necessary to implement the physical improvements, facilities, and programs contained in this Plan, along with the estimated costs for the proposed improvements, maintenance requirements, and funding and financing strategies.

Implementation

Successful implementation of the projects and programs contained in the Bicycle Plan will require ongoing cooperation within and among City departments, other public agencies, and bicycle stakeholders. The planning horizon for the projects identified in this plan is the year 2035. Implementation of the projects in this plan will occur incrementally in a variety of ways. Many projects will be incorporated into the City's Capital Improvement Program (CIP) process and will be implemented as the CIP projects get funded. Others can happen as part of regular maintenance and operations practices and road resurfacing projects. Development and/or redevelopment in some areas of the City will present a significant opportunity to implement some of the recommendations of this Plan. While improvements associated with development and/or redevelopment often occur "piecemeal," this is the way development happens and it is important to include bicycle improvements as a component of project improvements. Finally, outside funding can be obtained to finance the design and construction of other projects, improvements and programs. The most likely funding sources are addressed in the last section of this chapter.

Project Implementation Process

The actions necessary to complete infrastructure projects identified in this Plan will vary from project to project, but generally include:

1. Adoption of the Plan by resolution
 - a. Approval of the Plan by the Metropolitan Transportation Commission
 - b. Certification of the Plan by the Caltrans Bicycle Facilities Unit
 - c. Programmatic level review and environmental clearance of the Plan
2. Feasibility analysis, environmental analysis, and cost estimates for individual projects as needed
3. Public review as necessary
4. Project approvals; Advisory Committee, Planning Commission, City Council
5. Secure local and outside funding commitments
6. Completion of final plans, specifications and estimates, advertising for bids, receipt of bids and award of contract(s)
7. Project construction

Maintenance and Monitoring

Bicycle system maintenance needs include cleaning/sweeping, asphalt resurfacing, striping maintenance, sign replacement, pavement repairs, signal maintenance, drainage work, refuse removal, graffiti removal, and landscape maintenance. Maintenance of on-street facilities such as Class II bike lanes, Class III bike routes, and bicycle boulevards, is generally treated as a component of typical roadway maintenance activities which are funded through gas taxes and programmed annually. While some maintenance

needs such as re-striping or re-surfacing can be placed on a periodic schedule, other needs such as sweeping, fixing potholes, addressing signal detection sensitivity, and trimming overgrown vegetation require immediate attention. Table 8 provides a recommended timetable for regular maintenance activities associated with the bicycle network.

**Table 8
Bicycle System Maintenance**

Maintenance Item	Schedule/Frequency
Pavement/pathway sweeping	Monthly – annually as needed
Signal detection sensitivity	Bi-annually – or as needed on a request basis
Trash disposal	Weekly – as needed
Graffiti removal	Weekly – monthly as needed
Potholes	As needed – on a request basis
Sign replacement/repair	1 to 3 years – as needed
Pavement marking replacement	1 to 3 years – as needed
Pavement sealing	Every 5 years – as needed
Lighting (replacement/repair)	Annually – or as needed on a request basis
Clean drainage system	Annually – or as needed on a request basis
Maintain furniture, bus stops, railings	Annually – or as needed on a request basis
Fountain/restroom cleaning/repair	Weekly – monthly as needed
Bridge/Underpass inspection	Annually
Maintain emergency telephones, Closed circuit TV	1 year
Replenish shoulder material	Annually
Landscape Maintenance	
Tree, Shrub, & grass trimming/fertilization	5 months – 1 year
Maintain irrigation lines/replace sprinklers	1 year
Irrigate/water plants	Weekly – monthly as needed
Shoulder and grass mowing	Seasonally as needed
Vegetation maintenance	Annually – or as needed on a request basis
Weed control	Monthly – as needed

Maintenance Recommendations

Recommendation: Ensure that all bikeways and roadway shoulders are included in the City’s street sweeping program and swept as part of routine street sweeping operations. Street sweeper operators

should be properly trained to understand the needs of bicyclists and the importance of clearing debris from bikeways.

Recommendation: Ensure that all construction projects (roadway and/or road adjacent projects) maintain both a clean swept shoulder and a through right-of-way for bicycles.

Recommendation: Continue to maintain the City’s maintenance reporting system, the web-accessible “Service Request Form”, as a means to report, track, and respond to routine bicycle maintenance issues in a timely manner. Ensure that the City’s maintenance reporting system is integrated with any Countywide efforts to develop a similar program.

Recommendation

Implement a Maintenance Reporting System

Policy 9.2: Develop or retain a maintenance reporting system with a central point of contact to report, track, and respond to routine bicycle maintenance issues in a timely manner. [NCTPA, NCBC, cities, towns, County]

Maintenance Costs

Maintenance costs for the bikeway system are generally lumped into two categories. As previously noted, maintenance activities associated with on-street bikeways are typically accommodated as a component of routine street maintenance activities that are programmed annually, while maintenance of off-street bikeways (Class I multi-use paths) and support facilities such as bike lockers and racks is generally funded through local revenues. Given the miles of existing and proposed Class I bikeways in Yountville, maintenance costs for the bikeway network are a consideration that should not be overlooked. The City’s pathways consist of both concrete and asphalt surfaces. While concrete pathways tend to remain stable and usable overtime, prompt and regular maintenance including pothole repair and seal coats help to preserve and extend pavement life. To address the long-term need for maintenance of the bikeway network, it is recommended that a maintenance budget be established to ensure regular on-going maintenance of the network so that Yountville’s trails and pathways remain usable by residents over time. Cost assumptions for typical bikeway maintenance activities are presented in Table 9.

**Table 9
Maintenance Cost Assumptions**

Facility Classification	Estimated Annual Cost Per Mile	Notes
Class I	\$8,500	Assumes maintenance associated with Class I trails, trail amenities, and landscaping
Class II	\$2,000	Assumes regular/periodic lane sweeping, sign and stripe/stencil maintenance, signal detection, and minor surface repairs
Class III	\$1,000	Assumes sweeping and minor surface repairs
Sidewalks	\$2,500	Assumes landscape/vegetation maintenance and surface repairs

To address the long-term need for maintenance of the bikeway network, it is recommended that a maintenance budget be established to ensure regular on-going maintenance of the network so that Yountville’s trails and pathways remain usable by residents over time.

Monitoring

The projects and programs recommended in this Plan are dynamic and subject to change as bicycling conditions and demands throughout the plan area evolve. Periodically monitoring certain indicators and conditions along the bikeway network will allow the City to assess needs and issues that require attention and/or to adjust plans and project recommendations accordingly. The primary components to monitor include: bicycle collisions, bicycle usage, and safety/security and enforcement. The following monitoring actions are recommended to evaluate the success of the City's efforts and to ensure implementation of the Bicycle Plan goals over time.

- Collect and analyze collision data on an ongoing basis to assist in the identification of problem locations.
- Conduct and log bicycle counts on an annual or semi-annual basis so that usage trends can be identified and measured.
- Conduct regular meetings with bicycle stakeholders (annually or bi-annually) to solicit feedback on bicycle facilities, network maintenance, promotional and educational activities, and safety/security and enforcement issues.
- Consider the use of periodic public surveys to receive input on bicycle issues from the larger community.

Project Costs

Construction costs for bicycle infrastructure are presented in Table 10. Costs estimates were developed by researching the latest unit costs experienced by local jurisdictions in Napa County and the North Bay, and were cross-referenced by reviewing the National Cooperative Highway Research Program's Guidelines for Analysis of Investments in Bicycle Facilities². In recent years, actual costs have fluctuated significantly, with sharp rises in the costs of construction materials in the late 1990's and early 2000's, followed by steep declines in labor costs and a leveling of construction material costs in last few years. Overall, these changes have been dramatic and have resulted in instabilities that are difficult to predict, especially over a long-term. The costs below are for planning level estimates. They are unit costs for construction and do not include contingencies, design, environmental analysis, administrative costs, right-of-way acquisition, or inflation factors. Furthermore, unit costs may vary considerably depending on the size of the job and the location. For example, the unit cost of striping only 1,000 linear feet can easily be two to three times that of a 15,000-foot project. The same 'economy of scale' can be applied to sign installation and signal modification projects. Pavement widening costs also vary considerably depending on the terrain and other variables, such as presence of utility poles, monuments, and drainage issues.

² Transportation Research Board, National Cooperative Highway Research Program's *Guidelines for Analysis of Investments in Bicycle Facilities*, 2006

**Table 10
Construction Cost Assumptions for Bikeway Improvements**

Capital Project	Unit	Cost
Class I: Multi Use Trail		
Construct Multi-Use Pathway	Mile	\$550,000
Rehabilitation	Mile	\$125,000
Trail Entry Improvements (may include bollards, signs, minor paving, & concrete driveway apron)	Each	\$2,000-\$6,000
At Grade Roadway Crossing (varies by improvement type)	Each	\$10,000-\$90,000
Grade Separated Crossing (under/over crossing)	Each	**
Trail Bridge (Prefabricated steel bridge 10-12 ft wide by 100 ft long)	Each	\$200,000
Class II: Bike Lanes		
Install Signs, Striping, & Stencils	Mile	\$30,000
Reconfigure Roadway Striping, add Bike Lanes	Mile	\$75,000-\$90,000
Install Loop Detectors	Each Intersection	\$2,500-\$5,000
Intersection Striping (bike lane pockets, combined turn lanes, advanced stop bar/pocket)	Each Intersection	\$2,000-\$6,000
Class III: Bike Route		
Install Signing (Up to 10 signs per mile)	Mile	\$2,500
Bicycle Boulevard (Signing and Stencils Only)	Mile	\$4,500
(Traffic Calming Treatments)	Each	\$2,000-\$60,000
Shoulder/Roadway Widening (One side, 6 foot)	Mile	\$325,000
Shared Lane Markings / Pavement Legends	Each	\$175-\$300
Bicycle Parking		
Inverted "U" Rack (1 rack parks 2 bikes)	Each	\$250
Post and Ring Rack (1 rack parks 2 bikes)	Each	\$200
Bicycle Locker (1 to 2 bikes per unit depending upon locker type)	Each	\$1,500
Bus Bicycle Racks – Front Loading	Each	\$600-\$800

Notes: The above unit costs are for construction. These planning level estimates do not include contingencies, design, administrative, right-of-way acquisition costs, or inflation factors.

** Costs are highly variable depending upon conditions

A variety of bicycle rack and bicycle locker products and styles are available through local and national manufactures and retailers. The sample "styles" identified in Table 15 are intended for reference. Local agencies and developers are encouraged to utilize racks and lockers that are effective and appropriate for the context of the respective installation site.

Program Costs

This plan includes a variety of collaborative programmatic improvements and actions that will help achieve the vision of increased bicycling throughout Napa County and bicycle safety improvements for each community. The programs and actions are important to help realize Plan vision and safety enhancements and should be implemented as soon as time and funding resources are available. Costs for individual programs and actions are highly variable and dependent upon the scope and scale of actions. For example, bicycle counts are often collected using volunteer labor which results in a significant savings. Other programs and actions can be carried out using existing staff resources and/or by utilizing existing media available free of charge from other transportation agencies such as safety education materials and/or public service announcements. Table I I identifies the primary programmatic improvements, which are defined in greater detail in earlier sections, includes a range of estimated costs, a potential lead agency, likely partner agencies, and potential funding sources.

For all of the programs listed here, the Town of Yountville will participate in countywide initiatives and programs responsive to the local level of need where feasible on a volunteer basis.

**Table 117
Cost Assumptions for Programmatic Improvements**

Program/Project Name	Lead Agency	Partner Agencies	Estimated Cost	Estimated Annual Maintenance Cost	Potential Funding Source
Napa Bike Program – Education and Encouragement Activities					
Centralized Bicycle Program Webpage	NCTPA	Cities, County, Town	\$20,000 start up	0.25 time staff position	Federal, State, Regional Funds
Maintenance, Monitoring, and Reporting System	NCTPA	Cities, County, Town	\$0 Component of Bicycle Program Webpage	\$0 Part of regular staff duties	
Countywide Traffic Safety Campaign	NCTPA	Cities, County, Town	\$250,000 start up and operation for two year period	\$10,000+ printing, maintenance, and outreach costs	CA Office of Traffic Safety, Federal, State
Bicycle Guide Map	NCTPA	Cities, County, Town	\$40,000	\$10,000 printing and update costs every 3 to 5 years	Regional and State Grants
Safety and Education Publications (Includes print media, billboards, transit billboards)	NCTPA	Cities, County, Town	\$15,000 assumes utilization of existing materials. Includes initial print runs.	\$5,000 to \$7,000	Federal and state grants
Street Skills Bicycle Safety Courses	NCTPA	Cities, County, Town	\$5,000 administration and contract instructors	\$2,000 to \$4,000	Non-profit, Grants
Encouragement Activities (bike to work day, city streets, fairs, races, student, and community events)	NCTPA, Cities, County, Town, Non-profits	Cities, County, Town, non-profits, local businesses	\$5,000 to \$20,000 per event	Varies per event	Non-profits, local businesses, Tourism and Hospitality Industries
Radio, TV, Public Service Announcements	NCTPA, Cities, County, Town	Non-profits, local law enforcement agencies, private business	\$15,000 start up assumes administration and materials acquisition	\$3,000 to \$5,000	Donations, non-profit grants, local businesses, Federal, state, regional grants, CA Office of Traffic Safety
Tourism/Tourist Safety and Wayfinding Materials	Local Businesses, Tourism/Hospitality Industry	NCTPA, Cities, County, Town	\$75,000 startup	\$10,000 printing and maintenance costs	Non-profits, local businesses, Tourism and Hospitality Industries
Bicycle Parking Program	NCTPA, Cities, County, Town, local businesses	Non-profits	\$20,000 start-up Assumes design, administration, site selection	\$5,000 Annual installation expenses	Bicycle Transportation Account, state and regional grants

**Table 117
Cost Assumptions for Programmatic Improvements**

Program/Project Name	Lead Agency	Partner Agencies	Estimated Cost	Estimated Annual Maintenance Cost	Potential Funding Source
Wayfinding Signing Campaign	NCTPA	Cities, County, Town	\$75,000 Accounts for design and administration along with installation of approximately 250 signs Countywide	\$5,000	Bicycle Transportation Account, state and regional grants
Share the Road Campaign	NCTPA	Cities, County, Town	\$35,000 Accounts for design and administration along with installation of approximately 75 signs Countywide	\$2,500	Bicycle Transportation Account, state and regional grants, general fund
Bicycle Ambassador Program 2 to 4 part-time persons Potential internship or volunteer opportunities	NCTPA	Cities, County, Town	\$5,000 Administration costs	\$2,000 to \$5,000	Private funding, non-profits, local businesses
Bicycle Share Program	NCTPA	Cities, County, Town, local businesses	\$5,000 per installation site. Does not include land costs.	Annual operating costs can range from \$1,000 to \$2,000 per bike	Private Funding, local businesses, Tourism and Hospitality Industries
Local Agency Bicycle Fleets	Local Agencies and NCTPA	Cities, County, Town	\$3,000 to \$6,000 per agency	\$250 to \$500	
Bicycle Diversion Program	Napa County Courts	Local Police Agencies	\$5,000 Program start-up	\$0	Part of annual operating costs
Focused/Targeted Enforcement	Local Law Enforcement Agencies	Cities, County, Town	\$0		General Fund, CA Office of Traffic Safety Grants
Bicycle Counts	Cities, County, Town	NCTPA, Non-profits, volunteers	\$6,000 Program start-up and administration	\$3,500	

Project Prioritization and Phasing

Project implementation priorities are identified in , the proposed project list. Projects are categorized as High, Medium, or Low to both indicate priority and provide flexibility in phasing and implementation. Project prioritization was developed using the qualitative analysis detailed in the “Criteria for Route Selection and Evaluation” section. Project ranking and prioritization scores are presented in Appendix E. It is important to note that the prioritization of projects and phasing of improvements are presented as guidelines, as flexibility is essential in the implementation of planned bikeway projects and programs in order to capitalize on opportunities as they arise.

Past Expenditures

Since completion of the 2003 Napa Countywide Bicycle Plan, the Town of Yountville has spent approximately \$## on the construction of bicycle facilities. Additional funds have been spent on design, administration, environmental clearance, and maintenance activities. Project improvements are listed in Table .

Table 12
Historical Expenditures on Bicycle Facilities
Fiscal Year 2004/05 to 2009/10

Funding Resources

There are a number of funding mechanisms available to implement the bicycle projects and programs contained in this plan. Due to its dynamic nature, transportation financing is complex. Implementation of bicycle facilities, improvements, and programs is made possible by a wide variety of funding sources including:

- Federal, State, Regional, and Local Governmental Sources
- Private Sector Development and Investment
- Community, Special Interest and Philanthropic Organizations

Federal, State, Regional, and Local Governmental Sources

The dollars used to fund transportation projects originate from a wide variety of government sources including federal and state fuel taxes, sales taxes, property taxes, transit fares, truck weight fees, vehicle registration fees, tolls, development fees, bonds, traffic fines, local general funds, and assessment districts, among others. Many transportation fund sources are closely tied to larger local, state, and national economic trends, and as a result, the availability of these funds can fluctuate with economic upturns and downturns.

In the San Francisco Bay Area, the flow of revenues for bicycle and pedestrian projects from source to implementing entity most often involves the California Department of Transportation (Caltrans), the regional Metropolitan Transportation Commission (MTC), to a limited extent, the Bay Area Air Quality Management District (BAAQMD), and at the local level, the Napa County Transportation Planning Agency (NCTPA). Funding for bicycle projects is possible from various sources that NCTPA facilitates. While the NCTPA does not own or operate bicycle facilities or services, the agency supports the implementation of projects and programs identified by its member agencies.

At the federal, state, regional and local levels, transportation funds are divided into myriad funding programs. Each program is handled differently, depending on its size, eligible uses, and the agency responsible for making spending decisions. While some programs remain relatively consistent, the majority are dynamic, changing regularly with passage of legislation or as a result of administrative or programmatic adjustments. Moreover, many programs, especially at the regional level, are not funded from a single source; rather they are derived from a combination of federal and/or state funds. Government funds can be used for both non-infrastructure and infrastructure projects. Examples of the non-infrastructure or “programmatic” improvements include safe routes to school education and community traffic safety campaigns; examples of infrastructure projects include roadway rehabilitation, roadway construction, construction of Class I multi-use pathways and Class II bike lanes, and traffic signal infrastructure.

In general, federal funds are used for capital projects, such as new roadway, highway, and rail construction, as well as for specific projects earmarked by Congress. State funds are used for new capital projects too, but also cover maintenance costs, like street and highway resurfacing. Certain State funds may also be used as matching funds for larger federal projects, and/or to cover operational costs. Regional and local funds are often the most flexible, and may be used for capital project, maintenance, and operational costs, and programmatic improvements.

The primary implementers of infrastructure projects are city and county public works departments. Project selection is typically based on planning processes involving public participation. Additionally, schools and school districts can be the implementers of on-site bicycle and pedestrian infrastructure and amenities, such as sidewalks and bicycle racks; and/or for bicycle and pedestrian education programs and incentives. Other governmental partners are law enforcement agencies and parks and recreation departments. Such entities can sponsor enforcement and/or safety programs that are aimed at improving motorist, bicyclist and pedestrian behaviors to bring about greater community safety and security.

Redevelopment agencies are another source of governmental funding. Many redeveloped districts have incorporated bicycle and pedestrian facilities in their planning. Likewise, fees exacted from developers for project mitigation can potentially be used to accommodate pedestrians and bicyclists.

Private Sector Development and Investment

Private sector development and investment play an important role in funding non-motorized infrastructure. Many newer housing and retail developments throughout Napa County have been planned, or required, to include sidewalks, pathways, and bicycle facilities. Private development is expanding its focus on “smart growth” and balanced transportation options. This inherently builds in orientation to the bicycle and pedestrian modes. Sometimes developers also fund such amenities as bicycle racks, bicycle storage, benches, lockers and shower facilities. Additionally, in many locations improvements such as closure of gaps in sidewalks or road widenings are made only after a private land use change is approved. Improvements or right-of-way dedication can be made conditions of approval, allowing upgrades for bicyclists and pedestrians. Finally, both the government and the private sector can play important roles in providing employee programs that encourage walking and bicycling, as well as use of transit.

Community, Special Interest and Philanthropic Organizations

Other non-governmental sources of funding include the contributions of community-based organizations, such as the Napa County Bicycle Coalition, in carrying out programs that support bicycle usage. Examples include Bike to Work Day efforts, bicycle valet parking at events, education programs, and community bike rides. Special-interest groups have made contributions toward non-motorized improvements and programs if such are in alignment with group objectives. Sometimes the contribution is monetary; at other times in the form of volunteer efforts, such as path or trail upkeep programs.

Philanthropic entities including non-profit, foundation, and corporate organizations and individuals can fund programs, and at times facilities. Donations and grants have paid for community amenities such as pathways and trails; landscaping, fountains and other aesthetic improvements; and street furniture such as bicycle racks, lighting and seating benches. The latter “beautification” efforts create bicycle and pedestrian friendly environments.

Construction Projects

Because this Plan’s planning process has generated a ranked list of construction projects for each entity, additional information about the sources of infrastructure financing will be useful. Bicycle projects are eligible for funding through a variety of program sources. However, while a portion of the funds available for such improvements are programmed or ‘guaranteed’ to the local agencies based on various formulas, the majority of the funds are available through a competitive process at the state, regional, or local level. Thus while improvements to major roadways are likely to be financed through programmed transportation funds, the majority of the projects contained in this Plan are likely to be funded through competitive grant programs or some combination of the two sources.

To ensure timely implementation of the projects contained in this plan, it will be incumbent upon the local agencies to pursue competitive source funds, which are expected to account for the majority of funds available to implement the projects in this Plan. Competition for these limited funds can be intense, especially at the state and regional levels where often hundreds of applicants compete for monies from impacted programs. Therefore, competitive programs typically require the development of extensive applications with clear documentation of the project need, costs, and benefits, along with maps, schedules, letters of support, and proposed work scopes. A local match of between 10 and 15 percent is typically required; however, some programs require a dollar for dollar match. While the development of applications combined with securing local matching funds can be challenging, competitive source funding programs represent an outstanding opportunity to secure funds for local improvements.

Costs and Implementation

This section provides an overview of the costs, implementation strategies, and actions that are necessary to implement the projects and programs that have been identified in this Plan.

Project Costs

Planning level cost estimates were developed for this effort. Bicycle project cost estimates were developed by utilizing available information on each proposed project including segment length, corridor condition, and other available information. Each segment was evaluated according to an estimated cost-per-mile based on the recommended facility type. Unit costs were developed by researching the latest unit costs experienced by local agencies in Napa County and the North Bay; and were reviewed by agency staff for verification.

Proposed projects and programs in this Plan have been analyzed to determine financing requirements, and to allow the entities to budget their resources and target available funding sources. It is important to note that the majority of funding for the projects contained in this Plan is expected to be derived from competitive funding sources that require a combination of sound applications, local support, and lobbying on the regional and state level. To help with project implementation, potential funding sources for improvement projects have been identified in . Figure 8 displays a calendar overview of primary competitive source programs to provide an understanding of funding program timelines. Since the programs are dynamic, often changing annually, the calendar is formatted on a quarterly basis. It provides a twelve-week time to provide guidance on when calls for projects are typically released and application deadlines occur. Summaries of funding programs including weblinks are provided in Appendix F.

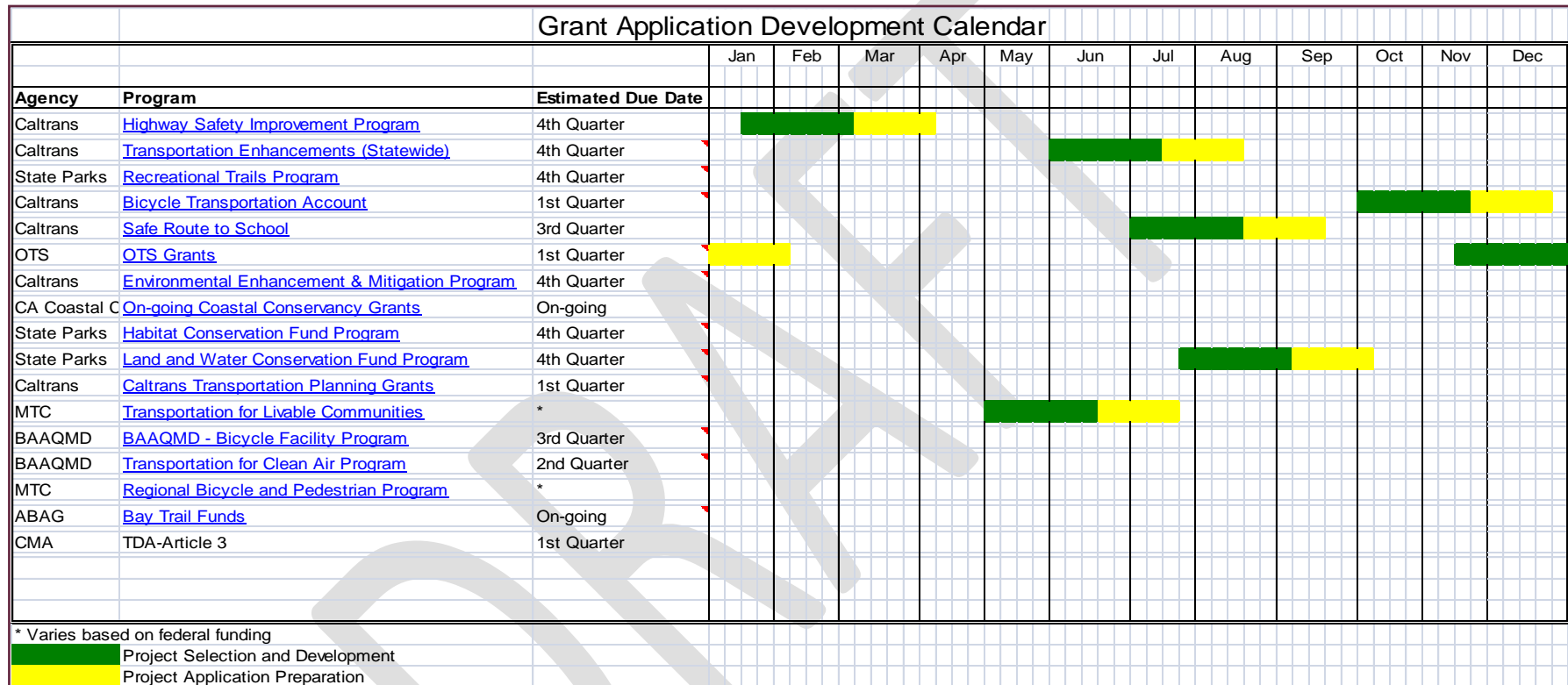


Figure 8 – Grant Application Development Calendar

Definitions, Terms, and List of Acronyms

AASHTO – American Association of State Highway and Transportation Officials

Accessible – Characteristic of a location allowing approach and use; absence of barriers

Accessible Pathway – Unobstructed path connecting all accessible elements and spaces of a building or a facility that meets the requirements of ADAAG

Accessible Pedestrian Signal (APS) – A device that communicates information about pedestrian signal timing in non-visual format, through the use of audible tones (or verbal messages) and vibrating surfaces

ADAAG – ADA Accessibility Guidelines for Buildings and Facilities

Americans with Disabilities Act (ADA) – A Federal law prohibiting discrimination against people with disabilities. Requires public entities and public accommodations to provide accessible accommodations for people with disabilities

AQMD – Air Quality Management District

Arterial – Through route/street carrying traffic to and from major points of interest, often inter-city

BAC – Bicycle Advisory Committee

Bicycle Boulevard – A low volume or residential street that has been modified for bicyclist safety and access.

Bicycle Connection – Paths or roadways created to link bicycle users with major streets/corridors

Bicycle Facilities – A general term denoting improvements and provisions to accommodate or encourage bicycling, including parking facilities, all bikeways and shared roadways, bicycle activated signal infrastructure, bicycle storage and changing facilities, etc.

Bicycle Lane (Class II Bike Lane or Class II Bikeway) – A portion of a roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes are ideal for minor thoroughfares or collectors. Under certain conditions, bike lanes may be beneficial on streets with significant traffic volumes and/or speeds. The Highway Design Manual (HDM) specifies the minimum width for bike lanes under various curb and on-street parking conditions. The HDM also states that “for greater safety,” widths wider than the minimums should be provided “wherever possible.”

Bicycle Path (Class I Multi-Use Path or Class I Bike Path) – A bikeway physically separated from motorized vehicular traffic and either within the highway right-of-way or within an independent right-of-way. Bike paths have a minimum paved width of 8 feet, with an additional graded area maintained on each side of the path. Typically, these facilities are usually shared with other non-motorized modes of travel.

Bicycle “Network” – the physical improvements that establish bikeways (Class I, II, or III routes)

Bicycle Route (Class III Bike Route or Class III Bikeway) – a designated route that provides for shared use of paved surfaces with pedestrian or motor vehicle traffic, also termed “shared roadway” designated by appropriate directional and/or informational signs. In this plan, a Class 3 signed bike route may be a local or residential street, bicycle boulevard, an arterial with wide outside lanes, or a roadway with a paved shoulder.

Bicycle “System” – the whole of all of the components, including both physical bikeways and programmatic improvements

Bicyclist Demand – Number determined by count of recreational and non-recreational bike trips during a specific duration of time (i.e. peak commute, weekly, monthly, etc.) on a given street/corridor

Bikeway – Any path or roadway with a provision for transportation or recreational use by bicyclists

Bikeway Network – The combined system of all bikeway types and amenities; connects destinations and attractions via bicycle accessible routes

Bollards – A rigid post placed in a through fare so as to limit access or traffic of certain widths or types

BPAC – Bicycle & Pedestrian Advisory Committee

BTA – Bicycle Transportation Account

Caltrans – California Department of Transportation

CARB – California Air Resources Board

CEQA – California Environmental Quality Act

Circulation Enhancements – Elements placed to modify and improve circulation for one or more modes of transportation

CMAQ – Congestion Mitigation and Air Quality Program

Connectivity – The relative relationship of transportation routes and access corridors to necessary resources and points of interest

Controlled Intersection – Area with a traffic light or other traffic control device where traffic flow from two or more paths or roadways meet

Corridor – An area that follows the shape and path of a major environmental feature; also a term used for transportation routes with designated district activities such as a mixed use-retail corridor

Crosswalk – Portion of a roadway where pedestrians are permitted to cross the street; can be marked or unmarked

CTC – California Transportation Commission

Curb Ramp – A combined ramp and landing that accomplishes a change in level at a curb. This element provides street and sidewalk access to pedestrians using wheelchairs

Design Guidelines – Specifications set to govern the physical or visual elements of development

Detectable Warning – A standardized surface feature built in or applied to walking surfaces or other elements to warn people who are blind or visually impaired of specified hazards

Existing Conditions – Current context of a site, including physical, demographic and political data

FAS – Federal Aid System

FHWA – Federal Highway Administration

FTA – Federal Transit Administration

FTIP – Federal Transportation Improvement Program

Gateway – A designated or marked entrance to a pathway or area

Goal – a "goal" describes the destination, or where we want to be at the end of the planning journey. Goals are usually broad, optimistic and expressive of a long-term vision.

Greenway – A pathway for various modes of transportation, including bicycles, that contains elements of a linear park

Infill Development – Development of new building adjacent to or on the same lots as existing buildings, utilizes pockets of un- or underdeveloped real estate contiguous with existing development

Infrastructure – Physical structures that support basic uses and services

Intersection – Where traffic flow from two or more paths or roadways meet

ISTEA – Intermodal Surface Transportation Efficiency Act of 1991 (reauth'd 1998 as TEA-21, and 2006 as SAFTEA-LU)

JARC – Job Access and Reverse Commute Program

Landscaping – Alteration of the ground through grading, planting and contouring

LTF – Local Transportation Fund

Median – A barrier (paved, landscaped, or planted) separating two traffic through fares

Median Refuge – An area within an island or median that is intended for pedestrians to wait safely away from travel lanes for an opportunity to continue crossing the roadway

Midblock Crosswalk – A legally established crosswalk that is not at an intersection

Mode Split – the number of people using a particular mode of transportation (bicycle, public transit, vehicle, walking, etc.)

MPO – Metropolitan Planning Organization

MTC – Metropolitan Transportation Commission – The Metropolitan Transportation Commission is the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area

MUTCD – Manual on Uniform Traffic Control Devices

NCTPA – Napa County Transportation Planning Agency

NEPA – National Environmental Quality Act

Objective – objectives describe mileposts along the way to achieving the goals. They are specific, measurable steps to be achieved if the overall goals are to be met.

Paved Shoulder – The part of the highway/street that is adjacent to the regularly traveled portion of the highway, is on the same level as the highway, and when paved can serve as a bikeway. Paved shoulders should be at least four feet wide and additional width is desirable in areas where speeds are high and/or a large percentage of trucks use the roadway.

Paving Treatments – a variety of materials, utilitarian and/or decorative used to level and condition pathway and roadway surfaces

Pedestrian Accessibility – the relative ease with which a location can be approached and utilized by pedestrian traffic

Policy – a principle or rule to guide decisions by the local agency with regard to a particular issue or set of issues.

Primary Bikeway Network – a continuous countywide network of on- and off-street bikeways that extend between and through communities developed specifically through this planning effort. The Primary Bikeway Network consists of a selection of existing and proposed Class I, Class II, and Class III bikeways that provide inter-city and inter-county routes along with connections to other transportation modes, major destinations, jobs, neighborhoods, recreation, and local bicycle networks.

Program – a specific action to accomplish the policy or objective

PSR – Project Study Report

Public Improvements – additions to public space intended to increase value and functionality

Public Transit – a system of multi-user transportation incorporating light rail, busses, ferries, streetcars, aerial trams, commuter trains

PUC – Public Utilities Commission / Public Utilities Code

Regional Trail System – a trail system that cross jurisdictional lines

Right of Way – the right of a vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian. (2) A general term denoting land, property, or interest therein, usually in a strip. (3) Land designated for transportation purposes, usually in the public sphere

RPA – Rural Planning Assistance

RSTP – Regional Surface Transportation Program

RTIP – Regional Transportation Improvement Program

RTP – Regional Transportation Plan

RTPA – Regional Transportation Planning Agency

Safe Routes to Schools – a nationwide program focusing efforts on improving the paths and routes used by children to commute to and from school

SHA – State Highway Account

SHOPP – State Highway Operation and Protection Program

Shared Lane Markings (Sharrows) – pavement legends which may be placed in the travel lane to provide positional guidance to bicyclists on roadways that are too narrow to be striped with bike lanes

Shoulder – Any portion of a roadway to the right of the right-most travel lane, but not including curbs, planting buffers and sidewalks. Shoulders can have a variety of surface treatments including pavement, gravel or grass. Depending on their width and surface, they serve a variety of purposes, including providing space for

vehicles to slow and turn right, accommodation of stopped or broken-down vehicles, to allow emergency vehicles to pass, for structural support of the roadbed, or for bicycle and pedestrian travel.

Sidepath – An informal term referring to a portion of a street or highway right-of-way, separated from motor vehicle traffic, and designed for non-motorized modes of travel, including bicycles

STA – State Transit Assistance

STIP – State Transportation Improvement Program

STP – Surface Transportation Program

Streetscape – the overall appearance and functionality of the roadway, incorporating the rights-of-way, landscaping, built features and adjacent land uses

Subdivision – an area that has been divided into smaller lots for individual development

TAC – Technical Advisory Committee, a committee made up of citizens and technical professionals, convened to create recommendations for the development of a plan

TDA – Transportation Development Act of 1971

TE – Transportation Enhancement Program (formerly TEA)

TEA-21 – Transportation Equity Act for the 21st Century (1998 – formerly ISTEA)

Title 24 Standards – administrative, building, mechanical, and safety codes set forth in the California Code of Regulations

Traffic Congestion – roadway condition characterized by reduced travel speeds or even complete stoppage of flow of vehicles

Transportation Routes – all widely used paths and roadways

USDOT – United States Department of Transportation

Utilitarian Trips – all trips made to secure basic needs and services; e.g. grocery, pharmacy, local commerce

VMT – vehicle miles traveled

Wide Outside Lane – an outside (curb) lane on a roadway that does not have a striped bike lane, but may be of sufficient width for a bicyclist and motorist to share the lane with a degree of separation

Wrong-Way Riding – riding against the flow of traffic

Zoning – regulation by a governing agency to specify permitted land uses for a given area

Bibliography

- Yountville Municipal Code*, Quality Code Publishing, 2011
- California Manual on Uniform Traffic Control Devices for Streets and Highways*, California Department of Transportation, 2010
- California Vehicle Code*, California Department of Motor Vehicles, 2011
- Caltrans Bicycle Transportation Account, <http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm>
- Town of Yountville General Plan*, Town of Yountville, 2006
- Draft Yountville Citywide Circulation Study*, Omni•Means, 2008
- Draft Parks and Community Services Master Plan*, Town of Yountville, 2011
- Factors Contributing to Pedestrian and Bicycle Crashes on Rural Highways*, Federal Highway Administration, 2010
- Guide for the Development of Bicycle Facilities*, American Association of State Highway and Transportation Officials, 1999
- Guidelines for Analysis of Investments in Bicycle Facilities*, Transportation Research Board, 2006
- Kimberly Bay Trail Feasibility Study*, Questa Engineering Corporation, 2010
- Napa River Bay Trail Town of Yountville Feasibility Study*, Questa Engineering Corporation, 2007
- Napa Valley Visitor Profile Study*, Purdue University Tourism and Hospitality Research Center, 2005
- SCTA Countywide Bicycle & Pedestrian Master Plan*, Sonoma County Transportation Authority, 2008
- South County SR 29 Corridor Study*, Korve Engineering, Inc., 2005
- Statewide-Integrated Traffic Records System (SWITRS)*, California Highway Patrol, 1999-2008
- United States Census 2000*, United States Census Bureau, 2000
- VINE, <http://www.nctpa.net/vine.cfm>
- Wetlands Edge Bay Trail Concept Plan*, Questa Engineering Corporation, 2002

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Appendix A

Summaries of Relevant Planning Documents and Policies

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Appendix B

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Bikeway Type Design Details

Appendix C

OTS Collision Rankings, Charts and Graphs

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Appendix D

MTC and National Bicycle and Pedestrian Documentation Project Information

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Appendix E

Project Ranking Matrix

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Appendix F

Funding Program Summaries

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