

# Chapter 2

## EXISTING CONDITIONS

This chapter provides *the discussion of “where we are now”* by providing an overview of the City of Santa Rosa’s existing conditions for walking and bicycling. Existing conditions consist of the following components:

- 1) demand and usage;
- 2) sidewalks and bikeways;
- 3) accident analysis;
- 4) pedestrian and bicycle facilities;
- 5) consistency/conformance with other plans; and
- 6) design guidelines for bikeways, bicycle facilities and maintenance.

### DEMAND AND USAGE

Factors for demand and usage include commute percentages for walking and biking as the primary commute mode; trip purpose percentages for trips made by walking and biking; and pedestrian and bicycle counts.

#### Commuter Trips

A comparison of the 1990 and 2000 Census figures on commuter patterns in Santa Rosa show a decrease in the rate of biking and walking. (See Table 2-1) However, Santa Rosa’s population increased by 30% between 1990 and 2000, so the actual number of trips to work by biking and walking has increased substantially.

Table 2.1: Residents’ Bicycling and Walking Rate for Commuting

	Bike		Walk	
	1990	2000	1990	2000
Santa Rosa	1.6%	0.9%*	2.9%	2.4%*
Sonoma County	1.0%	0.8%	3.3%	3.3%

SOURCES: 1990 and 2000 US Census.

\*Figures are for the Santa Rosa Urbanized Area (UZA)

Table 2-2 Sonoma County Primary Commute Mode Sonoma County Residents, 1990 - 2000					
	1990	1994*	1996*	1999	2000
Bike	1.0%	2.0%	0.0%	1.5%	0.8%
Walk	3.3%	3.3%	3.0%	1.2%	3.3%
*Sonoma and Napa Counties were combined.					
Data Sources: 1990: 1990 Census-Working Paper No. 5 Journey to Work data, April 1993. 1994, 1996, 1999: Rides for Bay Area Commuters, Commute Profile 1999: A Survey of San Francisco Bay Area Commute Patterns (August 1999). 2000: US Census					

#### All Trips

The percentage of the all trips, including commute, shopping, recreation, etc, undertaken in Sonoma County on weekdays by bicycling and walking is 1.8% and 3.4% respectively, based on data from the 2000 San Francisco Bay

Area Travel Survey (BATS). This represents a drop from 1990 BATS, where bicycling and walking accounted for 1.9% and 6.7% respectively for total weekday trips.

Table 2.3: Sonoma County, Percentage of Total Trips by Bicycling and Walking

	Bike		Walk	
	1990	2000	1990	2000
Sonoma County	1.9%	1.8%	6.7%	3.4%

SOURCES: 1990 and 2000 San Francisco Bay Area Travel Survey

Trip Purpose

It should be noted that while commute trips get most of the attention in transportation planning and programs, they account for a fraction of the total bicycle and walking trips. The following table provides a snapshot of the more specific trips undertaken by bike and on foot.

Table 2.4: “For each of the following types of trips, please indicate how often you use bicycling/walking as your primary mode of transportation”

	Never		< twice a month		Once a week		3-4 times/week		5-7 times/week	
	Bike	Walk	Bike	Walk	Bike	Walk	Bike	Walk	Bike	Walk
Work	34%	72%	14%	12%	16%	6%	24%	7%	11%	2%
School	69%	85%	4%	6%	13%	2%	8%	7%	6%	0%
Daily Needs (grocery, health care, etc)	24%	21%	23%	22%	26%	34%	20%	21%	6%	3%
Exercise	8%	12%	9%	11%	22%	27%	38%	30%	23%	20%
Entertainment	9%	8%	14%	19%	34%	37%	29%	26%	14%	10%
Social Visits	20%	19%	26%	24%	33%	40%	16%	14%	5%	3%
Other	50%	30%	13%	9%	13%	9%	6%	13%	19%	39%

Source: Online Santa Rosa Bicycle and Pedestrian Questionnaire, 200X

Gender and Age

While males account for twice as many trips by bicycle than females, they make less trips by walking than females. People under the age of 30 account for almost half the trips by bike, but only a third of the trips by walking. People over the age of 45 account for one-third of the walking trips, but the rate of bicycling trips for them drops markedly.

Table 2.5: Percentage of Biking and Walking Trips, by Gender and Age, US

	% of Total Bike Trips	% of Total Walk Trips
Male	68%	47%
Female	32%	53%
16-20 years	26%	15%
21-29 years	19%	16%
30-45 years	34%	33%
46-64 years	18%	25%
65+ years	3%	11%

2002 National Survey of Bicyclist and Pedestrian Attitudes and Behavior – Summary Report, NHTSA 2008

Santa Rosa Bicycle and Pedestrian Questionnaire

The questionnaire was posted online on the City's website, as part of the data collection for this update of the Bicycle and Master Plan. 293 respondents completed the questionnaire. While the survey is not statistically significant due to the small sample size and self-selection of the respondents, it does provide insight on biking and walking trends in Santa Rosa.

**Table 2.6 "What transportation modes do you combine most often on a single trip?"**

Walking & Automobile	32%
Bicycling & Automobile	25%
Walking & Bicycling	19%
Walking & Public Transit	7%
Bicycling & Public Transit	4%
Automobile & Public Transit	2%
No other combination of modes	9%
Other	2%

Source: Online Santa Rosa Bicycle and Pedestrian Questionnaire, 200X

Other survey results of note include:

- The average walking trip was 32 minutes; the average biking trip was 42 minutes.
- The most common reason cited for NOT bicycling was concerns with personal safety and security
- The most common reason for NOT walking was the time/distance to get to the destination.
- Transit usage amongst these respondents is very low: 71% never rode buses.
- 49% of the respondents used their car daily

In addition, respondents commented extensively on the specific intersections or locations that needed bicycle/pedestrian facilities or improvements. This questionnaire showed that surveys are a valuable tool for getting detailed public input. More surveys and data collection should be done when planning bicycle and pedestrian projects, to ensure that the projects will fit the needs of the users.

~~Factors for demand and usage include commute percentages for biking and walking, primary commute mode and car ownership. 1990 Census figures on commuter patterns in Santa Rosa show that about 1.5 percent of Santa Rosa residents and 1.6 percent of commuters to Santa Rosa use bicycles as a principle mode of transportation to work. (See Table 2-1) Santa Rosa's Trip Reduction Ordinance survey results from 59 large employers show that 2.1 percent of employees rode to work by bicycle in 1993.~~

Mode Location	Bicycle		Walk	
	Place of Residence %	Place of Work (%)	Place of Residence %	Place of Work %
Santa Rosa	1.6	1.5	2.9	2.5
Total Sonoma County	1.0	1.2	3.3	3.8

Source : 1990 Census

RIDES for Bay Area Commuters has also conducted mode split surveys in the Bay Area periodically since 1992 to update the 1990 census data. These have been conducted as a telephone survey of a one week commute pattern in the Spring.<sup>1</sup> (Data are available only at the county level, not by city). These surveys indicate that the level of bike commuting has been erratic, while walking declined in 1999. As shown in Table 2-2, bicycle mode share in Sonoma County fell from a high of 2.0 percent in 1994 to 1.5 percent in 1999. The reasons for this are not entirely clear, although the rainy season in Spring 1999 may have affected the survey results.

	<b>1990</b>	<b>1994*</b>	<b>1996*</b>	<b>1999</b>
<b>Bicycle</b>	1.0%	2.0%	0.0%	1.5%
<b>Walk</b>	3.3%	3.3%	3.0%	1.2%
<b>*Sonoma and Napa Counties were combined.</b>				
Source: 1990 data from 1990 Census Working Paper No. 5 Journey to Work data, April 1993. All other years: Rides for Bay Area Commuters, Commute Profile 1999: A Survey of San Francisco Bay Area Commute Patterns (August 1999).				

The above tables reflect only work trips. However, work trips are just one of many reasons for making trips. Data from the National Personal Transportation Survey conducted by FHWA in 1995 indicates that only about 14 percent of bicycle trips are work trips. Bicycles are used for other trip purposes as follows: 14 percent of bicycle trips are school trips, 14 percent are shopping trips, 18 percent are to conduct family or personal business and the remainder, about 40 percent, are for social or recreation purposes. Thus, as important as work trips are, only 1 in 8 bicycle trips nationally are work trips.

### **MTC Travel Survey**

The Metropolitan Transportation Commission (MTC) conducted surveys of regional travel characteristics in 1990 and 1981. The results of these surveys show regional and subregional travel characteristics with an emphasis on average weekday intraregional travel made by residents of the nine county Bay Area. The data include information on the components of travel (trip purpose, time of day, etc.), household travel rates, personal characteristics of the trip maker, and county level and county to county travel patterns.

Table 2-3 displays the 1990 survey results for bicycling or walking trips by purpose for the nine Bay Area counties individually and combined and the combined results for 1980. In the 1990 survey results for Sonoma County, bicycling is most common for home based social/recreation

<sup>1</sup> RIDES conducts a telephone survey of adults over age 18 who are employed 35 hours or more outside the home. The survey is conducted in the Spring, usually March or April, using random digit dialing, and asks the question "How do you usually get to work?" Thus, the results can be affected by the weather of that particular period when the survey is conducted. The sample size for Sonoma County has historically been about 400. The data are felt to be valid at the county level, but not at the city level. More details about the study and the methodology are available on the RIDES website: [www.rides.org](http://www.rides.org).

trips (2.4%) and least common for home-based shop trips (0.6%). Walking is most common for non-home-based trips (8.9%) and least common for home-based work trips (2.2%). Compared with the combined regional results, bicycling and walking are less common modes in Sonoma County. The 1990 bike and walk mode splits for the combined nine-county Bay Area appear to be similar to 1980. The two survey results are not entirely comparable because the home-based other trip purposes (shop, social/recreation, school) are combined in 1980.

**Table 2-3  
Weekday Bicycle and Walk Trips by Purpose  
All Bay Area Counties**

	Home-Based				Non-Home-Based
<b>Alameda</b>	<b>Work</b>	<b>Shop</b>	<b>Soc/Rec</b>	<b>School</b>	
Bicycle	1.1%	1.0%	0.8%	1.2%	0.9%
Walk	2.4%	8.2%	3.3%	8.3%	12.8%
<b>Contra Costa</b>					
Bicycle	0.2%	0.4%	0.4%	0.5%	0.4%
Walk	1.1%	2.5%	2.4%	4.4%	11.5%
<b>Marin</b>					
Bicycle	0.4%	0.5%	2.7%	1.4%	1.5%
Walk	1.4%	4.3%	3.0%	3.8%	15.3%
<b>Napa</b>					
Bicycle	0.9%	1.1%	1.1%	3.0%	0.9%
Walk	1.9%	6.2%	5.9%	8.6%	9.1%
<b>San Francisco</b>					
Bicycle	1.2%	0.1%	0.1%	0.2%	0.6%
Walk	5.8%	14.7%	6.7%	5.4%	24.4%
<b>San Mateo</b>					
Bicycle	1.5%	0.5%	1.6%	1.2%	0.6%
Walk	1.6%	5.1%	3.3%	7.0%	9.1%
<b>Santa Clara</b>					
Bicycle	1.1%	0.5%	0.9%	1.8%	0.6%
Walk	1.6%	2.6%	2.4%	6.3%	4.4%
<b>Solano</b>					
Bicycle	0.7%	0.2%	0.5%	1.2%	0.2%
Walk	2.9%	3.5%	2.9%	6.0%	7.1%
<b>Sonoma</b>					
Bicycle	0.9%	0.6%	2.4%	1.4%	0.9%
Walk	2.2%	4.4%	4.0%	2.5%	8.9%
<b>Combined Nine-County Bay Area</b>					
Bicycle	1.3%	0.7%	3.0%	4.2%	0.9%
Walk	3.0%	8.0%	10.8%	21.5%	13.7%
<b>Combined Nine-County Bay Area, 1980</b>					
Bicycle	1.7%	3.2% (Other)			1.1%
Walk	4.0%	13.7% (Other)			13.0%
Source: San Francisco Bay Area 1990 (and 1980), Regional Travel Characteristics, Working Paper #4, 1990 MTC Travel Survey					
Percents measures what percent of each trip purpose type is done by biking or walking. Numbers do not total 100 %; all modes would need to be shown to total 100 %.					

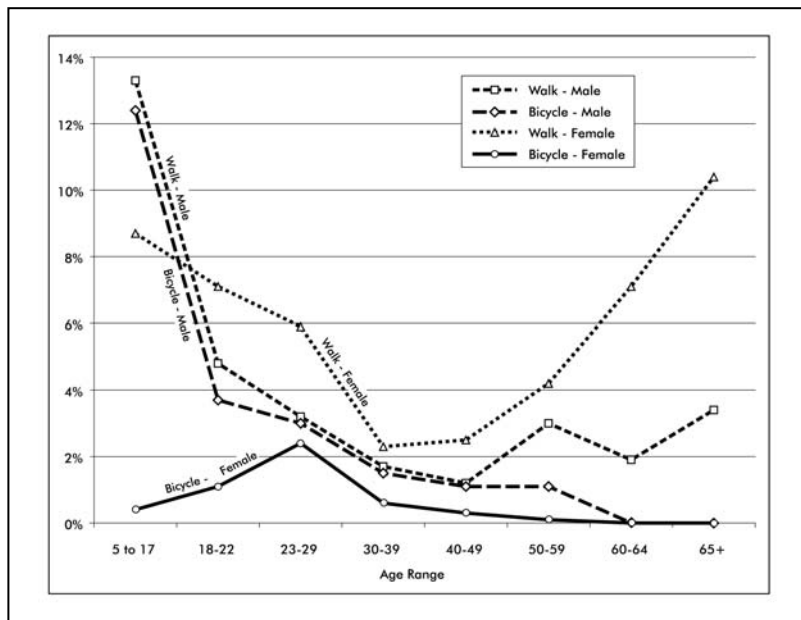
Table 2-4 shows the duration of bicycle and walk trips in the nine county Bay Area from the 1990 survey results<sup>2</sup>. Not surprisingly, over two-thirds of bicycle and walk trips are less than 15 minutes. About 3 to 5 percent of trips are 45 minutes or longer.

<b>Table 2-4</b>			
<b>Regional Duration (minutes) by Bicycle or Walk Mode</b>			
	<b>Bicycle</b>		<b>Walk</b>
0-5 minutes		19.5%	28.9%
5.1-10 minutes		20.1%	21.0%
10.1-15 minutes		28.0%	26.7%
15.1-20 minutes		7.3%	5.6%
20.1-25 minutes		5.8%	3.7%
25.1-30 minutes		12.1%	8.0%
30.1-45 minutes		2.5%	3.1%
45.1-60 minutes		2.5%	2.1%
> 60 minutes		2.3%	1.0%

Source: San Francisco Bay Area 1990, Regional Travel Characteristics, Working Paper #4, 1990 MTC Travel Survey

Exhibit 1 shows the 1990 walk and bicycle mode split by age and gender in the nine county Bay Area<sup>2</sup>. Young (5-17 years) males are the largest group of walkers and bicyclists. Bay Area residents between 30 and 50 years old are least likely to bike or walk. Walking increases sharply for women over 60.

**Exhibit 1**  
Regional Age and Gender by Bicycle or Walk Mode



<sup>2</sup> Data by duration and age and gender was only available for the Bay Area as a whole, not by county.

### **Pedestrian and Bicycle Counts [2.7.6 Action Step]**

Besides using travel surveys to get an idea of the demand for pedestrian and bicycle facilities and usage, a more location specific method is doing actual counts of pedestrians and bicyclist to determine the level of (pedestrian and bicycle) traffic in a particular area. This count data is also important in providing input into project specific design, planning and traffic engineering efforts.

In April/May of 2008, bicycle and pedestrian counts were conducted at 31 locations throughout the City of Santa Rosa as a component of the 2009 Santa Rosa Bike and Pedestrian Master Plan Update. Besides collecting pedestrian and bicycle traffic data to understand the existing level of use throughout the community at key locations, the purpose was also intended to establish a policy of conducting routine pedestrian and bicycle counts. Thus this effort establishes a baseline for future pedestrian and bicycle counts.

Selection of the 31 locations was derived from key origination and destinations identified as part of the pedestrian and bicycle network review and include: neighborhoods, schools, city and regional parks, transit centers, community centers, and shopping centers. An effort was made to balance to 31 count locations as much as possible among the City's four quadrants and included input from the Bicycle and Pedestrian Advisory Board.<sup>3</sup> This was the first time that bicycle and pedestrian counts have been conducted on a City-wide scale.

#### **Count Dates and Times**

The count dates and times were scheduled to fit within the overall schedule of the Bicycle and Pedestrian Master Plan Update and were conducted to be consistent with recommendations in the Metropolitan Transportation Commission's Handbook for Bicyclist and Pedestrian Counts, and the National Bicycle and Pedestrian Documentation Project. Counts were conducted on weekdays –Tuesday through Thursday during the spring count window. Two-hour counts were generally collected during the AM and PM peak commute periods, with the exception of a few counts that were conducted to capture lunchtime or school dismissal activities. The counts were collected between April 29 and May 8, with some re-counts collected in the following weeks. Average weather conditions were experienced on each of the count days; conditions included sunshine, mild temperatures with highs in the upper 60s to the upper 70s, and light variable winds. No measurable precipitation was received during that period. The results of the counts are provided in Table 2.3 for East-West direction of travel and Table 2.4 for North-South direction of travel.

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<sup>3</sup> This is an adaption from MIG's October 2008 Draft, Ch.2 Existing Conditions, pp. 45 and 51.

TABLE 2.3: BICYCLE AND PEDESTRIAN COUNTS (EAST – WEST)- APRIL &amp; MAY, 2008

Count Date	Location		Count Time	Peak Hour				2 - Hour Total			
	Primary Street	Cross Street		Time	Bikes	Peds	Total	Time	Bikes	Peds	Total
5/20/2008	Joe Rodota Trail	Dutton Avenue	PM	5:00 - 6:00 PM	64	29	93	4:00 - 6:00 PM	106	57	163
4/29/2008	Joe Rodota Trail	Prince Memorial Greenway	AM	7:15 - 8:15 AM	29	17	46	7:15 - 9:15 AM	46	33	79
4/29/2008	Joe Rodota Trail	Prince Memorial Greenway	PM	5:00 - 6:00 PM	42	15	57	4:00 - 6:00 PM	73	24	97
5/8/2008	Piner Road	Marlow Road	PM	3:00 - 4:00 PM	15	66	81	3:00 - 5:00 PM	27	127	154
4/29/2008	Sonoma Avenue	Brookwood Avenue	MD	12:15 - 1:15 PM	13	78	91	12:00 - 2:00 PM	25	125	150
5/7/2008	Sonoma Highway (SR 12)	Calistoga Road	PM	5:00 - 6:00 PM	13	17	30	4:00 - 6:00 PM	20	30	50
5/1/2008	4th Street	Farmers Lane	AM	7:15 - 8:15 AM	15	16	31	7:15 - 9:15 AM	22	30	52
5/1/2008	Sonoma Highway (SR 12)	Mission Boulevard	PM	4:45 - 5:45 PM	27	34	61	4:00 - 6:00 PM	44	64	108
5/6/2008	College Avenue	Mendocino Avenue	AM	7:15 - 8:15 AM	17	68	85	7:15 - 9:15 AM	32	100	132
5/6/2008	College Avenue	Mendocino Avenue	PM	4:00 - 5:00 PM	36	107	143	4:00 - 6:00 PM	74	177	251
5/1/2008	7th Street	B Street	AM	7:30 - 8:30 AM	12	78	90	7:30 - 9:30 AM	27	129	156
5/6/2008	9th Street	Wilson Street	PM	4:15 - 5:15 PM	42	95	137	4:15 - 6:15 PM	74	157	231
5/14/2008	Sonoma Avenue	Farmers Lane	PM	3:30 - 4:30 PM	11	30	41	3:30 - 5:30 PM	24	42	66
4/29/2008	Guerneville Road	Range Avenue	AM	7:45 - 8:45 AM	10	9	19	7:15 - 9:15 AM	16	9	25
5/1/2008	Guerneville Road	Range Avenue	PM	3:00 - 4:00 PM	22	73	95	3:00 - 5:00 PM	36	143	179
5/14/2008	Administration Drive	Ventura Avenue	AM	9:15 - 10:15 AM	8	74	82	8:15 - 10:15 AM	10	120	130
5/1/2008	3rd Street	Davis Street (Hwy 101)	PM	4:30 - 5:30 PM	18	35	53	4:00 - 6:00 PM	31	43	74
5/5/2008	Davis Street	4th Street	PM	4:30 - 5:30 PM	8	94	102	4:00 - 6:00 PM	16	157	173

\* Alternative for Davis and 3rd, since sidewalk on south side was closed.

TABLE 2.4: BICYCLE AND PEDESTRIAN COUNTS (NORTH – SOUTH) - APRIL &amp; MAY, 2008 (CONT.)

Count Date	Location		Count Time	Peak Hour				2 - Hour Total			
	Primary Street	Cross Street		Time	Bikes	Peds	Total	Time	Bikes	Peds	Total
5/7/2008	Fulton Road	Piner Road	AM	7:45 - 8:45 AM	17	68	85	7:00 - 9:00 AM	26	83	109
5/7/2008	Fulton Road	Guerneville Road	PM	4:15 - 5:15 PM	19	26	45	4:00 - 6:00 PM	32	36	68
5/20/2008	South Wright Road	Joe Rodota Trail	AM	7:00 - 8:00 AM	26	2	28	7:00 - 9:00 AM	43	4	47
5/21/2008	Stony Point Road	Santa Rosa Creek Path	PM	5:00 - 6:00 PM	54	68	122	4:00 - 6:00 PM	93	95	188
5/21/2008	Petaluma Hill Road	Kawana Springs Road	PM	4:30 - 5:30 PM	11	6	17	4:00 - 6:00 PM	18	13	31
5/1/2008	Santa Rosa Avenue	Sonoma Avenue	PM	4:15 - 5:15 PM	55	97	152	4:15 - 6:15 PM	101	156	257
5/7/2008	Summerfield Road	Sonoma Avenue	AM	7:30 - 8:30 AM	29	24	53	7:00 - 9:00 AM	45	42	87
4/29/2008	Mission Avenue	Montgomery Boulevard	AM	7:45 - 8:45 AM	10	9	19	7:15 - 9:15 AM	16	9	25
4/29/2008	Mission Avenue	Montgomery Boulevard	PM	5:00 - 6:00 PM	16	6	22	4:00 - 6:00 PM	21	10	31
5/21/2008	Brush Creek Trail	Motecito Boulevard	AM	8:00 - 9:00 AM	14	34	48	7:00 - 9:00 AM	29	59	88
5/7/2008	North Street	Pacific Avenue	AM	7:30 - 8:30 AM	29	24	53	7:00 - 9:00 AM	45	42	87
5/7/2008	Mendocino Avenue	Administration Drive/Chanate Road	PM	4:15 - 5:15 PM	20	27	47	4:15 - 6:15 PM	41	46	87
5/22/2008	Yulupa Avenue	Bethards Drive	PM	4:30 - 5:30 PM	14	67	81	4:00 - 6:00 PM	24	109	133
5/7/2008	Stony Point Road	West Third Street	PM	5:00 - 6:00 PM	26	56	82	4:00 - 6:00 PM	44	84	128
5/7/2008	Mendocino Avenue	Steele Lane	AM	7:30 - 8:30 AM	15	63	78	7:00 - 9:00 AM	32	91	123
5/20/2008	Dutton Avenue	Joe Rodota Trail	PM	4:30 - 5:30 PM	28	52	80	4:00 - 6:00 PM	51	87	138
5/14/2008	Mendocino Avenue	Pacific Avenue	AM	8:15 - 9:15 AM	19	0	129	8:00 - 10:00 AM	33	193	226

*{Reference Appendix xx for detailed Regional methodology for conducting pedestrian and bicycle counts as well as the necessary forms.}*

#### **Pedestrian Facilities<sup>4</sup>**

The primary considerations for maintaining the pedestrian network is to serve all users, improve safety, and limit pedestrian barriers to accessing transit, education, shopping, and services. The lack of sidewalks diminishes safe access through the city for all residents, but in particular the elderly, disabled, and youth. Of the 773 miles of regional, transitional, and local streets, Santa Rosa has approximately 39.6 miles of roadways lacking pedestrian facilities either on one or both sides of the road network. Conversely 95% of Santa Rosa's streets have sidewalks (pedestrian facilities). In the City limits, responsibility for sidewalk maintenance belongs to the property owner<sup>5</sup>. It's important to note that some parts of the City are not required to provide sidewalks. This is common in rural hillside developments<sup>6</sup> such as portions of the Fountaingrove area, or areas previously built out when under the County's jurisdiction and subsequently annexed into the City such as the Castlerock subdivision area (In general, the County does not require sidewalks in new residential developments outside of Urban Service Areas and Spheres of Influence except in specified circumstances<sup>7</sup>). Future updates to the BPMP should contain "Pedestrian Facilities maps" These types of maps would facilitate measuring and cataloging areas where sidewalk infills are needed as the City makes progress toward completing its Sidewalk In-fill program and conditioning new development for the installation of sidewalks in order to fulfill the GP Policy T-B-1 to of "continuous sidewalks." It would also help distinguish those areas of the City where by design sidewalks are not required.

Table 2.2 on the following page summarizes total length of roadways without sidewalk facilities by road class and planning quadrant.

Pedestrian infrastructure provided in the City of Santa Rosa includes sidewalks, multi-use pathways—paved and unpaved, curb ramps, crosswalks, pedestrian signals, audible crossing cues and amenities, such as warning and information signs, transit shelters, lighting, benches, drinking fountains, shade trees and artwork.

Special treatments are provided downtown for pedestrians such as decorative paving, bollards and crosswalk treatments. The existing crosswalks include standard parallel lines, ladder crosswalks, school zone crosswalks, enhanced "zebra" crosswalks, special paving treatments and high visibility treatments with overhead pedestrian activated warning flashers, although the City is moving

Figure xx

Pedestrian crosswalk in school zone with high visibility treatments and overhead pedestrian activated warning flashers—Jennings Ave at Dutton Avenue.

<sup>4</sup> Adapted from MIG's Ch.2 pp.35-36. "Availability of Pedestrian Facilities" maps by quadrant were not used because the maps include areas that were designed not to have sidewalks.

<sup>5</sup> City Ordinance 3886 (See Appendix xx for complete text of ordinance)

<sup>6</sup> Reference City Design and Construction Standard 200L

<sup>7</sup> Conversation with Gary Helfrich, Planner, County of Sonoma Permit and Resource Management Department

toward high visibility Continental cross walk markings. Cross walk markings are discussed further in the Best Practices and Design Guidelines [Section xx](#).

Classification and Quadrant	Street Length with Sidewalks Needed	
	One-side	Two-sides
<b>Northwest Planning Quadrant</b>		
Regional Street	4.2	2.8
Transitional Street	2.5	1.9
Local Street	0.9	0.4
<b>Northeast Planning Quadrant</b>		
Regional Street	2.5	0.5
Transitional Street	0.9	0.4
Local Street	0.6	1.0
<b>Southwest Planning Quadrant</b>		
Regional Street	8.2	1.8
Transitional Street	1.2	1.7
Local Street	0.4	0.4
<b>Southeast Planning Quadrant</b>		
Regional Street	1.9	1.8
Transitional Street	0.3	0.6
Local Street	0.6	2.1
<b>City Total</b>		
Regional Street	16.8	6.9
Transitional Street	4.9	4.6
Local Street	2.5	3.9
All Road Classes	24.2	15.4

Recently completed projects include 1) Aston Avenue at South Henley Street pedestrian walk way and traffic signal, 2) Piner Road at Industrial pedestrian pathway and Bus Shelter, and 3) Five additional Over-head Pedestrian Flashers at, 4).

## EXISTING BIKEWAYS

The City of Santa Rosa currently has approximately ~~7670~~ existing bikeway miles that are composed of ~~12-13~~ miles of Class I paths, ~~25-45~~ miles of Class II lanes, and ~~33-19~~ miles of Class

III route<sup>8</sup>. ~~Thirteen~~ *Twenty* miles of bicycle lanes have been added since the ~~1994~~ *2001* Plan, mainly by installing bike lanes on streets that were Class III Bike Routes. In 1993, the City had approximately 69 bicycle miles that included 9.2 miles of bike paths, 12.3 bike lanes, and 48 miles of bike routes. The existing and ~~programmed~~ *proposed* bikeways are depicted in **Figure 2**; ~~a detail of the downtown area is depicted in Figure 3.~~ *More detail is provided by quadrant in Figure 3A to 3D.*

~~Recently completed projects include 1) extending the Joe Rodota Trail between Wright Road and Stony Point Road; 2) securing funding for an additional half mile along the Santa Rosa Creek in the downtown area (Gap Project) as well as minor additions to the east end of the Santa Rosa Creek Trail; 3) completing a half mile section of the Colgan Creek path in Southeast Santa Rosa; and 4) completing several Class II bike lanes on Hearn Avenue, West Third Street, West College Avenue, Guerneville Road, Fountaingrove Parkway, Bennett Valley Road, Maple Street, and Marlow Road.~~

*Recently completed projects include*

*Class I: a) ;*

*Class II: a) Fulton Road—Piner Road to Wood Road; b) Third Street Widening – Morgan St to Davis St; c) South Hendley Street – South E Street to Aston Avenue, d) Yulupa Avenue—Douglass Drive to Bennett Valley Road; e) W. Steele Lane—Coffee Lane to Range Avenue; f) Mendocino Avenue – College Avenue to Fountaingrove Parkwya; g) Range Ave—Guerneville Road to Piner Road; h) Montgomery Drive—Hahman Drive to Summerfield Road; i) Dutton Avenue—Guerneville Road to College Avenue; j) Coffey Lane—Piner Road to N. of Steele Lane; k) Stony Point Road—Highway 12 to Sebastopol Road*

*Class III: Signage installation and maintenance on Routes 9, 21, 22, 33, 37, 39, 44, 50, 52 and 55. **{When will this be completed?}***

## **NORTH-SOUTH CORRIDORS**

A narrative description of major Santa Rosa bikeway corridors is presented below. *A corridor is a route or series of routes strung together to form a “corridor” that traverses the City or connects to a major traffic generator or* ~~These corridors link all~~ major activity centers (i.e. schools, employment centers, and parks) in Santa Rosa. These general corridors are depicted in **Figure 4**.

### **Fulton Road Bikeway (Route #1)**

At western edge of the City, the Fulton Road corridor (between ~~Piner~~ *Wood* Road and Highway 12) has ~~2.5~~ *3.8* miles of bike lanes. The route serves ~~two~~ *four* parks and Piner High School *and connects with a major West-East Class I-Bike Path, Santa Rosa Creek.* These bike lanes are in good condition and provide ample width for bicyclists.

### **~~Stony Point Road—Marlow Road—Coffey Lane Bikeway (Routes #2, 4)~~**

<sup>8</sup> *Based on staff Bicycle Project Lists Tables 3-1 and 3-2.*

~~This corridor generally parallels Highway 101 to the west. It runs along Stony Point Road at the southern City limits at Hearn Avenue, continuing along Marlow Road, Piner Road, Coffey Lane to Hopper Avenue. Marlow Road north of Guerneville Road was widened to have bike lanes several years ago from Santa Rosa Creek to Piner Road. The route serves four parks, the Stony Point Business Park, and three schools.~~

~~The Stony Point Road/State Route 12 intersection is currently challenging for bicyclists due to heavy traffic and turning volumes. This interchange was modified in 1994, improving bicycling conditions somewhat by including bike lanes.~~

***Coffey Lane—Marlow Road—Stony Point Road Bikeway (Routes #4, 2)***

*This corridor generally parallels Highway 101 to the west. It runs along Coffey (Rte.4) Lane from Hopper Avenue to Piner Road west to Marlow Road (Rte.2) to continue south onto Stony Point Road to reach the southern City limits at Bellevue Avenue and beyond. The route serves three parks, the Stony Point Business Park, and four schools.*

*The Stony Point Road/State Route 12 intersection is currently challenging for bicyclists due to heavy traffic and turning volumes. This interchange was modified in 1994, improving bicycling conditions somewhat by the addition of bike lanes on the overcrossing only. The area south of this intersection to Sebastopol Road is currently under construction to be widened and will have bike lanes added. The 2007-08 Capital Improvement Program ultimately plans for future widening of Stony Point Road to Hearn Avenue and includes bike lanes.*

**Figure 2-2**

**Dutton-Guerneville-Range Bikeway (Routes #5)**  
*Range—Guerneville—Dutton Bikeway (Routes #5, 36, 4)*

This corridor runs parallel to and west of Highway 101 and *jogs west along Guerneville Road (Rte.36) for .3 of a mile before continuing south on North Dutton Avenue (Rte.4) to Hearn Avenue. The Guerneville Road portion includes 0.5 mile of bike lanes with the remainder being Class III Bike Route. This bikeway serves two-one parks, the Santa Rosa Business Park, and the Coddington Center, the Santa Rosa Business Park, and Roseland area. Dutton Avenue south of Sebastopol Road enters is located in the unincorporated Roseland area. After South Avenue, Dutton Avenue is within the County's jurisdiction. This corridor south of Sebastopol Road has many sections with restricted widths, including most of Dutton Avenue and Range Avenue.*

### **~~Santa Rosa Avenue/Petaluma Hill Road/Mendocino Bikeway(Route #7)~~**

~~This corridor starts on Santa Rosa Avenue at the southern City limits and runs north to Sonoma Avenue, east to D Street, north to Fifth Street, and north along Mendocino Avenue to the northern City limits. It generally parallels U.S. 101 to the east. None of this 6.8 mile corridor is currently striped for bike lanes, but funding has been programmed to provide bike lanes on the section from Highway 12 to the southern city limit. This corridor serves major destinations such as downtown Santa Rosa, Santa Rosa High School, Santa Rosa Junior College, and the County Administration Center. Petaluma Hill Road could be considered a southerly branch of this corridor. There are high traffic volumes on Petaluma Hill Road as it acts as a reliever route for U.S. 101.~~

### ***Old Redwood Highway, Mendocino Avenue, Santa Rosa Avenue Bikeway (Route #7)***

*This corridor parallels U.S. 101 to the east and starts on the northern City Limits from Old Redwood Highway to Mendocino Avenue and runs south to Santa Rosa Avenue to the southern City limits at Bellevue Avenue and beyond. At College Avenue the corridor bears right to continue south on Healdsburg Avenue onto B Street and jogs east on 3rd Street to continue south on Santa Rosa Avenue to the southern City limits. In the northbound direction, the route proceeds north on Santa Rosa Avenue past 3rd Street through the future reunited Court House Square to continue north on Mendocino Avenue and back to College Avenue. Except for the approximate 1.1 mile portion through the heart of downtown from College Avenue to Highway 12, the route has entirely Class II-Bike Lanes. This corridor serves major destinations such as Kaiser, Fountaingrove Parkway, County Administration Center, Santa Rosa Junior College, Santa Rosa High School, downtown Santa Rosa, City Hall, Prince Memorial Greenway, Julliard Park, Petaluma Hill Road, Santa Rosa Market Place, and the Santa Rosa Town Center.*

### **~~Brookwood-North-Franklin-Lewis Bikeway (Route #11)~~**

~~This corridor runs 2.6 miles from the Sonoma County Fairgrounds through the east side of downtown to the Sonoma County Administration Center.~~

~~The route is currently all bike route, except for 0.3 mile of bike lane on Brookwood near Memorial Hospital. This bikeway serves as an important commuter route into downtown, the County Center, and two schools.~~

~~There are currently two gaps in this bikeway on Brookwood between Third Street and College Avenue, and on Franklin Avenue between North Street and Chanate Road.~~

### ***Humboldt Bicycle Boulevard—Aston--Brookwood (Route #10, 47, 11)***

*This corridor runs 4.8 miles from the Chanate Road to Kawana Springs Road. Approximately 1.5 miles is on the proposed Bicycle Boulevard route currently deployed as a pilot. This corridor serves as an important commuter route into downtown from residential neighborhoods that anchor northern and southern ends of the corridor. The corridor serves one school and three parks. With the County's future plan to provide access to its Taylor Mountain Regional Park, an additional park will be accessible.*

*There are currently incomplete segments to this bikeway on D Street-Brown Street south to Wheeler Street and South E Street to Bennett Valley Road as well as Aston and Linwood avenues. **The first incomplete segment can be easily completed through appropriate signage and directional arrows.** However, the south E Street is more challenging with its limited roadway width, street function, vehicle speeds and volumes. These are all factors for future consideration and factors that may create an intimidating environment for some users.*

***(County Center) North-Franklin-Lewis-Brookwood Bikeway (Route #34, 10, 11)***

*This corridor runs 3.7 miles from the Sonoma County Administration Center through the east side of downtown to the Sonoma County Fairgrounds. Approximately 2.5 of the 3.7 miles is Class II Bike Lanes with reminding amount either proposed or existing Class III-Bike Route. This corridor serves as an important commuter route into downtown, the County Center, the Bike Boulevard, one school and three parks.*

*There are currently incomplete segments to this bikeway on Franklin Avenue between Mervyn Avenue and Chanate Road, Brookwood between Third Street and College Avenue, and Brookwood between Sonoma Avenue and Maple Street. This is due to the limited roadway width, particularly in the latter segment where vehicle speeds and volumes are more of a factor. To compensate for this last segment, a Class III-Bike Route is proposed on Brigham Avenue via Vallejo Street (Rte 50) to get users south of Highway 12.*

**~~Yulupa/Brush Creek Bikeway (Routes #15, 60)~~**

~~*This bike corridor runs 4.5 miles from the City limits/Galvin Park along Yulupa Avenue to Montgomery Drive. This portion of the corridor is an important recreation connection from the City to Bennett Valley Road. A connection was completed across Santa Rosa Creek to connect with the Brush Creek Bikeway. This Class I facility in northeast Santa Rosa follows Brush Creek through residential areas. The route appears to serve mostly local residents, and has good access from local streets onto the system.*~~

***Brush Creek—Yulupa Bikeway (Routes #60, 15)***

*This corridor runs 4.5 miles south along the Class I—Bike Path on Brush Creek Pathway from Montecito Boulevard and jogs west onto Santa Rosa Creek Pathway before heading south again on Yulupa Avenue. This corridor continues to the southern City Limits at Bennett Valley Road and beyond. This corridor serves two schools and Galvin Community Park at the southern end serving as an important recreation connection from the City to Bennett Valley Road. In the northern section, a bridge connection is provided to connect across to and for travel east on the Santa Rosa Creek Pathway (Class I). This northern segment along Brush Creek runs through residential areas. The route appears to serve mostly local residents, and has good access from local streets onto the system. A major portion of the Yulupa Avenue segments are Class II—Bike*

*Lanes with the exception of .2 of mile near the connection with Brush Creek, which is designated as a Class III—Bike Route through this local street area. The remaining proposed Class II segments are estimated to be completed in late 2010.*

#### **~~Summerfield/Mission Bikeway (Route #16)~~**

~~This bikeway corridor runs parallel to Yulupa Bikeway for about three miles between Bennett Valley Golf Course and Sonoma Highway at Mission Boulevard. The corridor continues up Mission Boulevard to its terminus at Montecito Boulevard. It connects with other routes and serves Howarth Park and Spring Lake Park.~~

#### ***Mission/Summerfield Bikeway (Route #16)***

*This corridor begins on Mission Boulevard from Montecito Boulevard to Bethards Drive via Summerfield Road. This bikeway corridor runs parallel to Yulupa Bikeway for about 2.5 miles between Sonoma Highway at Mission Boulevard to Bethards Drive. It connects with other routes and serves Howarth Park, which is the connection to the Bay Area Ridge Trail, Spring Lake Regional Park, Annadel State Park and other points south. This corridor serves two schools and three Parks. By 2010 approximately 1.9 miles will be Class II-Bike Lanes with the remaining segments proposed as Class II Bike Lanes.*

### **~~EAST-WEST—EAST CORRIDORS~~**

#### **~~Piner-Bicentennial-Mendocino-Chanate-Montecito Bikeway (Routes #32, 8, 34)~~**

~~This 5.97-mile system *corridor* parallels the northern side of Santa Rosa, from the intersection of Piner Road and Fulton Road to Montecito Boulevard and Calistoga Road. This corridor serves a regional bus line (Golden Gate Transit-Piner Road at Industrial Drive) the Sonoma County Administration Center, Sutter Hospital three parks one park, three schools one public library and one school on its eastern leg, the Sonoma County Administration Center, and Sutter Hospital. The bikeway is about two currently a little over one-thirds<sup>9</sup> Class II Bike Lanes bike route with the remaining segments either a Class III Bike Route or not signed as a bikeway. two miles of bike lanes.~~

This bikeway currently has three *incomplete gaps segments*: Piner Road between Marlow Road and Range Avenue/Bicentennial Way; ~~Montecito Boulevard between Middle Rincon and Brush Creek Road; and between Bicentennial/Mendocino-Ventura Avenue and Chanate/Mendocino to Humboldt Street, Chanate/Montecito Meadow Drive to Fountaingrove Parkway and Montecito Boulevard between Brush Creek and Middle Rincon Road. The most sever restricted width is east of Montecito Meadow Drive. Another area of limited width is~~ Several stretches on Piner Road have restricted width, as does the Bicentennial Way overcrossing of Highway 101. The bike lanes on the west end of Chanate and Montecito Boulevard have sub-standard widths.

#### **~~Guerneville-Steele Bikeway (Route #36)~~**

~~This corridor begins south of the County Center, passes under U.S. 101, and joins Guerneville Road. This is a popular route for bicyclists heading west out of the City, and also for commuters~~

<sup>9</sup> Total combined route mileage is 7.03 miles with 3.08 miles existing Class II Bike Lanes (3.08/7.03 = .42). The DPW has proposed plans to install Class II on Piner Rd east of Marlow Rd to Cleveland Avenue. This proposed section is not included pending completion of the Class II Bike Lanes.

heading towards employment and school destinations such as Santa Rosa Junior College. This route also passes by Coddington Center, and several recreation sites. A major barrier on this route is the undercrossing of U.S. 101, where restricted width and high traffic volumes of the interchange create an intimidating environment.

***Guerneville-Steele Bikeway (Route #36)***

*This corridor begins west of Fulton Road proceeds east on Guerneville Road merging with West Steele Lane and passing under U.S. 101 and south of the County Center terminating at Franklin Road after becoming Lewis Road after Mendocino Avenue. This is a popular route for bicyclists heading west out of the City, and also for commuters heading east towards employment and school destinations such as Santa Rosa Junior College. This route also passes by Coddington Center, the Westside Transit Transfer Center, the Steele Lane Community Center, one park and four schools. This corridor intersects the City's proposed north-south Bicycle Boulevard. A major barrier on this corridor is the segment between Range Avenue and the approach to the undercrossing of U.S. 101 where restricted width, multiple intersections and travel lanes, high traffic volumes and highway on-ramp can create an intimidating environment.*

**~~West College-Mendocino-Pacific-Bryden-Fourth Street-Sonoma Highway Bikeway (Routes #37, 38, 40)~~**

~~This corridor runs from the western boundary of Santa Rosa at West College Avenue to Oakmont on State Route 12 (Sonoma Highway). This corridor serves major recreation facilities (Finley & Howarth Park), a commute route to downtown and to the Junior College, and a route to three schools. Most of this bikeway is currently Class III (bike route), and there is a bike lane between Fulton and Stony Point Road. Although not designated a bike lane, Sonoma Highway from Farmers Lane east provides a wide striped shoulder for bicyclists.~~

~~The corridor currently has a major gap (1 mile) along West College Avenue between Dutton and Mendocino Avenue, caused by narrow roadway conditions and Highway 101. Bicyclists can continue on College Avenue under Highway 101 or use an alternate route, West Ninth Street, which has less traffic. Several sections of West College Avenue east of Stony Point Road have restricted widths for bicycles. Mendocino Avenue, Pacific Avenue, Bryden Lane, and Fourth Street have restricted widths for bicycles.~~

~~Two other routes that serve this corridor are: College Avenue between Mendocino Avenue and Fourth Street; and Fourth street between Bryden Lane and College Avenue. Both segments have restricted widths for bicyclists.~~

### ***West College-Jennings-Pacific-Spencer-Fourth Street-Sonoma Highway Bikeway (Routes #37)***

*This corridor runs from the western boundary of Santa Rosa at West College Avenue to Oakmont on State Highway Route 12 (Sonoma Highway). This corridor serves major destinations such as the future SMART Station at Jennings Avenue, Santa Rosa Junior College, Santa Rosa High School, Humboldt Street Bicycle Boulevard, Safeway/Flamingo Shopping Center, Oakmont and beyond. The corridor serves six schools and three parks. Approximately 7 miles of this 11.2 mile corridor is proposed as a Class II-Bike Lane facility. Currently there are Class II Bike Lanes on West College Avenue and wide shoulders on most of the Sonoma Highway segment.*

*It is important to note that of this 11.2 mile corridor, only about 4 miles is within the City's jurisdiction. This corridor passes through the Sonoma Marin Area Rail Transit (SMART), California Department of Transportation (Caltrans), and Santa Rosa Junior College. A major portion of the corridor, 6.4 miles, is also within Caltrans' right-of-way. Two major obstacles include crossing the SMART rail line and Highway 101. Both crossings involve considerable right-of-way and engineering considerations. The City has initiated preliminary discussions with SMART which notes the Public Utilities Commission (PUC) has indicated it would not favor additional at grade crossings. However, a feasibility study for a Highway 101 Pedestrian/Bicycle Bridge Overcrossing that would serve this corridor is currently under way.*

*Other corridors exist that can facilitate this west-east movement across the rail line and Highway 101: West College-4th Street-Highway 12 (Route #38, 37); West College-Cleveland-West 9th-7th-E Street-4th Street-Highway 12 (Route #38, 5, 39, 40 37). Class II-Bike Lanes are scheduled for 2010 between Stony Point Road to the SMART rail line on West College Avenue. However east of this location, College Avenue width narrows and traffic volume increase with vehicles entering College Avenue to enter/exit Highway 101 from adjoining Regional streets, or using College Avenue as a cross cut to Sonoma Highway via 4th Street. These operating characteristic can create an intimidating environment for some users. Bicyclists may choose to use yet another alternate route through West Ninth Street, which has less traffic to connect to 4th Street. However, both College Avenue and 4th Street have restricted widths for bicycles, and 4th Street has fewer traffic signals than College Avenue.*

### **West Ninth-A Street-Seventh Street Bikeway (Route #39)**

*This 2.2 mile bike corridor is an important connector between west and central Santa Rosa, and a good bicycling alternative to using the Third Street tunnel and West College Avenue *that it parallels*. The route serves the downtown shopping area as well as Finley Park *via Bikeway Route 2*. ~~Currently, portions of West Ninth Street near Highway 101 are in poor physical condition with no shoulders. This route parallels West Third Route and West College Route.~~ *A little more than half of approximate 2.2 mile corridor currently exists as a combination Class II and III facility. This corridor is likely to remain a combination Class II and III facility because of specific limited roadway width along residential areas between Wilson and A Streets; A Street between 9th and 7th Streets; and 7th Street between Humboldt Street and Brookwood Avenue. Because this is a popular route with bicyclist, additional street treatments encouraging motorist and bicyclist to share the road, coupled with education and awareness efforts would be**

warranted along these restricted areas. Sample of these treatments and education and awareness concept are covered in the *Design Standards Chapter XX*

### **West Third –~~Sonoma Avenue~~-Montgomery *Sonoma Avenue*-Bikeway (Routes #41, 42)**

This segment stretches ~~5.2~~<sup>2.8</sup> miles through the heart of Santa Rosa, from the western *City Limits* ~~at west of~~ *Fulton Road/West Third Street* to the east *State Highway Route 12 (SR 12) and Melita Road*, ~~leading into Howarth and Spring Lake Parks~~. The route generally parallels ~~State Route~~ *SR 12* through the city and is a major *commute route into downtown Santa Rosa from the southeast (Pythian Road and beyond)*. *Some of the few downtown destinations served are the library, Santa Rosa Plaza, Fourth Street commercial district (or Courthouse Square), Transit Mall and City Hall.* ~~recreation conduit for bicyclists heading either east or west~~. The route also serves as a *recreation conduit for bicyclists heading either east or west into Howarth and Spring Lake Parks.* ~~commute route into downtown Santa Rosa and also serves destinations such as the library, Santa Rosa Plaza and the Fourth Street commercial district (or Courthouse Square)~~. *This corridor is proposed as a Class II facility. Currently approximately 3.6 miles exist. Of these only 1.2 miles is Class III. The bikeway is predominately Class III (bike route). However, there are two areas along this corridor that have restricted roadways and will require further study, particularly east of Mission Boulevard (Segment p) where the roadway curves and is restricted by a hillside (See Project List in Appendix XX).*

An alternative or complement to using *Montgomery Drive* ~~Sonoma Avenue~~ is to use *Sonoma Avenue* ~~Montgomery Drive~~, which parallels *Montgomery Drive* ~~Sonoma Avenue~~ up to *Summerfield Road* and is more aligned with accessing *Howarth and Spring Lake Parks*.

~~Currently this corridor is broken by a 3,000 foot gap on West Third Street between Dutton Avenue and Santa Rosa Avenue caused by narrow roadway conditions and Highway 101. Bicyclists typically use the Third Street tunnel or pedestrian bridge at the foot of Sonoma Avenue to bridge this gap. West Third Street just east of Stony Point Road, and just east of Dutton Avenue to the SMART railroad tracks and a segment of and Sonoma Avenue between Hahman Drive and Yulupa Avenue~~ *Montgomery Drive* have restricted widths for bike lane expansion. *Another alternative for bicyclists is the Prince Memorial Greenway/Santa Rosa Creek, which parallels 3rd Street between Downtown and Stony Point.*

## **OTHER BIKEWAY CORRIDORS**

### **Southwest Area Bikeways**

Three bikeways segments (*Routes 46, 3, 48*), all bike lanes, make up a mini-loop in southwest Santa Rosa. Located on Sebastopol Road, Corporate Center Parkway, and Northpoint Parkway, this 2.2 mile system serves a rapidly-growing employment and residential area. These segments are currently disconnected from the City bikeway system. Bicyclists currently use Sebastopol Road, Stony Point Road, and Hearn Avenue to connect to other bike routes. *This area is complemented by a proposed Class I pathway, Roseland Creek, running southwest to northeast through the area and proposed Class IIs on Burbank Avenue as well as on West and Dutton Avenues (Routes 205 and 4), although these two remaining routes have restricted widths for bike lane expansion and will require further study.*

### **Santa Rosa Creek / Prince Memorial Greenway (Routes #69)**

A ~~2.7~~3.6 mile Class I path follows Santa Rosa Creek from Fulton Road to Pierson Street (about 2,000 feet to the west of Highway 101). The Class I facility is very popular with bicyclists, runners, and walkers. The Santa Rosa Creek Master Plan identifies an eventual corridor running along the creek and City streets from Laguna de Santa Rosa to ~~Annadel State Park~~ *Acacia Lane*. *Completion of this corridor west of Fulton Road is a County of Sonoma Regional Parks Department project. The first phase to Willowside Road is underway. Subsequent County Regional Parks phases will connect to Laguna de Santa Rosa.*

~~When completed, the~~ *The Prince Memorial Greenway (PMG) project will consist of a completed in late 2005 restored Santa Rosa Creek and recreational trail along the banks of the creek. The project will connect the downtown at Santa Rosa Avenue to the historic railroad square district at Olive Street with pedestrian and bicycle paths, plazas and multiple urban design elements. Currently, the section of the Prince Memorial Greenway between U.S. 101 and Olive Street is under construction. In August 2008, the Prince Gateway Park was completed. It is located at Santa Rosa and Sonoma Avenues and provides access to the south bank of PMG. Conversely, it provides an exit to the south east area of Santa Rosa connecting to Sonoma and Santa Rosa bikeways for points east and south.*

### **Howarth/Spring Lake Parks Bikeway Pythian Road (Routes #63, 231, 239)**

This multi-use ~~trail~~ *pathway* runs along Lake Ralphine in Howarth Park, and connects to *Channel Drive through Annadel State Park and through the Wild Oak and Oakmont communities to connect to Pythian Road. This route provides access east through to Hood Mountain Regional Park, the future County “Central Sonoma Valley Trail” and south toward Lawndale Road south of the City Limits and into the unincorporated area of Sonoma County. This corridor provides an alternative to Sonoma Highway and Montgomery Drive facilitating commuters coming from the Pythian Road area into Santa Rosa. A connection between the County’s Spring Lake Park pathway (Route 63, Segment d) to Channel Drive (Route 231) is proposed to close the gap between the County and City and facilitate the use of this corridor. Paving the route through Annadel State Park would require coordination with the State and improvements to the existing pathway between lower Timber Springs Drive and White Oak Drive to reduce any potential for pedestrian and bicycle conflicts. This corridor also connects to a system-pathway that circles Spring Lake and provides a connection to the Bay Area Ridge Trail discussed in Chapter 1 (page 1-9).* Almost three miles long, the ~~route~~ *pathway that circles Spring Lake* is very popular with recreational riders, both leisurely riders and those headed for *west side of Annadel State Park*. Due to its popularity, user conflicts exist between bicyclists and walkers *around Spring Lake as well as along Howarth Park.*

### **Fountaingrove Parkway / Calistoga Road Bikeway (Routes #62, 35, 34)**

This ~~Class I route~~ *corridor is approximately six miles<sup>10</sup> long running from Mendocino Avenue on the west to Calistoga Road (Route 18) on the east. The western end of this corridor is on a grade. An asphalt pathway is provided for about runs 1.72.2 miles along Fountaingrove*

<sup>10</sup> Route 62, 35 and segments “d-g” of Route 34 equals 5.95 miles (2.16, 1.89, and 1.90 respectively)

Parkway from Mendocino Avenue past Fountaingrove Country Club. ~~The route connects with another short Class I facility along to Stage Coach Road, which provides a connection that leads south back onto Parker Hill Road (Route 9). At the northern end of Parker Hill Road, which connects with Fountaingrove Parkway, Class II-Bike lanes exist for approximately 2.5 miles to Brush Creek Road. Except for a short segment east of Middle Rincon Road that is an existing Class II-Bike Lane, the rest of this corridor on Montecito Avenue to Calistoga Road is proposed as a Class II facility and exists as a of Class III-Bike Route.~~

### **Sebastopol Road Bikeway / Joe Rodota ~~Rodota~~ Trail (Routes #46 ~~and~~ 73)**

~~These two corridors parallel each other and This corridor starts end near the Railroad Square area. The Sebastopol Road corridor (Route 46) is an on-street facility while the Joe Rodota is an off-street facility following an abandon railroad right-of-way. The Sebastopol Road corridor begins at the western City limits west of South Wright Road and terminates at Olive Street to the east. This corridor is approximately three miles long with approximately 1.9 miles as an existing Class II facility—0.3 of these miles are within the County’s jurisdiction in the Roseland area.~~

~~The Joe Rodota Trail (Route 73) is a County facility that lies, generally, about a block to the north of the Sebastopol Road Corridor and runs between Sebastopol and Santa Rosa for approximately 8.47 miles. Approximately 3.18 miles of these are within the City Limits of Santa Rosa. Although the Joe Rodota Trail intersects the Sebastopol Road corridor at the western City limits, the trail is interrupted by industrial buildings and trail users are directed to the sidewalk on the east side of South Wright Road via Sebastopol Road to reconnect with the Joe Rodota Trail. From here the Joe Rodota Trail heads east behind the long commercial/industrial strip on Sebastopol Road. Several public streets provide access to the Joe Rodota Trail within the City Limits: Sebastopol Road, South Wright Road, Courtside Village Park (via Campoy Street and Louis Krohn Drive), Stony Point Road, Hampton Way, Roseland, Dutton and Roberts avenues. After Roberts Avenue the Joe Rodota Trail winds north under State Highway Route 12 and ends at the pedestrian/bicycle bridge intersection with the Prince Memorial Greenway (Route 69) between West 3rd Street and Railroad Street, southwest of the Marriott Courtyard Hotel.<sup>11</sup>~~

~~The community has expressed desire for the pathway to continue north past the Prince Memorial Greenway across 3rd Street paralleling the SMART Rail line. The City’s Downtown Station Area Specific Plan shows a Class I facility extending north through the SMART station to West 6th and Adams streets. However, the 2004 SMART Corridor Schematics<sup>12</sup> plan for pedestrians and bicyclist to take the Prince Memorial Greenway (PMG) to Pierson Street to city surface streets to reconnect with the SMART pathway at 7th street and continue north. Both the north and south ends require additional Right of Way. No specific project is currently under way to address this north-south connection. Both SMART and the City will continue to work together to address this north-south connection. , winds south under State Route 12, and then turns west through a long commercial/industrial strip on Sebastopol Road. Portions of this road have~~

<sup>11</sup> Adapted from County of Sonoma Regional Parks Department web site, “West County & Joe Rodota Trails” [[http://www.sonoma-county.org/parks/pk\\_westc.htm](http://www.sonoma-county.org/parks/pk_westc.htm)]

<sup>12</sup> SMART Draft Environmental Impact Report, Appendix E, “SMART CORRIDOR SCHEMATICS...BIKE/PEDESTRIAN PATH (PHASE 1).”

~~unpaved shoulders. This corridor eventually connects with the popular Joe Rodota Trail and routes toward Sebastopol.~~

### ***Vacant Highway 12 Corridor (Routes #310)***

*This swath of land runs east from Hoen Avenue and Cypress Way toward Spring Lake County Regional Park. It is undeveloped land still in its relatively pristine state of grass, trees and shrubs. The alignment is what would have been State Highway Route 12 had it continued east from Farmers Lane where Caltrans stopped construction in 19xx. This corridor runs for 1.0 mile and is proposed as a Class I facility—a nonmotorized alternative to Hoen Avenue. This corridor would provide an interior connection to neighborhoods and connect to Montgomery High School and Montgomery Village on the west. The eastern end would access Summerfield Road and providing access on surface streets for continued trips to Spring Lake County Regional Park.*

*Discussions of what to do with the vacant swath of land have come and gone over the years and recently has been revisited by neighbors in the area who would like to see the land used as a greenway with a Class I facility in it<sup>13</sup>. The Department of Transit has informally suggested the area be considered a Priority Development Area with Rapid Bus service along with a Class I facility to provide rapid and direct connections to and from the east to downtown. The City's Community Development Department did an exploratory study of recreational opportunities along the vacant Highway 12 corridor in September 2002. The State of California (i.e. Caltrans) still owns the land and no immediate determinations have been made about the vacant highway corridor.*

*The California Streets and Highways Code provides that state highway right-of-way (ROW) should not be abandon unless Caltrans first consults with local agencies having jurisdiction over the area to determine if the ROW or part of it could be developed as a nonmotorized transportation facility. The same determination—whether useful as a nonmotorized facility—applies to the abandonment of local streets.<sup>14</sup>*

*The 2007 Citywide Creek Master Plan shows a paved trail along this vacant State Highway Route 12 alignment above and next to an existing under ground culvert. The BPMP update is consistent with the CCMP and shows a Class I facility along the vacant State Highway Route 12 alignment.<sup>15</sup>*

## **ACCIDENT ANALYSIS**

<sup>13</sup> 95405 [The Neighborhood Association for Bennett Valley](http://www.95405.org) web site page "Highway or Greenway?" subject of September 22, 2009 meeting, [www.95405.org](http://www.95405.org)

<sup>14</sup> Streets and Highways Code 892.

<sup>15</sup> CCMP MANTANZAS tile C, D, E and F

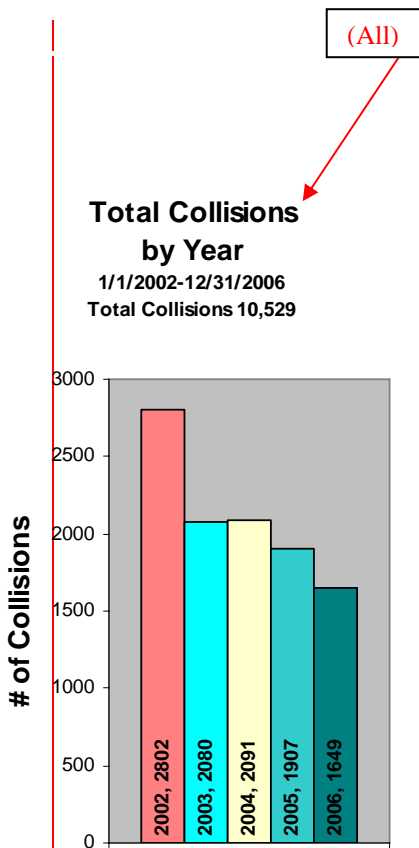
In order to assist in determining locations within the City of Santa Rosa that are potentially problematic to bicyclists and pedestrians, the accident data from the past five years was evaluated. A database of accidents involving bicyclists was acquired from the City of Santa Rosa for the five year period between April 1995 and April 2000. The same information was also acquired directly from the California Highway Patrol, which maintains the statewide accidents database (SWITRS), for the three year period between January 1997 and January 2000. The SWITRS data included additional information beyond that included in the City's output, which allowed the type of accident and party at fault to be determined. In addition to bicycle incidents, the SWITRS data also included accident history for pedestrian-related accidents.

### **Accidents Involving Bicyclists**

The data from the City included locational information for 388 accidents over a five year period; the CHP data covers 295 accidents occurring over the past three year period. The locations of all reported incidents were plotted on City maps in order to determine roadway segments and intersections that appear to have higher frequencies of accidents. These accidents are depicted in Figure 5. Specific street segments were identified and their approximate lengths estimated in order to develop an accident rate per mile, which was then divided by the five year period of available data. The "accidents per mile per year" statistic provides a general means of ranking the street segments by the historical frequency of accidents. A list of the 25 street segments that have the most reported bicycle accidents is provided in Table 2-5.

*In order to determine locations within the City of Santa Rosa that are potentially problematic to bicyclists and pedestrians from a safety perspective, collision data from the past five years was evaluated. Collision records for 2002-2006 were obtained through the California Highway Patrol's (CHP) State Wide Integrated Traffic Records System (SWITRS), the same data used by the City of Santa Rosa. The CHP Accident Investigation Unit maintains SWITRS. It 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 data collection tools and methods to collect and compile meaningful data and statistics that can be used to improve roadway conditions and monitor the effectiveness of enforcement efforts. It is important to note that SWITRS only includes reported collisions, so it may not reflect all conflicts that occur. A comprehensive review and analysis of the data was performed to help understand the nature and factors involved in bicycle and pedestrian collisions. A better understanding of these factors may help planners and engineers address some of environments that contribute to these incidents. For example, if it is determined that a high incidence of collisions are occurring in the evening, lighting*

improvements may help to correct the situation. Conversely, a high incidence of collisions attributed to bicycles riding in the wrong direction or those involving children may be addressed through education and/or enforcement activities and awareness programs.



**Total Collisions by Year**  
1/1/2002-12/31/2006  
Total Collisions 10,529

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:

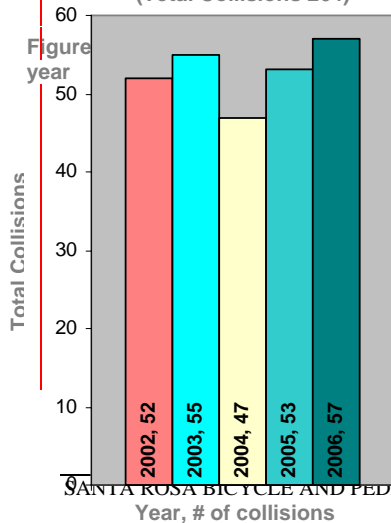
**Collisions:** This information includes an analysis of the major causes of each collision, the locations of collisions, and the seasonal variation of collisions.

**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 and pedestrians.

**Locations:** This portion of the analysis includes a citywide map of bicycle and pedestrian collisions and other spatial analyses of different collision types.

Figure 2.1-4 Bicycle collisions by year (1/1/2002 – 12/31/2006)  
(Total Collisions 264)



**Collisions Involving Bicyclists**

For the five-year period reviewed, a total of 10,529 collisions were reported in Santa Rosa, including 264 bicycle collisions and 253 pedestrian collisions. Therefore, bicycle and pedestrian collisions account for approximately 5 percent of collisions in Santa Rosa. As depicted in the Figure 2.4, the number of bicycle collisions has stayed relatively constant over the five-year analysis period with a low of 47 collisions in 2004 and a high of 57 collisions in 2006. The locations of all reported incidents were plotted in the City's GIS mapping system in order to determine roadway segments and intersections that appear to have

higher frequencies of collisions. These collisions are depicted in Map 1.  
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<sup>16</sup> Taken from MIG, Task One Report Chapter Six Collision Analysis\_011608

*Map 1 Bicycle Collision Locations*

*(Insert Map1 collision map from MIG January 2008 draft)*

Specific street segments were identified and their approximate lengths estimated in order to develop an accident rate per mile, which was then divided by the five-year period of available data. The “collisions per mile per year” statistic provides a general means of ranking the street segments by the historical frequency of collisions. A list of the 20 street segments that have the most reported bicycle collisions is provided in Table 2.3.<sup>17</sup>

**Table 6-4.2.3**  
**Bicycle Collisions by Roadway Segment**  
**City of Santa Rosa January 1, 2002 to December 31, 2006**

#	Corridor	Begin Point	End Point	Bicycle Collisions	Segment Length in Miles	Crash Rate (Collisions/ Mile Per Year*
1	Wilson Street	3rd Street	College Avenue	7	0.76	1.8
2	Mendocino Avenue	Fountaingrove Parkway	Third Street	23	2.68	1.7
3	Hearn Avenue	Santa Rosa Avenue	Stony Point Road	11	1.53	1.4
4	Pacific Avenue	Montecito Avenue	Mendocino Avenue	6	0.84	1.4
5	Steele Lane	Myers Drive	Marlow Road	10	1.54	1.3
6	Dutton Avenue	Guerneville Avenue	Hearn Avenue	19	3.03	1.3
7	Santa Rosa Avenue	Third Street	Bellevue Avenue	14	2.64	1.1
8	Stony Point Road	College Avenue	Hearn Avenue	13	2.53	1.0
9	College Avenue	4th Street	Fulton Road	18	3.54	1.0
10	Marlow Road	Piner Road	College Avenue	7	1.53	0.9
11	4th Street	Farmers Lane	B Street	8	1.75	0.9
12	Range Avenue	Piner Road	Jennings Avenue	6	1.32	0.9
13	Sebastopol Road	Dutton Avenue	Wright Road	10	2.4	0.8
14	Cleveland Avenue	Hopper Lane	Steele Lane	6	1.5	0.8
15	Guerneville Road	Range Avenue	Fulton Road	8	2.14	0.7
16	Humboldt Street	Pacific Avenue	5th Street	3	0.81	0.7
17	Sonoma Avenue	Farmers Lane	Santa Rosa Avenue	5	1.45	0.7
18	Sonoma Hwy / SR 12	Farmers Lane	St. Francis Road	7	2.73	0.5
19	Yulupa Avenue	Montgomery Drive	Bennett Valley Road	5	2.37	0.4
20	Fulton Road	Alton Lane	SR 12 / Wright Road	5	3.44	0.3

Source: CHP, SWITRS and W-Trans

Rate of “Collisions per mile per year” was determined in order to formulate a ranking. The accident rates should be considered as a relative measure; however, as segment distances *vary by street and do not take into account type of street, volume of traffic, speed, or cause of collisions*. ~~are approximate.~~

- The two corridors experiencing the highest frequency of bicycle collisions per mile are Wilson Street in Railroad Square and Mendocino Avenue between

<sup>17</sup> Ibid

Fountaingrove and downtown, which includes Santa Rosa Junior College and Santa Rosa High School.

- The third highest segment is Hearn Avenue between Santa Rosa Avenue and Stony Point Road.
- Ranked fourth is Pacific Avenue between Mendocino Avenue and Montecito Avenue, and ranked fifth is the segment of Steele Lane between Myers Avenue near Steele Lane Elementary School and Marlow Road.
- Notable patterns in bicycle accident locations include a string of incidents on the entire Mendocino Avenue/Santa Rosa Avenue corridor, and a high incidence rate on east-west streets that pass under U.S. 101.<sup>18</sup>

Bicycle collisions at intersections were analyzed in order to determine which intersections in the City experience the highest incidence of bicycle collisions. The top twenty-five intersections were ranked, of which ten intersections experienced three or more reported bicycle collisions during the five-year period between January 1, 2002 and December 31, 2006. The highest incident intersections are Marlow Road/Crosspoint Avenue adjacent to Monroe Elementary School, and Mendocino Avenue/College Avenue, both of which experienced a total of four reported collisions. Eight intersections experienced three reported bicycle collisions during the period. It is important to note that the data indicates a downward trend in intersection related collisions, as the analysis for the 2001 Bicycle and Pedestrian Master Plan indicated that the top five high incidence intersections included five or more reported collisions. The highest ranking intersection in 2001, Corby Avenue/Hearn Avenue had four fewer reported collisions down from seven to three. A list of the 10 intersections experiencing reported bicycle collisions is shown in Table 2.4.<sup>19</sup>

**TABLE 2.4: BICYCLE COLLISIONS BY HIGH INCIDENCE INTERSECTION  
CITY OF SANTA ROSA JANUARY 1, 2002 TO DECEMBER 31, 2006**

<i>Intersection</i>	<i>Total Collisions</i>	<i>Collision Per Year</i>
Marlow Road at Crosspoint Avenue	4	0.8
Mendocino Avenue at College Avenue	4	0.8
B Street at 3rd Street	3	0.6
Hearn Avenue at Corby Avenue	3	0.6
Mendocino Avenue at Administration Drive	3	0.6
Rt 12 at Mission Boulevard	3	0.6
Sebastopol Road at Dutton Avenue	3	0.6
Stony Point Road at SR 12 W/B Offramp	3	0.6
Stony Point Road at SR 12 (N)	3	0.6
West Steele Lane at Steele Lane	3	0.6
Source: CHP, SWITRS, and W-Trans		

<sup>18</sup> From MIG's October 2008 Draft, Ch.2 Existing Conditions, "Collision and Related Documentation p. 54 and p.56.

<sup>19</sup> Taken from MIG, Task One Report Chapter Six Collision Analysis\_011608, p.8. Table 2.4 renumbered from Table 2.6 which was taken from MIG October 2008 Draft, Ch.2 Existing Conditions,p.56.

The SWITRS data received from the California Highway Patrol included information that indicated the type of accident and party at fault. The data was summarized to include the top ten collision types for both bicyclist-at-fault and driver-at-fault incidents involving bicyclists, and includes a breakout of incidents involving children under the age of 16. The data is shown in Table 2.5.

Collision Type	Bicyclist-at-Fault		Motorist-at-Fault	
	Collisions	Percent	Collisions	Percent
Wrong Way	86 (20)	32.6	1	~
Right-of-Way	32 (16)	12.1	27	10.2
Improper Turn	20 (5)	7.6	13	4.9
Improper Pass	3 (1)	1.1	6	2.2
Signal/Stop	22 (2)	8.3	7	2.6
Unsafe Speed	8 (1)	3.0	2	0.8
Unsafe lane Change	3	1.1	1	
Other Hazardous Movement	6	2.2	3	1.1
Under Drug/Alcohol Influence	4	1.5	1	~
Lights	4 (1)	1.5	0	~
Other	12	6.1	3	1.1
TOTAL	200		64	
Source: CHP, SWITRS, and W-Trans (x) Number under 16 years				

Of the 264 reported bicycle collisions during the five-year review period, over three-quarters of the collisions (76%), were determined to be the fault of the involved bicyclist and, the remaining 24% were determined to be the fault of the driver. The most common cause of collisions, as determined by the law enforcement officers conducting the collision reports, was related to bicyclists riding on the wrong side of the road. The second and third most common causes of collisions were right-of-way violations attributed to bicyclists and vehicle drivers respectively. The fourth most frequently cited cause is signal or stop sign violations attributable to bicyclists. The fifth most frequent is improper turns attributable to bicyclists. Bicyclists under age 16 were at-fault in 17 percent of all bicycle collisions, a reduction of 6 percent in comparison to the analysis performed for the 2001 BPMP.<sup>20</sup>

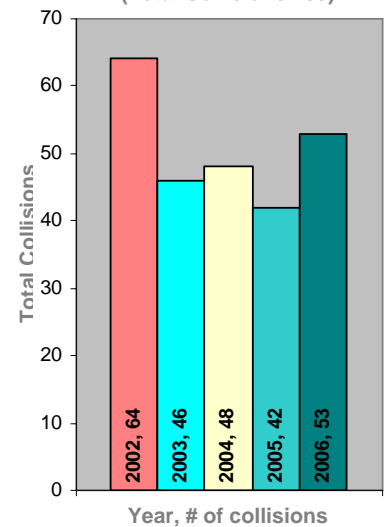
<sup>20</sup> Taken from MIG, Task One Report Chapter Six Collision Analysis\_011608, p.10-11.

### Collisions Involving Pedestrians

As with bicycle-related incidents, the locations of all reported pedestrian collisions were plotted on a City map (see Map 2 on the following page) in order to determine key roadway segment and intersection locations that appear to have higher frequencies of collisions.

Figure 2.6 illustrates that pedestrian related incidents have decreases during the five-year analysis period with a slight trend upward in 2006.<sup>21</sup>

Figure 2.6 Pedestrian collisions by year (1/1/2002 – 12/31/2006)  
(Total Collisions 253)



<sup>21</sup> Taken from MIG, Task One Report Chapter Six Collision Analysis\_011608, p.11 and 16. Figure 2.6 taken from MIG October 2008 Draft, Ch.2 Existing Conditions,p.57

*Map 2 Pedestrian Collision Locations*

*(Insert Map 2 collision map from MIG January 2008 draft)*

A list of the twenty street segments that have the most reported pedestrian collisions is provided in Table 2.6 on the following page.

TABLE 2.76: PEDESTRIAN COLLISIONS BY ROADWAY SEGMENT, SANTA ROSA, CA JAN. 1, 2002 TO DEC. 31, 2006

#	Corridor	Begin Point	End Point	Pedestrian Collisions	Segment Length in Miles	Crash Rate (Collisions/Mile Per Year*
1	D Street	5th Street	Sonoma Avenue	8	0.3	5.3
2	Santa Rosa Avenue	3rd Street	Petaluma Hill Road	14	0.7	4.0
3	3rd Street	B Street	Brookwood Avenue	9	0.5	3.6
4	Guerneville Road	Cleveland	North Dutton	8	0.62	2.6
5	Mendocino Avenue	Pacific Avenue	Fountaingrove Pkwy	20	1.67	2.4
6	College Avenue	US 101	4th Street	9	1.0	1.8
7	Mendocino Avenue	Pacific Avenue	3rd Street	8	1.0	1.6
8	Santa Rosa Avenue	Yolanda Avenue	Baker Avenue	4	0.56	1.4
9	Wilson Street	9th Street	3rd Street	3	0.43	1.4
10	4th Street	B Street	Collage Avenue	5	0.72	1.4
11	Stony Point Road	Sebastopol Road	9th Street	5	1.0	1.0
12	Montgomery Drive	2nd Street	Mission Blvd	10	2.17	0.9
13	Dutton Avenue	9th Street	Hearn Avenue	8	1.92	0.8
14	Petaluma Hill Road	Yolanda Avenue	Santa Rosa Avenue	5	1.23	0.8
15	E Street	Collage Avenue	Sonoma Avenue	2	0.5	0.8
16	Chanate Road	Mendocino Avenue	Parker Hill Road	4	1.1	0.7
17	West 3rd Street	Fulton Road	Wilson Street	9	2.83	0.6
18	Fulton Road	SR 12 / Wright Road	Piner Road	8	2.8	0.6
19	Sonoma Avenue	Santa Rosa Avenue	Summerfield	6	2.55	0.5
20	West Collage	Fulton Road	US 101	5	2.43	0.4

Source: CHP, SWITRS and W-Trans

\* Collisions per mile per year were applied in order to formulate a ranking. The accident rates should be considered as a relative measure; however, as segment distances vary by street and do not take into account type of street, volume of traffic, speed, or cause of collisions, are approximate.

- The segment of D Street between 5th Street and Sonoma Avenue in downtown has experienced the highest frequency per mile of reported pedestrian collisions over the past five years;
- The segment of Santa Rosa Avenue between 3rd Street in downtown and Petaluma Hill Road has experienced the second highest rate of pedestrian collisions;
- The segment of 3rd Street between B Street and Brookwood Avenue experienced the third highest rate of pedestrian collisions;
- The segment of Guerneville Road between Cleveland Avenue and North Dutton Avenue experienced the fourth highest rate of pedestrian collisions; and,
- The segment of Mendocino Avenue between Pacific Avenue and Fountaingrove Avenue experienced the fifth highest rate of pedestrian collisions.

It should be noted that each of these corridors includes major origins and destinations such as downtown, Santa Rosa Junior College, Santa Rosa High School, and the Coddington Mall. Therefore, a substantial amount of pedestrian activity would be expected to occur in these areas.<sup>22</sup>

Eight intersections within the City of Santa Rosa experienced three or more reported pedestrian-related collisions during the five-year review period. The intersection at Mendocino Avenue/McConnell Avenue near the entrance to Santa Rosa Junior College experienced 6 pedestrian-related collisions. Also on Mendocino Avenue in the vicinity of the Junior College, Clement Avenue/Mendocino Avenue experienced 4 reported pedestrian collisions and Silva Avenue/Mendocino Avenue experienced 3 reported pedestrian collisions. Four collisions involving pedestrians have occurred at the D Street/3<sup>rd</sup> Street and Santa Rosa Avenue-Mendocino Avenue/3<sup>rd</sup> Street intersections. Davis Street/5<sup>th</sup> Street, Santa Rosa Avenue/Bennett Valley Road, and Sebastopol Avenue/Mill Street each experienced three reported pedestrian collisions. A list of the eight intersections experiencing three or more pedestrian incidents is shown in Table 2.7.<sup>23</sup>

<b>Intersection</b>	<b>Total Collisions</b>	<b>Collision Per Year</b>
Mendocino Avenue at McConnell Avenue	6	1.2
D Street at 3rd Street	4	0.8
Mendocino Avenue at Clement Avenue	4	0.8
Santa Rosa Avenue-Mendocino Avenue/3rd Street	4	0.8
Silva Avenue at Mendocino Avenue	3	0.6
Davis Street at 5th Street	3	0.6
Santa Rosa Avenue at Bennett Valley Road	3	0.6
Sebastopol Avenue at Mill Street	3	0.6

<sup>22</sup> From MIG's October 2008 Draft, Ch.2 Existing Conditions, "Collision and Related Documentation" p. 57-58.

<sup>23</sup> Taken from MIG, Task One Report Chapter Six Collision Analysis\_011608, p.16 and 17. Table 2.7 taken from p.17 of the MIG, Task One Report Chapter Six Collision Analysis\_011608, renumbered and extra row added to account for Silva Avenue at Mendocino Avenue referenced in text..

A total of 253 pedestrian-related collisions were reported within the City over the five-year review period. Of these, approximately 36 percent were determined by presiding officers to be pedestrian-at-fault incidents. Approximately 59 percent were determined to be driver-at-fault incidents, and no at fault determination was made for the remaining 5 percent.

Pedestrian collisions were also broken down by fault and age for the years between 2002 and 2006. In about 36 percent of pedestrian collisions, the pedestrian was deemed at fault; approximately eleven percent those involved pedestrians under ages sixteen. On the following page, a summary of pedestrian collisions by fault and type is provided in Table 2.8.<sup>24</sup>

<sup>24</sup> Taken from MIG, Task One Report Chapter Six Collision Analysis\_011608, p.17. Table 287 taken from p.18 of the MIG, Task One Report Chapter Six Collision Analysis\_011608,

**Table 6.6**  
**Pedestrian Collisions Ranked by Fault and Type – 2002 through 2006**

<b>Collision Type</b>	<b>Pedestrian at fault</b>	<b>Percent</b>	<b>Motorist at Fault</b>	<b>Percent</b>	<b>Neutral (No Fault Assigned)</b>	<b>Percent</b>
<i>Pedestrian Violation</i>	88 (26)	34.8%				
<i>Right-of-Way</i>			101 (14)	39.9%		
<i>Improper Turn</i>			3	1%		
<i>Improper Pass</i>			9 (2)	3.5%		
<i>Signal/Stop</i>			4	1.5%		
<i>Unsafe Speed</i>			8	3.1%		
<i>Unsafe Backing</i>			7 (2)	2.7%		
<i>Other Hazardous Movement</i>	1 (1)	0.3%	5	1.9%		
<i>Under Drug/Alcohol Influence</i>			4 (1)	1.5%		
<i>Not Stated</i>	2	0.8%	6 (1)	2.3%		
<i>Other</i>			2	0.7%	8 (1)	3.1%
<i>Other Than Driver or Pedestrian</i>					5 (1)	1.9%
<b>TOTAL</b>	<b>91</b>	<b>35.9%</b>	<b>149</b>	<b>58.9%</b>	<b>13</b>	<b>5.1%</b>

Source: CHP, SWITRS, and W-Trans  
(x) Number under 16 years

**Table 2-5  
Bicycle Accidents by Roadway Segment – City of Santa Rosa April 1995 to April 2000**

Corridor		Segment	Accidents	Length (mi)	Accidents/Mile per Year*
1.	Steele Lane	Range Avenue to County Center Drive	14	0.47	5.9
2.	W. Steele Lane	Coffey Lane to Range Avenue	10	0.44	4.6
3.	Mendocino Avenue	Steele Lane to College Avenue	22	1.08	4.1
4.	Santa Rosa Avenue	Fourth Street to Juilliard Park	10	0.49	4.1
5.	College Avenue	Dutton Avenue to Mendocino Avenue	14	0.72	3.9
6.	Dutton Avenue	Santa Rosa Creek to Sebastopol Road	10	0.53	3.8
7.	Fourth Street	E Street to Spring Street	10	0.53	3.8
8.	Santa Rosa Avenue	Flower Avenue to Yolanda Avenue	14	0.78	3.6
9.	Third Street	Wilson Street to Mendocino Avenue	8	0.45	3.5
10.	Hearn Avenue	West Avenue to U.S. 101	10	0.61	3.3
11.	Seventh Street	Morgan Street to Beaver Street	7	0.45	3.1
12.	Calistoga Road	Sequoia Elementary to Sonoma Highway	6	0.40	3.0
13.	Piner Road	Industrial Drive to Cleveland Avenue	7	0.51	2.7
14.	Davis Street	Ninth Street to Third Street	5	0.40	2.5
15.	Montecito Boulevard	Benicia Drive to Pesado Calle	5	0.40	2.5
16.	Fulton Road	Youth Community Park to Guerneville Road	5	0.49	2.0
17.	Sonoma Avenue	E Street to Farmers Lane	12	1.19	2.0
18.	Mendocino Avenue	College Avenue to Fourth Street	4	0.40	2.0
19.	Montgomery Drive	Summerfield Drive to Mission Boulevard	4	0.40	2.0
20.	Montgomery Drive	Shortt Road to Hahman Lane	4	0.20	4.0
21.	Stony Point Road	West Third Street to Northpoint Parkway	12	1.23	1.9
22.	Wilson Street	College Avenue to Third Street	7	0.72	1.9

**Table 2-5  
Bicycle Accidents by Roadway Segment – City of Santa Rosa April 1995 to April 2000**

Corridor	Segment	Accidents	Length (mi)	Accidents/Mile per Year*
23. Coffey Lane	Piner Olivet Elementary to Piner Road	4	0.42	1.9
24. Cleveland Avenue	Guerneville Road to College Avenue	9	0.98	1.8
25. Cleveland Avenue	Hopper Avenue to Piner Road	5	0.55	1.8

Source: CHP, SWITRS and WTRANS

\* Accidents per mile per year was applied in order to formulate a ranking. The accident rates should be considered as a relative measure, however, as segment distances are approximate.

The two corridors experiencing the highest frequency of bicycle accidents per mile are Steele Lane and West Steele Lane near Coddington Mall. The third highest segment is Mendocino Avenue between Steele Lane and College Avenue, which runs adjacent to the Santa Rosa Junior College and Santa Rosa High School. Ranked fourth is the segment of Santa Rosa Avenue between Fourth Street and Juilliard Park, and ranked fifth is the segment of College Avenue between Dutton Avenue and Mendocino Avenue. Notable patterns in bicycle accident locations include a string of incidents on the entire Mendocino Avenue/Santa Rosa Avenue corridor, and a high incidence rate on east-west streets that pass under U.S. 101.

A total of 25 intersections within the City of Santa Rosa experienced three or more reported bicycle accidents during the five year period between April 1995 and April 2000. The highest incident intersection is Corby Avenue/Hearn Avenue, with a total of seven reported accidents. The adjacent intersections at Cleveland Avenue/West Steele Lane and Range Avenue/West Steele Lane ranked as the second and third highest frequency bicycle accident intersections, with each having six reported accidents. Ranked fourth and fifth are the intersections at Mendocino Avenue/College Avenue and Stony Point Road/S.R. 12 Westbound ramps, each having five reported accidents. A list of the 25 intersections experiencing three or more reported accidents is shown in Table 2-6.

<b>Intersection</b>		<b>Accidents</b>	<b>Accidents per Year</b>
1.	Corby Avenue/Hearn Avenue	7	1.4
2.	Cleveland Avenue/West Steele Lane	6	1.2
3.	Range Avenue/West Steele Lane	6	1.2
4.	Mendocino Avenue/College Avenue	5	1.0
5.	Stony Point Road/S.R. 12 Westbound Ramps	5	1.0
6.	Range Avenue/Piner Road	4	0.8
7.	Santa Rosa Avenue/Baker Avenue	4	0.8
8.	Brookwood Avenue/Fourth Street	3	0.6
9.	Brookwood Avenue/Sonoma Avenue	3	0.6
10.	Doyle Park Drive/Sonoma Avenue	3	0.6
11.	Dutton Avenue/S.R. 12 Eastbound Ramps	3	0.6
12.	Dutton Avenue/Sebastopol Road	3	0.6
13.	Fulton Road/Apple Tree Drive	3	0.6
14.	Link Lane/West Ninth Street	3	0.6
15.	Marlow Road/Piner Road	3	0.6
16.	Mendocino Avenue/Clement Avenue	3	0.6
17.	Mendocino Avenue/Dexter Avenue	3	0.6
18.	Mendocino Avenue/Pacific Avenue	3	0.6
19.	Middle Rincon Road/Montecito Boulevard	3	0.6
20.	Morgan Street/College Avenue	3	0.6
21.	Range Avenue/Guerneville Road	3	0.6
22.	Santa Rosa Avenue/Sonoma Avenue	3	0.6
23.	Santa Rosa Avenue/Flower Avenue	3	0.6
24.	Townview Avenue/Hoen Frontage Road	3	0.6
25.	Yulupa Avenue/Bethards Drive	3	0.6
Source: CHP, SWITRS and WTRANS			

The SWITRS data received from the California Highway Patrol included information that indicated the type of accident and party at fault. The data was summarized to include the top five accident types for both bicyclist at fault and driver at fault incidents, and is shown in Table 2-7.

<b>Bicyclist-at-Fault</b>			<b>Driver-at-Fault</b>		
Collision Type	Accidents	Percent of Total	Collision Type	Accidents	Percent Of Total
Wrong Side of Road	70	24%	Right-of-Way Violation	42	14%
Right-of-Way Violation	31	11%	Improper Turn	16	5%
Improper Turn	25	8%	Improper Passing	9	3%
Alcohol/Drug Related	19	6%	Unsafe Speed	7	2%
Run Stop Sign	16	5%	Run Stop Sign	5	2%
Others	35	12%	Others	20	8%
<b>Total</b>	<b>196</b>	<b>66%</b>	<b>Total</b>	<b>99</b>	<b>34%</b>

Source: CHP, SWITRS and WTRANS

Approximately two-thirds of all reported accidents were determined to be the fault of the involved bicyclist, with the remaining third being attributable to driver fault. The most common cause of accidents, as determined by the law enforcement officers conducting the accident reports, was related to bicyclists riding on the wrong side of the road. The second and third most common causes of accidents were right-of-way violations attributed to vehicle drivers, followed by right-of-way violations attributed to bicyclists. The fourth most frequently cited cause is an improper turn made by a cyclist, and the fifth most frequent is attributable to bicyclists under the influence of drugs or alcohol.

Accident data was also evaluated on a yearly basis between 1997 and 1999 to examine the ages of bicyclists determined to be at fault. Children under 16 are involved in approximately one quarter of all bicycle incidents on a yearly basis. Motorists were the party at fault in 36 percent of the bicycle collisions, which is approximately equal to that of the bicyclists over 16. Bicyclists under age 16 were at fault in 23 percent of all accidents. A summary of bicycle accidents by fault and age is provided in Table 2-8.

<b>Year</b>	<b>Bicyclist At Fault</b>				<b>Motorist At Fault</b>		<b>Total</b>
	Under 16	Percent	Over 16	Percent	Number	Percent	
1997	24	24%	40	40%	36	36%	100
1998	22	22%	45	45%	33	33%	100
1999	23	24%	42	44%	30	32%	95
<b>TOTAL</b>	<b>69</b>	<b>23%</b>	<b>127</b>	<b>43%</b>	<b>99</b>	<b>34%</b>	<b>295</b>

Source: CHP, SWITRS and WTRANS

### Accidents Involving Pedestrians

As with bicycle related incidents, the locations of all reported pedestrian accidents were plotted on City maps in order to determine key roadway segment and intersection locations that appear to have higher frequencies of accidents. A list of the ten street segments that have the most reported pedestrian accidents is provided in Table 2-9.

Corridor		Segment	Accidents	Length (mi)	Accidents/ Mile per Year*
1.	Mendocino Avenue	Steele Lane to Ridgway Avenue	16	0.76	7.0
2.	Mendocino Avenue	College Avenue to Fourth Street	8	0.42	6.4
3.	Yulupa Avenue	Spring Creek Drive to Hoen Avenue	6	0.40	5.0
4.	Steele Lane	Cleveland Avenue to Mendocino Avenue	9	0.63	4.8
5.	Mendocino Avenue	Fourth Street to Juilliard Park	5	0.49	3.4
6.	Montgomery Drive	Summerfield Drive to Mission Boulevard	4	0.40	3.4
7.	Sonoma Avenue	Shortt Road to Hahman Drive	4	0.40	3.4
8.	College Avenue	Dutton Avenue to Mendocino Avenue	6	0.72	2.8
9.	Dutton Avenue	West Ninth Street to Barham Avenue	9	1.12	2.7
10.	Farmers Lane	Sonoma Highway to Hoen Avenue	6	0.74	2.7

Source: CHP, SWITRS and WTRANS  
 \* Accidents per mile per year was applied in order to formulate a ranking. The accident rates should be considered general guidelines, however, as segment distances are approximate.

The segment of Mendocino Avenue between Steele Lane and Ridgway Avenue has experienced the highest frequency per mile of reported pedestrian accidents over the past three years. This area was also identified as one of the most common locations for bicycle accidents. It should be noted that a substantial amount of pedestrian and bicycle activity would be expected in this area because of the proximity of Santa Rosa Junior College and Santa Rosa High School. The portion of Mendocino Avenue between College Avenue and Fourth Street downtown has experienced the second highest rate of pedestrian accidents. A short segment of Yulupa Avenue between Spring Creek Drive and Hoen Avenue was also identified, though as seen below all accidents have occurred at two intersections. Finally, the portion of Steele Lane between Cleveland Avenue and Mendocino Avenue also appears to have experienced a notable number of pedestrian related accidents.

Ten intersections within the City of Santa Rosa have experienced three or more reported pedestrian-related accidents in the past three years. The intersection at Mendocino Avenue/Silva Avenue near the Santa Rosa Junior College has experienced four pedestrian-related accidents. Three other intersections on Mendocino Avenue in this vicinity at Steele Lane, Elliott Avenue, and College Avenue have experienced three reported pedestrian accidents. Four accidents involving pedestrians have occurred at the Dutton Avenue/Sebastopol Road intersection. Two intersections on Yulupa Avenue at Princeton Drive and Mayfield Avenue have also experienced three reported pedestrian accidents. A list of the ten intersections experiencing more than three pedestrian incidents is shown in Table 2-10.

<b>Intersection</b>		<b>Accidents</b>	<b>Accidents per Year</b>
1.	Mendocino Avenue/Silva Avenue	4	1.3
2.	Dutton Avenue/Sebastopol Road	4	1.3
3.	Yulupa Avenue/Princeton Drive	3	1.0
4.	Yulupa Avenue/Mayette Avenue	3	1.0
5.	Mendocino Avenue/Steele Lane	3	1.0
6.	Mendocino Avenue/Elliott Avenue	3	1.0
7.	Mendocino Avenue/College Avenue	3	1.0
8.	Farmers Lane/Sonoma Avenue	3	1.0
9.	Dutton Avenue/West Third Street	3	1.0
10.	Cleveland Avenue/Steele Lane	3	1.0
Source: CHP, SWITRS and WTRANS			

A total of 182 pedestrian-related accidents was reported within the City over the 1997 to 1999 three-year period. Of these, approximately 58 percent were determined by presiding officers to be pedestrian at fault incidents. Approximately 41 percent were determined to be driver at fault incidents, and the remaining one percent involved bicyclists who were determined to be at fault.

Pedestrian accidents were also broken down by fault and age for the years between 1997 and 1999. In about 40% of pedestrian collisions, the pedestrian was deemed at fault; approximately half of those involved pedestrians under age sixteen, and half involved pedestrians age sixteen and older. A summary of pedestrian accidents by fault and age is provided in Table 2-11.

Year	Pedestrian At Fault		Bicyclist At Fault	Motorist At Fault	Total
	Under 16	Over 16			
1997	15 (22%)	13 (19%)	2 (3%)	38 (56%)	68 (100%)
1998	9 (18%)	10 (21%)	0 (0%)	30 (61%)	49 (100%)
1999	11 (17%)	16 (25%)	1 (1%)	37 (57%)	65 (100%)
Total	35 (19%)	39 (21%)	3 (2%)	105 (58%)	182 (100%)

Source: CHP, SWITRS and WTRANS

### Comparison to Similarly-Sized Jurisdictions

Accident data from several California cities were acquired and compared to Santa Rosa for comparison purposes. The cities of Vallejo, Salinas, and Modesto were chosen for comparison because of their similar size and relative location to other major metropolitan areas. A summary of the total bicycle and pedestrian accidents in each jurisdiction during the 1998 calendar year is shown in Table 2-12.

Jurisdiction	Population <sup>+</sup>	Bicycle Accidents	Pedestrian Accidents
Vallejo	112,300	36	47
Salinas	122,500	30	74
Santa Rosa	125,700	100	54
Modesto	178,700	111	80
Average		69	64

Source: CHP, SWITRS and WTRANS

<sup>+</sup> 1996 Population Estimates from the California Department of Finance, Demographic Research Unit

Based solely upon the number of reported accidents in each city, it appears that Santa Rosa experienced a comparatively high number of bicycle accidents in 1998, and a comparatively low number of pedestrian accidents during the same year. It is imperative to understand, however, that this information is not necessarily indicative of the adequacy of existing bicycle or pedestrian facilities within any of these jurisdictions. Such conclusions cannot be drawn without a more thorough analysis of bicycle usage, walking activity, and existing facilities within each of the compared cities.

### **Existing Facilities at Higher-Frequency Accident Locations**

The following is a description of the corridors and intersections with the highest frequency of accidents.

*Steele Lane Corridor*—West Steele Lane is a two-lane arterial between Marlow Road and Range Avenue. Sidewalks exist on both sides of the road along this segment, though no bicycle lanes exist. Signals exist at Coffey Lane, Range Avenue, and Guerneville Road. The segment of Steele Lane between Range Avenue and County Center Drive is a major arterial that, like the adjacent Guerneville Road, carries extremely heavy traffic volumes during peak hours. West Steele Lane is used by bicyclists as one of the few locations to cross under U.S. 101. Sidewalks exist along both sides of the road except on the south side of the street between Cleveland Avenue and Armory Drive (which includes the U.S. 101 underpass). Bicycle lanes currently do not exist on the street. An overhead crosswalk warning sign exists further to the east in front of the Steele Lane Elementary School. The corridor is currently not designated as a bicycle route.

*Mendocino Avenue Corridor*—Mendocino Avenue includes sidewalks on both sides of the street between Steele Lane and Fourth Street downtown, but does not include bicycle lanes. The street is generally comprised of a five-lane section between Steele Lane and College Avenue, and signalized intersections exist at Elliott Avenue, Pacific Avenue, Crawford Street and Ridgeway Avenue. A push-button actuated overhead crosswalk sign exists adjacent to the Junior College at McConnell Avenue. Crosswalks exist at the unsignalized intersections of Denton Way and Benton Street. South of College Avenue, Mendocino Avenue narrows to two northbound lanes and a single southbound lane, and includes sidewalks on both sides of the street but no bike lanes. Mendocino Avenue is currently not a designated bike route within the City, although there is one Class 3 bike route sign northbound just past College Avenue. Humboldt Avenue also is not a designated bike route. South of Fourth Street, Mendocino Avenue becomes Santa Rosa Avenue. The two streets combined are one of the longest non-freeway north-south roadways within the City.

*Santa Rosa Avenue Corridor*—Santa Rosa Avenue currently does not include bike lanes, though the street is designated as a bicycle route. Class II bicycle lanes exist to the south of Yolanda Avenue. The street is generally comprised of a five-lane section, with lane widths south of State Route 12 being wider than on the downtown portion of the corridor. Sidewalks exist on both sides of the street except for a short segment on the west side of the street, north of Hearn Avenue. A push-button actuated overhead crosswalk sign exists near the intersection of Sebastopol Avenue. The intersection at Baker Avenue is signalized, and serves as the northbound U.S. 101 off-ramp and on-ramp on the west leg. The narrow freeway overcrossing just north of Baker Avenue is used by bicyclists to cross between the east and west sides of U.S. 101.

*College Avenue Corridor*—College Avenue is a major east-west arterial that runs near the geographical center of the City. The western-most segment of the corridor includes Class II bicycle lanes between Fulton Road and Marlow Road. The segment between Marlow Road and Dutton Avenue is designated as a bicycle route, and the remaining section to the east is not currently designated as a bicycle facility. Sidewalks exist on both sides of the street. Like Steele Lane, College Avenue is used by bicyclists as one of the locations to cross under the U.S. 101 freeway. Most of the corridor is comprised of a five-lane street section.

*Corby Avenue/Hearn Avenue Intersection and Overcrossing*—The intersection at Corby Avenue/Hearn Avenue is signalized. A large amount of the vehicular traffic passing through the intersection is related to the adjacent U.S. 101 freeway ramps, and therefore, high vehicle turning volumes exist at the intersection. Crosswalks exist on all sides of the intersection. The Hearn Avenue freeway overcrossing is very narrow and does not include adequate sidewalk facilities. The crossing is intimidating to most bicyclists because of inadequate lane width and high traffic volumes. Bicycle lanes currently do not exist on Corby Avenue or Hearn Avenue near the intersection, though Hearn Avenue does have bicycle lanes to the west between Stony Point Road and Dutton Avenue.

*Dutton Avenue/Sebastopol Road Intersection*—The intersection at Dutton Avenue/Sebastopol Road is signalized with crosswalks on all four approaches. Northbound Dutton Avenue widens from a two-lane section to a five-lane section after the intersection. A large amount of traffic at the intersection is oriented toward the nearby S.R. 12 freeway, with high turning volumes to and from Sebastopol Road. A shopping center exists on the northwest side of the intersection. Bicycle lanes do not exist on Dutton Avenue. Sebastopol Road has bike lanes between Stony Point Road and Burbank and bike lanes are scheduled between Dutton and Burbank within the next year. Dutton Avenue is designated as a Class III bicycle route to the north of the intersection.

*Stony Point Road/S.R. 12 Westbound Ramps Intersection*—The intersection is signalized with crosswalks on the east and west legs. The intersection is remarkably wide to accommodate high freeway related turning movements. Bicycle lanes do not exist at the intersection, though they do exist on Occidental Road to the east of Stony Point Road, just north of the westbound S.R. 12 ramps intersection. Stony Point Road is also designated as a bicycle route to the north of Occidental Road, but not through this intersection.

*Yulupa Avenue Intersections*—Yulupa Avenue is a major north-south street that provides access to the residential areas of southeast Santa Rosa. The intersection on Yulupa Avenue at Mayette is now signalized, with a single crosswalk across Yulupa Avenue on the south side of the intersection. A shopping center is located on the west side of the street in this area. A push button actuated flashing crosswalk warning sign exists near Spring Creek Drive, adjacent to the Village Elementary School. Yulupa Avenue is designated as a Class III bicycle route, and a short segment includes Class II bicycle lanes just north of Spring Creek.

## EXISTING SUPPORT FACILITIES

As described in the 1994 Bicycle Plan, bicycle support facilities include bicycle parking, showers and lockers, signage, traffic signal detectors, and *promotional* ongoing programs. When the 1994 Plan was written, very few support facilities existed. Since then, however, more bicycle parking, traffic signal detectors, and programs have been added.

## Parking

A great deal of bicycle parking has been added since the 1994 Bicycle Plan. Santa Rosa in the early 1990's had only limited parking at schools and parks. New development is now required to provide parking per City code. Some employers also provide bicycle facilities as part of their transportation demand management programs. The City has installed numerous parking facilities in downtown Santa Rosa. The downtown area has approximately 55 bicycle U racks parking plus several bike lids, also known as "clams," in Parking Garage 12 on 1<sup>st</sup> Street. *Secure, functional and convenient bicycle parking is critical for maintaining and attracting bicycle trips; people are less likely to ride their bicycles to a destination without bicycle parking that suits their needs.*

### Inventory

*The City has installed bicycle racks throughout downtown, on sidewalks/plazas and in the downtown parking garages. These racks have been funded primarily through the Transportation Fund for Clean Air, provided by the Bay Area Air Quality Management District. Other private businesses have also installed bicycle racks. Parking Garage #12 on First Street also has bike lids, also known as clams. These bicycle lids cover the entire bicycle and have a 72-hour limit.*

*Bicycle lockers have also been installed downtown; however, they are assigned to specific users at worksites, and are not available for general public use. The City is considering installing a system of day-use electronic lockers that would be accessible to any user with a smart card for the system.*

*As part of a 2009 community grant through the City's Community Advisory Board, the City partnered with The New Horizon School to update the City's inventory of downtown bicycle racks for inclusion in the Santa Rosa Bicycle Guide Map. Consistent with the 2005 Santa Rosa Bicycle Guide Map, this effort focuses on bicycle racks in the downtown core.*

*However, it is **recommended** that the City develop a GIS-based inventory database of public bicycle parking throughout the City as part of a future Bicycle Parking Plan, as resources allow, that would supplement the BPMP. This information could also be shared with the public, to bolster and facilitate trips by bicycle not only to downtown but citywide. Such a citywide inventory would also help the City manage its free bicycle rack program described below.*

### Bicycle Parking requirements and the Zoning Code

*This update to the BPMP revises the Zoning Code specifications for bicycle parking for new and redevelopment projects, as called for by the 2007 Downtown Station Area Specific Plan (DSASP). These will include formulas for calculating the minimum required bicycle parking spaces, based on square feet and land use, as well as layout/site standards. See **Appendix X** for the proposed revisions to the Zoning Code. Bicycle parking facilities and designs are covered in the **Best Practices And Design Guidelines** section.*

## Traffic Signal Detectors

To help facilitate commuting by bicycle, the City installed **200** bicycle-sensitive detector loops with pavement markings so that a bicyclist can activate the signal. However, for better detection and

longer pavement life, the City has decided to replace loop detectors with video detection at all locations as needed.

### **Traffic Signals**

*The City has started to use countdown pedestrian crosswalk signals for new and replacement signals. This will improve safety, by enabling pedestrians to make better decisions when crossing the street.*

### **Signage and Pavement markings**

*The City uses standard signs and pavement markings that are consistent with the California Manual of Uniform Traffic Control Devices (CA MUTCD). Examples of these include (but are not limited to):*



R10-15



R5-1b

- *Flashing Beacon*
- *Turning Traffic Must Yield to Pedestrians (R10-15). An example of this can be seen at the intersection of Santa Rosa Avenue and Kawana Springs Road.*
- *Bright Green/Yellow Pedestrian Xing Warning (W11-2) with down arrow (W16-7) signs*
- *Continental Crosswalk pavement markings. These type of markings are a series of stripes parallel to the direction of vehicle travel. These are mostly used at non-signalized intersections within the City of Santa Rosa.*
- *Wrongway sign for bicyclists (R5-1b). This has been installed on Guerneville Road.*
- *Bicycle Detector Symbol. Used to indicate the spot bicycles should stop at signalized intersections to activate the green light for their direction of travel.*

*More discussion on the CA MUTCD standard markings/signs are appears in the Best Practices and Design Guidelines Section.*

### **Wayfinding and Guide Signs**

*The City is considering developing wayfinding signage for pedestrians. The City may also consider route numbering of bikeways (which has been implemented in San Francisco and Marin County). However it would require further study and coordination with neighboring jurisdictions to ensure consistency beyond city limits and available resources. In the interim, it's recommended that the City consider consistent application of the existing standard guide signage and directional signage to major destinations along bikeways which has the added benefit of alerting motorists that bicyclists are also legitimate users of roadways. More discussion and details for pedestrian wayfinding and guide signage are included in the Best Practices and Design Guidelines.*

### **Bike Racks on Buses**

~~Most intercity transit agencies in the San Francisco Bay Area already provide buses that are equipped with bicycle racks, and many local transit agencies also provide bicycle racks on their buses. Santa Rosa is partially served by buses equipped with bike racks, since all of Sonoma~~

County Transit<sup>25</sup> buses can carry up to two bikes and some Golden Gate Transit<sup>26</sup> buses are equipped with racks. However, Santa Rosa's City Bus system is not equipped to carry bikes.

Although Santa Rosa is a relatively small city surrounded by low density rural and suburban areas, WSA still recommends that bike racks be added on the Santa Rosa City Bus system. People are most likely to use public transit when transit is either within a three mile biking distance or within a quarter mile walking distance; thus, bicycling can increase the catchment area for bus service. Another advantage to racks on buses is that passengers with bicycles may be able to eliminate the need to transfer, which could increase both bicycle and transit use. Other smaller California cities that are relatively isolated have successfully equipped their buses with bike racks. These include Vallejo (population 109,199), Vacaville (population 71,479), and Lompoc (population 37,649). Even communities as small as Thousand Palms (population 4,122) (served by Sunline Transit) has equipped its buses with bike racks; the Sunline Transit Agency's service area is both rural and suburban and covers 250 square miles.

Most Bay Area transit agencies use bicycle racks produced by Sportworks<sup>27</sup> based in Woodinville, Washington. In the past five years, Sportworks has equipped buses with bike racks for over 200 public transit agencies in the U.S. Sportworks' design is transit specific. The rack secures two bikes by a spring loaded support arm. It folds up when not in use and down when carrying bikes. The rounded corners make the rack safe for bike riders and others. The rack weighs less than 30 pounds. The main feature is that the two bicycles can be loaded and unloaded independently of each other. The bicycle can be loaded in the time it takes two to three passengers to board.

**Signage** The City uses standard bike route signs (G93) and bike lane signs (R81). The city uses the "Bicycle" symbol stencil and "Bike Lane" legend in its bike lanes.

### ***Bike Racks on Buses***

*Bike racks on buses are a minor, but important component of bus service. Very few transit operators can provide door-to-door service for all trips. The convenience of traveling the first-and/or last-mile, i.e., from one's front door to the bus stop or transit station is an influential factor in transit ridership. Since the average cyclist can cover four times the distance of a pedestrian in the same amount of time, bicycling can extend the catchment area for transit service. Conversely, the ability to take their bike on transit allows bicyclists to make longer trips than those taken only by bike.*

*In addition, bicycling can free the user from the constraints of transit frequency and schedules; in some cases, the user may be able to ride their bicycle to their destination instead of waiting for a transfer, or when there is no scheduled service.*

*All of the public buses that serve Santa Rosa accommodate bikes on buses.*

<sup>25</sup> Sonoma County Transit provides intercity service in Sonoma County and local service in Rohnert Park, Cotati, Guerneville, Sebastopol and Windsor.

<sup>26</sup> Golden Gate Transit provides daily bus service within Marin, Sonoma, San Francisco and Contra Costa counties.

<sup>27</sup> Sportworks Home Page <<http://www.sportworks.com/sbhap.html>>.

- *Santa Rosa's City Bus: All buses have front-loading racks to carry two or three bicycles, on a first come, first serve basis.*
- *Sonoma County Transit: All buses have front-loading racks to carry two or three bicycles, on a first come, first serve basis.*
- *Golden Gate Transit: All buses accommodate two or three bikes, either with front-loading racks, or luggage bay bike racks.*
- *Mendocino Transit: All buses have front-loading racks to carry two or three bicycles, on a first come, first serve basis.*
- *Napa VINE Transit: All buses have front-loading racks to carry two bicycles, on a first come, first serve basis.*

*Most bus operators use bicycle racks of the same design. The rack secures two (or three) bikes by a spring-loaded support arm. It folds up when not in use and down when carrying bikes. The rounded corners make the rack safe for bike riders and others. . The main feature is that the bicycles can be loaded and unloaded independently of each other. The bicycle can be loaded in the time it takes two to three passengers to board.*

### **Showers**

*Showers should be included in development and redevelopment projects that will serve as workplaces. Some employers have showers available for their employees due to the nature of their business such as hospitals and colleges/schools with locker rooms. In general, all employers are encouraged to have showers available for their employees, whether on-site, or through arrangements with a nearby gym, etc. Showers would benefit all their staff, since those who bike (and exercise) to work together with those who do not bike. The Sacramento Municipal Utility District (SMUD) supports biking as a clean commute option by providing showers and lockers for employees who bike to work at least three times a week (as well as for employees who walk or jog to work). [Insert the SMUD newsletter text highlighting showers?—fwd to G. Freshley?]*

*In Santa Rosa, the engineering firm of Winzler & Kelly installed showers when it expanded its offices. Many employees bike to work, or go bike-riding or exercising at lunch, so the showers were a benefit for employees who wanted to wash up after working out. After the showers were installed, it became an incentive for other employees to start biking or exercising. The firm stocks soap and shampoo in dispensers in the showers. Both the showers (one for each gender) are well-used by the staff of nearly 100.*

~~**Showers** Some employers have showers available for their employees due to the nature of their business such as hospitals and colleges/schools with locker rooms. In general, few shower facilities exist for employees in the City of Santa Rosa. No public showers are available for bicycle commuters.~~

### **Maps**

*The City produces and distributes the Santa Rosa Bicycle Guide Map showing the bikeways, bike loop detectors, downtown bike parking, as well as bicycle safety tips in English and Spanish. There are also static and interactive GIS bikeways maps on the city's website <www.srcity.org>.*

### **City-sponsored Promotional Programs**

For the past five to six years, the City has had two ongoing programs. One program is the city-sponsored "Free Ride" program that offers incentives for commute alternatives such as bicycling and walking. Approximately 1000 people are signed up. The participants are primarily sponsored by their downtown employers or Coddington Shopping Center. Participants, who pre-register, track the number of times that they bike, walk, carpool, or take transit. This program is funded by the San Francisco Bay Area Air Quality Management District.

The second program is the annual Bike to Work Day, during which the City has seven energizer stations set up to refresh bicyclists. Approximately 368 participants stopped in at the seven citywide energizer stations in 2000. The City also distributes free maps showing both the bicycle network and bicycle safety tips. *The City sponsors a "Free Ride – Trip Reduction Incentive Program" for employers in the city which offers incentives for commute alternatives such as bicycling, walking, taking transit and carpooling. Incentives include discounted transit passes, and movie tickets. There is also a guaranteed ride home component, where a registered participant may get a free taxi ride to deal with an emergency. Approximately 2,200 people are signed up. In 2008, over 50,000 one-way commute trips were made by bike, and over 16,000 trips were made by walking.*

*Another program is the annual Bike to Work Day event. Energizer stations hosted by public and private entities are set up throughout the city to provide refreshments to bicyclists. In 2000, approximately 368 participants stopped in at seven energizer stations. The event has been growing every year. By 2009, there were 13 energizer Stations with 1,528 participants.*

### **Additional Promotional Programs**

In addition to the city-sponsored programs, the Santa Rosa Cycling Club focuses on promoting recreational cycling in Santa Rosa. The Cycling Club provides descriptions of various recreational bike routes in the area as well as organizing two annual events, the Wine Country Century Ride and the Terrible Two (200-mile ride).