Windsor Bicycle and Pedestrian Master Plan







Prepared by:
Sonoma County Transportation Authority

In partnership with:
Town of Windsor

Adopted October 2014

Glossary and List of Acronyms

ADA	Americans with Disabilities Act, passed in 1990, gives civil rights protections to indi-viduals with disabilities similar to those provided to individuals on the basis of race, color, sex, national origin, age, and religion. Title II of the ADA prohibits discrimination against qualified individuals with disabilities in all programs, activities, and services of public entities, including local governments.
Bicycle Facilities	Bicycle infrastructure, including bike lanes, bike routes, and bike paths.
BAAQMD	Bay Area Air Quality Management District was created through the California Legislature in 1955 to manage air quality in the 9-county Bay Area. BAAQMD funds a variety of bicycle, pe-destrian and transit projects through various grant programs, such as TFCA. Only the southern section of Sonoma County falls within the Air District's boundaries. The jurisdictions north of Windsor (Healdsburg and Cloverdale) outside of the BAAQMD boundaries.
Bicycle Support Facilities	Bike racks, bicycle lockers, changing rooms, signal detection, and other amenities that support bicycling.
Bike Lane	A painted lane for one-way bicycle travel with a minimum 5 foot width. Defined as a Class II Bikeway by Caltrans.
Bike Route	A street that is designated for shared bicycle and motor vehicle use by placement of bike route signs along the roadway. Note that bicyclists are legally allowed to ride on all roadways in California, whether they are bike routes or not, unless expressly forbid. Defined as a Class III bikeway by Caltrans.
Caltrans	California Department of Transportation
Measure M	The voter-approved Traffic Relief Act for Sonoma County is a 1/4 cent sales tax used to maintain local streets, fix potholes, widen Highway 101, improve interchanges, restore and enhance transit, support development of passenger rail, and build and support safe bicycle and pedestrian routes and programs.
Mode Share	A measurement of the number of trips or percentage of trips that are taken by a given type of transportation. Mode shares include, but are not limited to, bicycling, walking, transit, and driving.
MTC	Metropolitan Transportation Commission is the regional transportation agency for the 9-county Bay Area. MTC manages a variety of funding programs such as TDA3.
Multi-Use Path	An all-weather surface path that is the same as a Class I bikeway, which is defined by Caltrans as a completeley separated right of way for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized.
NSCAPCD	The Northern Sonoma County Air Pollution Control District (NSCAPCD) is one of 35 California air districts established to regulate the emissions of air pollution from "stationary sources" that could be detrimental to the health, safety, and welfare of the public. The NSCAPCD manages the northern section of Sonoma County that is outside of BAAQMD's boundary, and manages grant and incentive opportunities for clean air projects.
Pedestrian Amenities	Street furniture, pedestrian-scale lighting, landscaping, and other infrastructure and design elements that support pedestrians and improve the walkability of a street.

Glossary and List of Acronyms, continued

Pedestrian Facilities	Pedestrian infrastructure, including sidewalks and paths.
ROW	Right-of-Way
Sharrows	Shared Roadway Bicycle Markings - A stencil of a bicycle and chevron placed in the right-hand vehicle lane, typically adjacent to parallel parking. The shared lane marking indicates to bicyclists where they should ride to avoid opening car doors and reminds motorists that bicycles will be riding in the lane.
SCTA	Sonoma County Transportation Authority manages countywide planning and programming of funds.
SRTS	Safe Routes to Schools. There is a Countywide Safe Routes to Schools Program. There are also locally managed SRTS activities in some jurisdictions.
SWITRS	A database of police-reported collisions maintained by the California Highway Patrol.
TDA3	Transportation Development Act, Article 3 is a 2% set-aside from TDA funding, which is exclusively reserved for bicycle and pedestrian projects. In Sonoma County, each jurisdiction accumulates TDA3 funds each year based upon their share of the population.
TFCA	Transportation Fund for Clean Air is a funding program managed by the Bay Area Air Quality Management District. The TFCA program is funded by a $4 vehicle registration surcharge in the Bay Area.

Table of Contents

1 | Introduction 1

2 | Context and Setting 5

Land Use History 5
Juridiction Overview Setting and Land Use 6
Attractors and Generators 6
Schools and Safe Routes 8
Parks and Community Facilities 9
Demographics and Commute Patterns 9
Local Opportunities and Constraints 11
Data Collection 12

3 | Vision, Goal, Objectives and Policies 15

Vision and Goal 15
Objectives and Policies 16
Relationship to Other Plans and Policies 21

4 | Local Bicycle and Pedestrian Network 27

Existing Conditions 27
Proposed Improvements 34

5 | Project Costs and Funding 41

Costs 41
Past Expenditures 41
Funding Sources 41

Tables and Graphs

2.1 Land Use Map 7
2.2 Schools List 8
2.3 Travel Time to Work 10
2.4 Journey to Work Data 11
2.5 Bicycle & Pedestrian Counts (Old Redwood Hwy & Conde Ln / Windsor River Rd) 13
4.1 Bicycle and Pedestrian Map 28
4.2 Existing Bicycle and Multi-Use Paths 29
4.3 Total Collisions 33
4.4 Bicycle & Pedestrian Collisions 33
4.5 Proposed Bikeways and Pedestrian Paths 35
4.6 Proposed Bicycle and Pedestrian Projects and Priorities 39
4.7 TFCA Pedestrian Signal Enhancements 40

Appendices

A - Bicycle & Pedestrian Count Data (MTC) 44
B - Bicycle & Pedestrian Count Data (SCTA) 45
C - Future Potential Bicycle & Pedestrian Count Locations 46

1 | Introduction

This *Windsor Bicycle & Pedestrian Master Plan* was developed as a component of the Sonoma County Transportation Authority's (SCTA's) 2008 Countywide Bicycle and Pedestrian Master Plan. While part of the Master Plan, the Windsor plan is also a stand-alone document to be used by the Town of Windsor to guide implementation of local projects and programs and document Town policy. It is also designed to be a component of the SCTA Countywide Bicycle & Pedestrian Master Plan to improve coordination in realizing the countywide bicycle and pedestrian system.

The Windsor plan was developed over the course of a year through the coordinated efforts of the SCTA's Bicycle and Pedestrian Advisory Committee, a focused project steering committee, Windsor staff, and input from the public through a series of public workshops and public review periods. The Project Steering Committee was established to oversee the development of the plan and consisted of representatives from the County and each of its cities. Public workshops were held throughout the County to collect input from interested members of the public. The workshops were advertised through various local and regional print media, mailings, the posting of public fliers, and government outreach efforts.The primary emphasis of this planning effort is to facilitate transportation improvements for bicyclists and pedestrians.

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Purposes of the Plan

The purposes of the *SCTA Countywide Bicycle & Pedestrian Master Plan* are to:

- Assess the needs of bicyclists and pedestrians throughout Sonoma County in order to identify a set of local and countywide improvements and implementation strategies that will encourage more people to walk and bicycle;
- Identify local and countywide systems of physical and programmatic improvements to support bicycling and walking;
- Provide local agencies that adopt the Plan with eligibility for various funding programs;
- Act as a resource and coordinating document for local actions and regional projects;
- Foster cooperation between entities for planning purposes and to create Geographic Information System (GIS) maps and a database of existing and proposed facilities countywide.

To achieve these, the Plan includes recommendations for physical improvements and programs that could be developed to enhance and expand existing facilities, connect gaps, address constraints, provide for greater local and regional connectivity, and increase the potential for walking and bicycling

How does the Plan affect Daily Life in Sonoma County?

The SCTA Countywide Bicycle and Pedestrian Master Plan describes a vision for the future of these alternative transportation modes, identifies policies to help achieve that vision and contains funding strategies for implementation of the projects and programs contained within the plan. These policies affect what choices we have for travel by car, bus, and bicycle and on foot. By identifying transportation priorities and the funding to support them, the Plan determines what projects are built and what programs are pursued.

as transportation modes.

Purposes of the Plan Update:

The update to the 2008 Bicycle and Pedestrian Master Plan was driven by the need to address the current environment for pedestrian and bicycle planning in Sonoma County. Over the past five years, a variety of changes have taken place, therefore accompanying information needs to be updated. The key updates are:

- Map: countywide bicycle and pedestrian facilities map
- Data: Census data, collision data, and commuting statistics
- Project Lists: Countywide proposed bicycle and pedestrian projects

Vision Statement

Through a collaborative planning process, a vision, goal and objectives were approved by all ten jurisdictions of Sonoma County: Cloverdale, Healdsburg, Windsor, Santa Rosa, Cotati, Rohnert Park, Petaluma, Sonoma, Sebastopol, and the County of Sonoma. These are designed to guide the development and maintenance of bicycle and pedestrian facilities throughout Sonoma County and express the intent of SCTA and Sonoma County jurisdictions to enhance non-motorized mobility and to improve safety, access, traffic congestion, air quality, and the quality of life of Sonoma County residents, workers and visitors.



Vision

The vision for a comprehensive bicycle and pedestrian transportation system is:
In Sonoma County bicycling and walking are:

- Important to residents' quality of life
- Integral parts of an interconnected transportation system
- Safe and convenient for all user groups
- Viable means of reaching desired destinations
- Routinely accommodated as part of a complete streets approach
- Encouraged by easy connections to transit
- Supported by education and enforcement
- Advanced by actions of government, schools and the private sector
- Promoted as tourism and recreation attractions
- Mode choices that contribute to personal health
- Options that reduce vehicle miles traveled and greenhouse gas emissions

Caltrans Compliance

Active Transportation Program

The Active Transportation Program was created in 2013 by Senate Bill 99 and Assembly Bill 101. There is no longer a

checklist requirement as was the case per the Bicycle Transportation Account before the Active Transportation Program. Depending on the amount awarded to a project, there may be a requirement for the project/program to be included in a plan.

As detailed on page 10, the "Public Participation and Planning" bullet point under "Scoring Criteria" in the draft guidelines:

> Identification of the community-based public participation process that culminated in the project proposal, which may include noticed meetings and consultation with local stakeholders. Project applicants must clearly articulate how the local participation process resulted in the identification and prioritization of the proposed project.
>
> For projects costing $1 million or more, an emphasis will be placed on projects that are prioritized in an adopted city or county bicycle transportation plan, pursuant to Section 891.2, pedestrian plan, safe routes to school plan, active transportation plan, trail plan, or circulation element of a general plan that incorporated elements of an active transportation plan. In future funding cycles, the Commission expects to make consistency with an approved active transportation plan a requirement for large projects.

At the time of this writing, the guidelines and application process were being written and approved by the California Transportation Commission. For more information, please visit the Active Transportation Program website: http://www.catc.ca.gov/programs/ATP.htm or http://www.dot.ca.gov/hq/LocalPrograms/atp/.

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2 | Context and Setting

Land Use History



First settled by non-indigenous settlers in the 1840s, the area that is now Windsor was used primarily for agriculture, ranching and dairy operations throughout most of the 1900s. The town was founded in 1855, and situated originally on the county road leading from Santa Rosa to Healdsburg east of the present U.S. 101. Windsor was named for its majestic oak trees which reminded early settlers of the Windsor countryside in England. Two early transportation modes bear noting. In 1872, the railroad came to the town, facilitating the movement of locally-grown fruit, grain and other produce to distant markets. That railroad right-of-way remains intact today. In 1915, what became Old Redwood Highway was first paved, the first area road to be so. Prior to the construction of Highway 101, this road was the primary artery to the north and south.

The next major influence on transportation, and likewise land use, was the affordability of the automobile for many families and businesses. Trails evolved into paved roads to serve the new vehicular mode and land use and development quickly adapted with more dispersed patterns. As development became more sprawled and the number of car owners grew, non-motorized means of travel declined.

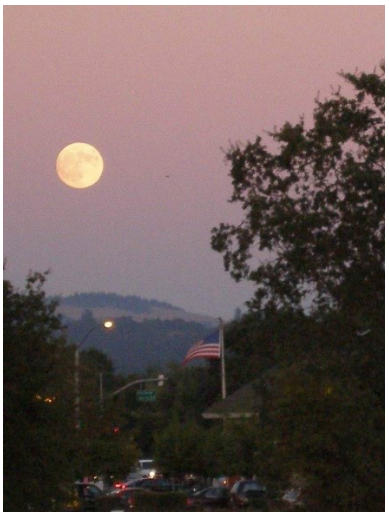
In the 1980's the town experienced a growth surge of residential and business development. Prior to its incorporation in 1992, Windsor was an Urban Service Area in the unincorporated part of Sonoma County. Up until then, most of the area's growth was in the form of single-family detached housing developed in isolated neighborhoods characterized by cul-de-sacs and incomplete sidewalk networks, each accessible to the rest of Windsor via a handful of collector streets. Shopping options were limited to centers laid out around large parking lots and most walking was for exercise or out of necessity. This dispersed development pattern made it difficult for Windsor residents to walk to desired destinations.

More recently, however, the Town of Windsor's elected leaders have developed a vision of a pedestrian-oriented Windsor. Town staff have developed planning documents and design guidelines, including the General Plan, and specific and vision plans for the downtown, Shiloh Road, and Old Redwood Highway north of downtown, that have already resulted in walkable communities with vibrant and inviting pedestrian environments.

For instance, as codified in the 2006 Update of the Town of Windsor Downtown Plan, central Windsor was designed to be pedestrian-oriented, with dense housing, interesting shops, offices where many Windsor residents work, and a recently-completed downtown intermodal station, all surrounding a Town Green. The Downtown Plan calls for new development to be oriented to pedestrians by: bringing building faces to the sidewalk; constructing wide, shaded sidewalks; and encouraging ground floor uses that are compatible with pedestrian access.

More recently, the Town adopted the Shiloh Road Village Vision Plan for southeast Windsor, another document that prioritizes pedestrians equally with automobiles. Although as yet unbuilt, the village is planned to promote walking with wide sidewalks, interesting storefronts, neighborhood-serving shops with housing above; medium-to-high density multifamily housing; and single-family homes with front porches.

Jurisdiction Overview Setting and Land Use



Windsor is located in central Sonoma County along US 101 approximately 20 miles east of the Pacific Coast. The City is situated on the Santa Rosa Plain approximately seven miles north of Santa Rosa and six miles south of Healdsburg. Several creeks flow roughly northeast to southwest through the Town including Windsor Creek, Star Creek, Faught Creek, and Pool Creek. Temperatures in Windsor are generally mild in the winter and warm to hot in the summer. October through April is the rainy season; Windsor receives approximately 42 inches of rain annually. Windsor is the fourth largest city in Sonoma County; the 2010 US Census indicates a population of 26,801 in Windsor. It is expected to grow to 30,300 by 2020 (Sonoma County General Plan 2020, Overview Draft).

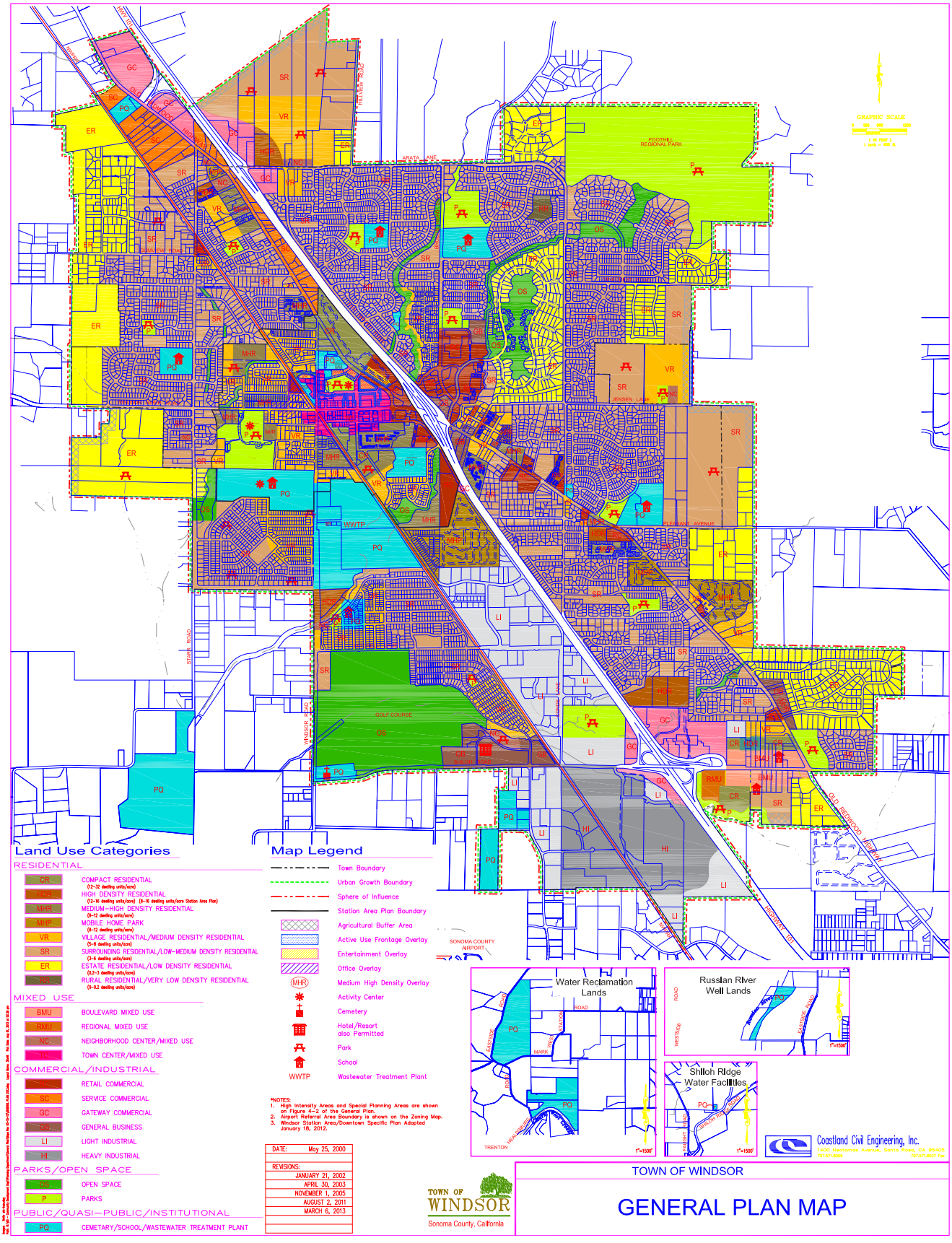
Prior to its incorporation in 1992, development in Windsor primarily consisted of single family residential development with low-density land uses and a suburban street pattern. Since its incorporation, the Town has worked diligently to develop a vibrant downtown in the Old Town Area with high density commercial, mixed-use, and residential development surrounding a Town Green and civic sites. Major commercial developments in Windsor are located in three areas: the Old Town area, the Lakewood area, and the Old Redwood Highway corridor. Industrial uses within the Town of Windsor include light and heavy manufacturing, wholesale and distribution businesses, and business parks, which are primarily located in central and southern Windsor west of US 101. Windsor's schools are distributed throughout the community.

Major transportation corridors include Old Redwood Highway which generally travels southeast to northwest through the community, Windsor Road which travels north-south on the west side of US 101, Hembree Lane which travels north-south on the east side of US 101, Windsor River Road which travels east-west from central Windsor west into the unincorporated County, and Starr Road which travels north-south on the west side of US 101. Regional access is provided by U.S. 101, a major north-south freeway. U.S. 101 bisects Windsor and connects California's northern coastal counties with the San Francisco metropolitan area. The Northwestern Pacific Railroad parallels and is approximately one-quarter mile west of U.S. 101. The Sonoma County Airport is located one-quarter mile south of the Planning Area. Transportation, land use development, and settlement patterns are indicated in Figure 1, the Town of Windsor General Plan Land-Use Map.

Attractors and Generators

Attractors and generators in Windsor were identified by reviewing information from standard sources such as maps, plans, and the Town's website as well as consultation with staff. The locations of the attractors and generators were considered in determining the alignments of both the local and countywide networks. They include downtown, Town Hall and other government buildings, the Town Green, the Windsor Intermodal Transit Facility, local and regional parks, schools, medical centers, shopping centers, Windsor Senior Center, and other public attractions.

Figure 2.1: Town of Windsor Land Use Map



Schools and Safe Routes

The Windsor Unified School District serves the community with eight public schools. However, Village Charter School (K – 8) is located outside of the town limits. The schools, the grades they serve, and their addresses are listed in Table 2.2 below.

Table 2.2
Windsor Schools

Windsor High School	*9 – 12*	*8695 Windsor Road*
Windsor Oaks Academy	*9 – 12*	*8681 Windsor Road*
Windsor Middle School	*6 – 8*	*9500 Brooks Road South*
Cali Calmecac Charter School	*K – 8*	*9941 Starr Road*
Windsor Creek Elementary	*2 – 3*	*8955 Conde Lane*
Brooks Elementary School	*4 – 5*	*750 Natalie Drive*
Mattie Washburn Elementary	*K – 1*	*75 Pleasant Avenue*
*Village Charter School**	*K – 6*	*4614 Old Redwood Hwy*
Windsor Christian Academy	*P – 8*	*10285 Starr Road*
** Located outside of town limits*		

In addition to being the name of state and federal funding programs, Safe Routes to Schools programs are an essential component of successful efforts to make walking and bicycling to school safer, increase the number of children walking and bicycling to school, improve children's health and fitness, and educate students and parents about the health, transportation and environmental benefits of walking and bicycling.

Safe Routes to Schools programs typically use the "five Es" to accomplish these goals: Encouragement (e.g., prizes, special events like Walk to School Day), Education (e.g., fliers on the benefits of walking, maps of safe routes, classroom curriculum), Engineering (e.g., improvements to infrastructure such as roadways, intersections, sidewalks and bicycle facilities), Enforcement (making sure motorists, pedestrians and bicyclists understand and obey the rules of the road), and Evaluation (such as before/after surveys to see the effect of programs and physical improvements on mode choice for student commuters).

In 2010 Windsor initiated and lead an effort to address school pedestrian and bicycle traffic safety issues in creating a Safe Routes to School Task Force. The task force met monthly, providing a beneficial community forum, embarking on developing a Safe Routes to Schools (SRTS) plan, and successfully completing a federal SRTS grant application in 2011-12. In 2012, the Town was awarded a Safe Routes to Schools non-infrastructure grant to develop and implement a SRTS program, with the three-year program focused on the five elementary and middle schools within the Windsor Unified School District.

In 2012 the Town of Windsor was recognized as a 'Bicycle Friendly Community' by the League of American Bicyclists, receiving a Bronze Award for their demonstrated commitment to bicycle safety and convenience town-wide. As part of an effort to continue this commitment, the Town of Windsor leads a monthly meeting of the Windsor Bicycle and Pedestrian Advisory Committee, which works to address pedestrian and bicycle traffic safety issues for travelers of all ages and abilities.

Parks and Community Facilities

A variety of parks and community facilities exist in Windsor. They include neighborhood parks, community parks, open space areas, regional parks, civic buildings, schools, and other quasi-public facilities. These facilities are distributed throughout the community and are accessible by those on foot and/or bicycle. Following is a list of the parks:



- Esposti Park – Community Park
- Kaiser Park – Community Park
- Hiram Lewis Park – Community Park
- Pat Elsbree Skate Park – Community Park
- Wilson Ranch Soccer Park – Community Park
- Windsor Town Green – Community Park

- Acorn Park – Neighborhood Park
- Michael A. Hall – Neighborhood Park
- Lakewood Meadows Park – Neighborhood Park
- Los Robles Park – Neighborhood Park
- R.T. Mitchell – Neighborhood Park
- Pleasant Oak Park – Neighborhood Park
- Pueblo Viejo Park – Neighborhood Park
- Robbins Park – Neighborhood Park
- Sutton Park – Neighborhood Park
- Old Vineyard Park – Neighborhood Park
- Vintage Oaks – Neighborhood Park

- Foothill Regional Park – Regional Park
- Shiloh Regional Park* – Regional Park

**Shiloh Regional Park is located outside of the Windsor town limits.*

Windsor Demographics and Commute Patterns

Local Bicycle and Pedestrian Travel Characteristics

Travel information in Windsor was analyzed to identify mode share and to evaluate travel time to work. The term 'mode share' refers to the percentage of travelers using a particular form, or mode, of transportation (i.e. walking, bicycling, taking a bus, driving, etc.). The commute analysis establishes base data on the existing number of bicycle and pedestrian commuters, as well as an indication of the number of potential bicycle and pedestrian commuters in the plan area. This information can then be used by staff and local officials to develop improvement plans and set priorities, with the objective of increasing the percentage of people who choose to walk or bicycle rather than drive a car or be driven.

A review of available demographic and commute statistics was performed in order to better understand the level of walking

and bicycling in Windsor and Sonoma County as a whole. Several data sources were reviewed, including California Department of Finance Population Estimates, the Bay Area Travel Survey, the 2010 US Census, and American Community Survey (ACS) Data from the US Census Bureau.



According to the most recent ACS data, there are 12,761 workers in Windsor 16 years or older. Of these, 12,097 work outside the home. Thirty-two percent, or 3,920 workers, have a travel time to work of 15 minutes or less. This data indicates that a substantial portion of workers who live in Windsor are employed within the community and close to home, which represents an opportunity to shift travel modes, at least part of the time. Travel time to work in Windsor is shown in Table 2.3.

Table 2.3
Windsor Travel Time to Work for Workers 16 Years and Older

	#	%
Total Employed Persons (16+)	*12,761*	*100%*
Worked at Home	*664*	*5.2%*
Did Not Work at Home	*12,097*	*94.8%*
Travel Time	*#*	*%*
Less than 15 minutes	*3,920*	*32.4%*
15-29 minutes	*4,621*	*38.2%*
30-44 minutes	*2,383*	*19.7%*
45-59 minutes	*532*	*4.4%*
60 minute or more	*629*	*5.2%*
Mean travel time to work	*22.9 minutes*	
Source: US Census, American Community Survey, 5-Year Estimates, 2007-2011		

Every ten years, the US Census Bureau attempts to count every person throughout the nation. In the 2000 Census, "journey to work" data set was included in the long-form of the census questionnaire; however, this data set is no longer included in the decennial census, but rather is included in the ACS. The question "How did you usually get to work last week?" is asked of participants in the ACS. Respondents who typically use more than one method of transportation are instructed to mark the mode used for "most of the distance". Even though the data from the ACS is available at the county level each year, only the five-year data set has the ability to show this data for all jurisdictions. Therefore, this Plan includes ACS data from the most recent five-year period available, 2007 to 2011.

Because of the change from census data used in the prior Plan to ACS data in this Plan, correlations for transportation choices are often less clear. However ACS data is considered the most recent source of transportation mode choice information available. The ACS provides a glimpse of how Windsor residents travel to and from work, though the data source only provides a limited understanding of travel characteristics. This is particularly true in assessing walking and bicycling trips since it does not reflect multi-modal trips or non-work trips. The data misses school, shopping, and recreational trips, which are understood to constitute a significant portion of the bicycle and pedestrian travel by Windsor's population. Furthermore, the instructions effectively eliminate any record of the pedestrian portion of walk-to-transit and walk-to-carpool trips. The wording of the questions also leaves the response for commuters who do not use the same mode every day up to the respondent.

As shown in Table 2.4, ACS transportation data indicates that approximately 81.5 percent of workers in Windsor, or 10,400 persons, were estimated to drive alone to work during the five year period between 2007 and 2011. Though the vast majority of workers drove to work alone, approximately 11.2 percent, or 1,429 workers, were estimated to carpool to work in Windsor in this same ACS survey. Far fewer, 0.9 percent of workers in Windsor, or 115 workers, were estimated to walk to work. The percentage of workers that rode a motorcycle or cab to work was estimated at 0.7 percent, representing approximately 89 workers, with the remainder of the work commute travelers choosing to ride bicycles to work: 0.1 percent, or 13 workers, were estimated to bike to work.

Table 2.4
Demographic and Journey to Work Data

	Windsor		Countywide		California	
Population	26,801		478,551		36,969,200	
Employed Persons 16 years of age +	12,761		226,280		16,251,032	
Mode Share	#	%	#	%	#	%
Drove Alone	10,400	81.5%	169,257	74.8%	13,764,624	84.7%
Carpool	1,429	11.2%	24,438	10.8%	1,901,371	11.7%
Public Transit	77	0.6%	4,299	1.9%	828,803	5.1%
Walk	115	0.9%	7,015	3.1%	455,029	2.8%
Bike	13	0.1%	2,715	1.2%	162,510	1.0%
Motorcycle, cab, other	89	0.7%	2,263	1.0%	211,263	1.3%
Worked at Home	664	5.2%	15,840	7.0%	828,803	5.1%

Source: US Census - American Community Survey, 5-Year Estimates 2007-2011

These estimated pedestrian and bicycle commute trips represent a decrease from the prior study, which may seem alarming until one considers when the data sets were assembled. In 2007-2011 there was a significant slump in the economy compared to the ten-year study period captured by the 2000 census data (1990 to 1999). Workers during this later ACS data set collection period often had to travel further due to less job availability, which reduced the likelihood walking or bicycling was a practical option in Windsor.

Given the Town's climate, topography, and percentage of commuters with a travel time to work of 15 minutes or less, a significant opportunity exists to achieve greater bicycle and pedestrian mode shares. Every motor vehicle trip or vehicle mile driven eliminated results in less air pollution, reduced greenhouse gas emissions, and decreased traffic congestion.

Local Opportunities and Constraints



This section provides a list of opportunities and constraints for the Town's bicycle and pedestrian networks. A variety of conditions were considered including roadway geometries, traffic volumes, crossing locations, distance between destinations, topography, system users, and other issues. The largest obstacles to mobility in the Town of Windsor are the US 101 Freeway that divides the Town into two nearly equal parts, east and west and the SMART Railroad. There are only three crossings of the US 101 Freeway at Shiloh Road, Old Redwood Highway and Arata Lane. As well, there are only four crossings of the SMART Railroad at Shiloh Road, Mitchell Lane, Windsor River

Road and Starr Road. Pedestrian and bicycle facilities at these crossing locations are limited or non-existent.

Opportunities:

- Completion of pathways along the SMART corridor, which will provide continuous north south access through Windsor
- Planned bicycle and pedestrian friendly improvements along the Old Redwood Highway Corridor at the south end of Town
- Way-finding and directional signing for pedestrians and bicyclists
- New pedestrian and bicycle facilities as a component of future development
- Enhancement of pedestrian districts and pedestrian crossing locations
- Accessible curb ramps
- Improved inter-county connection opportunities including bike lanes to the employment centers surrounding the Sonoma County Airport
- Multi-modal access at the Windsor Intermodal Station

Constraints:

- East and west sides of the Town are severed by US 101, bicycle and pedestrian improvements are needed to facilitate access over and/or under 101 at Arata Lane, Old Redwood Highway, and Shiloh Road
- Limited bicycle parking facilities and long-term bicycle storage at destinations throughout town
- Sidewalk gaps, obstructions, and missing or inaccessible curb ramps
- Physical barriers such as US 101 and the SMART Railroad

The following issues were identified by the public through a series of public forums on bicycle issues conducted by the City in the fall and winter of 2007.

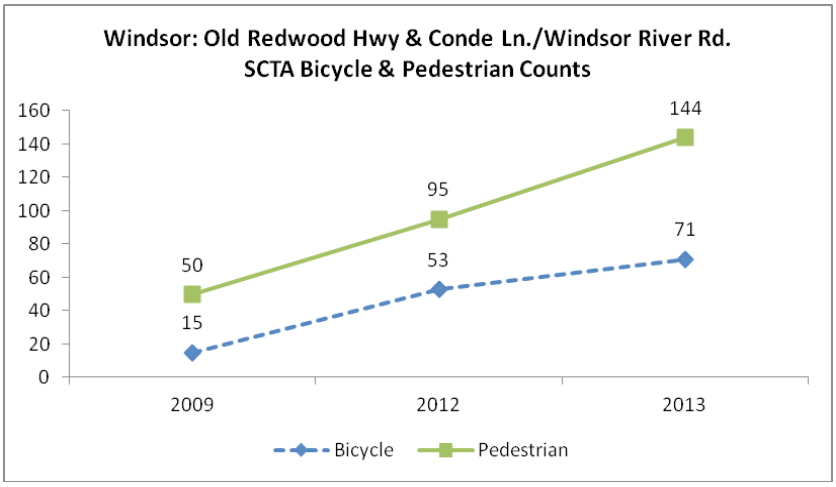
Data Collection

Bicycle and Pedestrian Counts

Since the adoption of the 2008 Countywide Bicycle and Pedestrian Master Plan, work has been accomplished with regard to bicycle and pedestrian counts by the Sonoma County Transportation Authority (SCTA). SCTA began their bicycle and pedestrian count program in 2009. The completion of the prior Plan assisted in informing SCTA staff of key locations within each jurisdiction to be included in a countywide bicycle and pedestrian count program.

Bicycle and pedestrian counts were obtained at three intersections in Windsor at least once during the five year period between 2009 and 2013, including Old Redwood Highway-Windsor River Road/Conde Lane, Windsor River Road/Windsor Road, and Old Redwood Highway/Starr Road. Three annual count data sets were obtained at the intersection of Old Redwood Highway-Windsor River Road/Conde Lane, enabling a review of potential trends of bicycle and pedestrian activities. This information is summarized in the graph below.

Graph 2.5: SCTA Bicycle and Pedestrian Counts in Windsor



The graph demonstrates the total bicycle and pedestrian counts at the Old Redwood Highway and Conde Lane/Windsor River Road location in Windsor for 2009, 2012 and 2013. At this location, there has been a 373 percent increase in bicycle activity and a 188 percent increase in pedestrian activity since 2009. These increases in pedestrian and bicycle activity contradict the decline in pedestrian and bicycle JTW trips inferred from comparing the 2000 census and ACS data. Further data collection may likely confirm increases in pedestrian and bicycle mode increases in commute trips.

Even though significant work has been accomplished in recent years on collecting bicycle and pedestrian count data, SCTA can only count roughly 20 locations per year. Moreover, only four hours per location are collected in manual bicycle and pedestrian counts. Therefore, the lack of documentation on usage and demand for pedestrian and bicycle facilities remains a challenge facing staff and local decision makers in bicycle and pedestrian planning. Without accurate and consistent data, it is difficult to measure the benefits of bicycle and pedestrian investments, especially when compared to the other types of transportation such as the automobile. In order to supplement commute JTW data, to attain a better understanding of existing usage and travel patterns, and to be able to project demand, specialized bicycle and pedestrian counts are recommended. SCTA is exploring various options to purchase automated counters to assist in counting bicyclists and pedestrians for longer periods of time at locations throughout Sonoma County. This will be a collaborative effort, which will include participation from each jurisdiction.

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3 | Vision, Goal, Objectives and Policies

This section defines the vision for bicycle and pedestrian transportation throughout Sonoma County, and outlines the vision, principal goal, and objectives that will serve as guidelines in the continuing development of the countywide bicycle and pedestrian transportation system. Through a collaborative planning process, the vision, goal and objectives were approved by all ten jurisdictions of Sonoma County: Windsor, Healdsburg, Santa Rosa, Cotati, Rohnert Park, Petaluma, Sonoma, Sebastopol, and the County of Sonoma. These are designed to guide the development and maintenance of bicycle and pedestrian facilities throughout Sonoma County and express the intent of SCTA and its member agencies to enhance non-motorized mobility to improve safety, access, traffic congestion, air quality, and the quality of life of Sonoma County residents, workers and visitors.

The vision, goal and top-tier objectives are meant to function as the mutually agreed upon common framework applicable to both the primary countywide system and local bicycle and pedestrian networks. Policies, and possibly additional objectives, that address jurisdiction-specific issues are included in the individual County and Town plans.

The role of the SCTA is in advocating, planning, coordinating, and funding, whereas local agencies, such as cities, towns, and the County, transit agencies, Caltrans, and the non-profit and private sectors, will be chiefly responsible for implementation of objectives and policies.

Vision and Goal

The vision for a comprehensive bicycle and pedestrian transportation system is that in Sonoma County bicycling and walking are:

- Important to residents' quality of life
- Integral parts of an interconnected transportation system
- Safe and convenient for all user groups
- Viable means of reaching desired destinations
- Routinely accommodated as part of a complete streets approach
- Encouraged by easy connections to transit
- Supported by education and enforcement
- Advanced by actions of government, schools and the private sector
- Promoted as tourism and recreation attractions
- Mode choices that contribute to personal health
- Options that reduce vehicle miles traveled and greenhouse gas emissions

Principal Goal:

To develop and maintain a comprehensive countywide bicycle and pedestrian transportation system, which includes projects, programs, and policies that work together to provide safe and efficient transportation opportunities for bicyclists and pedestrians.

Objectives and Policies

Objective 1.0: The Countywide Bicycle and Pedestrian Network
Establish a comprehensive countywide bicycle and pedestrian transportation system.

Policies

1.1 Develop a local and countywide bicycle and pedestrian transportation network that provides access to and among major activity centers, commercial districts, schools, transportation centers, public transportation recreation, and other destinations, according to the recommendations in this plan.
1.2 Work cooperatively with responsible agencies including Sonoma County's Transportation and Public Works, Regional Parks, and Water Agency, SCTA, Sonoma Marin Area Rail Transit (SMART), and others, to close existing facility gaps and ensure the system is implemented, constructed, and maintained.
1.3 Establish a bicycle and pedestrian advisory committee to advise staff on bicycle and pedestrian issues.
1.4 Assign a bicycle and pedestrian coordinator to oversee implementation of the Bicycle and Pedestrian Plan and coordinate activities between Town departments and other jurisdictions.
1.5 Double the "Journey to Work" mode split percentages for walking and bicycling, by the year 2020. Using 2000 Census data as the baseline, the "Journey to Work" for walking and bicycling for Windsor were 2.4% and 0.7%, respectively. By 2020, the Journey to Work for walking and bicycling for Windsor will be 4.8% and 1.4%, respectively.

Bicycle-specific policies

1.6 Consider the needs of bicyclists of all types (commuters, recreational riders, children, and families) in planning, developing, and maintaining a bikeway network that is safe and convenient.
1.7 Make the development of a Class I multi-use pathway along the SMART right-of-way a high priority, independent of the re-establishment of rail and transit operations.

Pedestrian-specific policies

1.8 Require new development to provide safe, continuous and convenient pedestrian access to jobs, shopping and other local services and destinations.
1.9 Create spaces and activities that invite pedestrian use and optimize the experience of walking with amenities such as landscaping, public art, seating, and drinking fountains.
1.10 Improve safety of pedestrian travelways and crossings of roadways and highways everywhere.
1.11 Shift focus from vehicle-perference to pedestrian-preference because everyone is a pedestrian at some point on their journey.

Objective 2.0: Design
Utilize accepted design standards and complete streets principles for the development of bicycle and pedestrian facilities.

Policies

2.1 Utilize National Association of City Transportation Officials (NACTO) *Urban Bikeways Design Guide* and *Urban Street Design Guide*, the California Highway Design Manual, the *California Manual of Uniform Traffic Control Devices*, the American Association of State Highway Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities* and *Guide for the Planning, Design, and Operation of Pedestrian Facilities* for the development of bicycle and pedestrian facilities.
2.2 Require that all signalized intersections include bicycle detection and are properly marked and operational for use by bicyclists.
2.3 Where minimum bike lane standards are infeasible, use striped edge lines, signs, shared lane markings, or other

route enhancements to improve conditions for bicyclists.

2.4 Create a continuous network for bicycle travel, where necessary using various pavement markings and signs that help clarify bicyclists need connections to every place that drivers need. Projects that will result in the loss of existing bicycle and pedestrian facilities or jeopardize future facilities as shown on the Bikeways Map must be avoided.

2.5 Install way finding signage, markers, and stencils on off-street paths, on-street bikeways, local roads, and State Routes to improve way finding for bicyclists, assist emergency personnel, and heighten motorist awareness.

2.6 Provide consistent ADA compliant features at uncontrolled pedestrian crossings, especially within pedestrian districts and at intersections of arterials with Class I trails.

2.7 Consider giving a higher priority to installing curb ramps at crosswalks near schools and parks as part of the Town ADA Transition Plan.

2.8 Where bulb-outs or curb extensions are incorporated into cross-town street designs, these curbs should be limited to allow for comfortable bicycle travel.

Objective 3.0: Multimodal Integration

Develop and enhance opportunities for bicyclists and pedestrians to easily access other modes of transportation.

Policies

3.1 Implement a safe routes to transit program that prioritizes pedestrian and bicycle access to transit stops and stations.

3.2 Require/encourage transit providers to provide and maintain convenient and secure bike parking facilities, all-weather shelters, and other amenities at major transit stops and transportation centers at a minimum.

3.3 Require/encourage local and regional transit agencies to accommodate bicycles on transit and plan for the need for additional bicycle storage capacity on transit to ensure capacity keeps up with demand.

Objective 4.0: Comprehensive Support Facilities

Encourage the development of comprehensive support facilities for walking and bicycling.

Policies

4.1 Encourage adequate short-term bicycle parking for retail, office, commercial and industrial uses.

4.2 Encourage adequate short-term bicycle parking and long-term bicycle storage for transportation centers.

4.3 Encourage employers to provide secure indoor and/or covered bicycle parking for their employees.

4.4 Encourage employers to provide adequate shower and locker facilities for workers.

4.5 Encourage installing high-visibility crossing treatments, street furniture, drinking fountains, and other pedestrian amenities in pedestrian districts and on Class I trails.

Objective 5.0: Education and Promotion

Develop programs and public outreach materials to promote bicycle and pedestrian safety and the benefits of bicycling and walking.

The goal of the Windsor Safe Routes to School (SRTS) program is to encourage more families to walk and bike to/from school and around Town, to educate parents, children, and the community as a whole to do so safely, and to provide a built environment conducive to safe walking and biking.

The Town of Windsor began implementing a SRTS program in the Fall of 2014, after being awarded a Federal Safe Routes to School non-infrastructure grant. SRTS “Five E’s” (education, encouragement, enforcement, engineering, and evaluation) activities are implemented at five K-8 sites in the Windsor city limits: Mattie Washburn (K-1), Windsor Creek (grades 2-3), Brooks (4-5), Windsor Middle School (6-8), and Cali Calmecac Language Academy (K-8). During the 2013-14 school year, engineering walking audits were conducted at each site to evaluate barriers to walking & bicycling to school, and to

make recommendations for improvement. Those recommendations have been incorporated into the Town Bicycle and Pedestrian Master plan and "recommended route to school" maps have been developed for each site.

The SRTS education program focuses on bicycle and pedestrian safety at the second, fourth, and sixth grade levels. All Windsor Unified School District second graders receive pedestrian safety education during the school day, including a neighborhood safety walk where students practice being a pedestrian and crossing the street in a real world environment. All Windsor fourth and sixth graders receive both in-class and on-bicycle safety/skill education during the school day, taught by classroom teachers, physical education teachers, and/or visiting instructors from the Sonoma County Bicycle Coalition. The Town purchased a bicycle fleet and a mobile trailer to transport the fleet between Brooks, Cali Calmecac, and Windsor Middle School. Direction, coordination, and maintenance of the bike fleet and trailer is provided by the Sonoma County Bicycle Coalition, in cooperation with the Windsor School District and Windsor Bicycle Center.

Community bicycle safety education is also implemented to complement the in-school education program and includes an annual Community Bicycle Safety/Skill Rodeo, Family Bicycle rides, and parent/adult education outreach. The Windsor Town Police Department supports the SRTS program by providing school-zone enforcement, targeted pedestrian-safety decoy operations, Driver Awareness campaigns, and supporting education programs such as the community and in-school bicycle safety rodeos.

Activities to encourage walking and bicycling to/from school and/or in neighborhoods also take place at Cali Calmecac Language Academy, Windsor Creek, Brooks, and Windsor Middle School. Encouragement activities include Walk/Roll Day events, contests, walking school buses, bike trains, and outreach. Evaluation of the Federally-funded program takes place bi-annually in the form of student arrival/departure tallies, as well as a pre and post-program parent survey.

Prior to the launch of the Windsor Safe Routes to School program, Cali Calmecac participated in the Countywide Safe Routes to School program from 2011-2013 (funded through a Federal CMAQ grant), and all sites except Mattie Washburn had participated in the county's annual International Walk & Roll to School Day event since 2009. In addition, the Sonoma County Bicycle Coalition and Town stakeholders established a Safe Routes to School Task Force in November 2010, comprised of representatives from the Town, law enforcement, school district, and community. The Task Force was instrumental in supporting the town in obtaining their Federal Safe Routes to School grant. In 2014, the SRTS Task Force evolved to become the current Town Bicycle and Pedestrian Advisory Committee.

Policies

5.1 Participate in the development and maintenance of a bicycle and pedestrian safety campaign as a countywide tool to deliver comprehensive safety awareness, driver, cyclist and pedestrian education information, and to increase the awareness of the benefits of walking and bicycling as transportation modes.

5.2 Support "grassroots" efforts that help to resolve bicycle and pedestrian transportation issues.

5.3 Distribute bicycle and pedestrian safety, educational, and promotional materials through law enforcement activities, at scholastic orientations, through drivers training and citation diversion programs, and to new political representatives.

5.4 Encourage events that introduce residents to walking and bicycling, such as bike-to-work, walk/bike-to-school days, senior walks and historic walks.

5.5 Encourage major employment centers and employers to support commuting by bicycle, including the use of flex-time work schedules to support non-rush hour bicycle commuting.

5.6 Educate the general public and the officials of state, county, and local law enforcement agencies on common Vehicle Code infractions involving bicyclists and other users of roadways or off-road pathways

Objective 6.0: Safety and Security
Create countywide pedestrian and bicycle networks that are, and are perceived to be, safe and secure.

Policies

6.1 Reduce automobile collisions with pedestrians and bicyclists by 50 percent by the year 2020, using 2006 collision data as the baseline for analysis.
6.2 Coordinate the delivery of bicycle safety education programs to schools, utilizing assistance from law enforcement agencies, local bicycle shops, and other appropriate groups and organizations.
6.3 Focus on improving safety of intersection crossings using routine pedestrian signal cycles, pedestrian buttons, high-visibility crosswalk markings and education.
6.4 Emphasize safety improvements in the vicinity of schools, public transit and other high-priority pedestrian destinations.
6.5 Improve collection and analysis of collision data. The Public Works Department shall review this data at least annually to identify problem areas which require immediate attention.
6.6 Improve pedestrian safety and security and the 'sense of isolation' with pedestrian-level lighting, where appropriate, and development of activities and facilities that encourage walking.
6.7 Develop procedures that help create uniformity of pedestrian and bicycle facilities townwide, increasing overall driver recognition of these facilities.

Objective 7.0: Land Use
Encourage smart growth land use strategies by planning, designing and constructing bicycle and pedestrian facilities in new development.

Policies

7.1 Encourage school districts to participate in providing safe and continuous bicycle and pedestrian connections from surrounding neighborhoods when constructing new or improving existing school facilities.
7.2 Consider allowing tandem parking for residential development in areas where on-street parking may conflict with development of Class II bikeways.
7.3 Encourage compact, high density pedestrian oriented development in pedestrian districts.
7.4 Condition discretionary projects in pedestrian districts to provide pedestrian facilities such as sidewalks, and trails that link pedestrian routes or provide access to destinations.
7.5 Where a nexus is identified, condition discretionary projects to provide an irrevocable offer of Class I easement or land dedication and construction of Class I multi-use pathways as designated in an adopted plan provided it can be shown that such a Class I pathway will serve as loops and/or links to designated or existing Class I multi-use pathways, trails, communities, existing or proposed schools, public parks and open space areas, and existing or proposed public transit nodes (e.g., transportation centers, park and ride lots, bus stops).

Objective 8.0: Planning
Continue to support bicycle and pedestrian efforts with data measurement, analysis, and ongoing planning.

Policies

8.1 The Bicycle and Pedestrian Advisory Committee (BPAC) shall be responsible for advising staff on the ongoing planning and coordination of the bicycle and pedestrian transportation system.
8.2 Update the Bicycle and Pedestrian Plan in accordance with the California Bicycle Transportation Act, and to coordinate with Regional Transportation Plan updates.
8.3 Incorporate policies in this Bicycle and Pedestrian Plan into all specific, master and General Plan documents and redevelopment policies.
8.4 The Town's Staff Design Review Committee shall review the design of all new road widening projects in order to

minimize hazards and barriers to bicycle travel on all local roads.

8.5 Refer projects that meet any of the following conditions to the Staff Design Review Committee for review to determine consistency with this plan:

A. Resurfacing, restoration, and rehabilitation (3R) projects, or other improvements of roads designated as Class II bikeways.

B. Resurfacing, restoration, and rehabilitation (3R) projects or other improvements of roads designated as Class III bike routes.

C. Resurfacing, restoration, and rehabilitation (3R) projects that include the installation of rumble strips, AC berms or similar barriers, and/or roadway dots in the shoulder area.

D. Traffic calming improvements.

E. Road capacity improvement projects.

F. Discretionary projects adjacent to or traversed by existing or designated Class I, II or III bikeways.

G. Discretionary projects conditioned with roadway improvements along a designated or existing Class I, II or III bikeway.

8.6 Proactively seek opportunities for acquisition of abandoned rights-of-way, natural waterways, flood control rights-of-way, utility rights-of-way, and lands for the development of new Class I multi-use pathways.

8.7 Where different classes of bikeways share the same route, Class I or II bikeways should not be constructed in a manner that reduces or eliminates other designated bikeways without consultation with the Bicycle and Pedestrian Advisory Committee.

Objective 9.0: Maintenance

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

Policies

9.1 Maintain geometry, pavement surface condition, debris removal, markings, and signage on Class II and Class III bikeways to the same standards and condition as the adjacent motor vehicle lanes.

9.2 Develop a maintenance reporting system with a central point of contact that can be used to report, track, and respond to routine bicycle and pedestrian maintenance issues in a timely manner.

9.3 Require that road construction projects minimize their impacts on bicyclists and pedestrians through the proper placement of construction signs and equipment, and by providing adequate detours.

9.4 Require that routine maintenance of local roads consider bicycle and pedestrian safety and at a minimum includes the following activities:

- Along rural lanes, trim vegetation to provide a minimum horizontal clearance of 4 feet from the edge of pavement and a minimum vertical clearance of 8 feet.
- Along rural lanes and unimproved street segments, clear debris from road shoulder areas to provide space for walking.
- Along urban streets, consider contacting adjacent property owners of the need to remove vegetation that obstructs the full width of sidewalks.

9.5 Perform periodic sidewalk inspections to ensure adequate pedestrian clearance and to address maintenance issues that could present a tripping hazard.

Objective 10.0: Funding

Maximize the amount of funding for bicycle and pedestrian projects and programs throughout Sonoma County, with an emphasis on implementation of this plan.

Policies

10.1 Work with federal, state, regional, and local agencies and any other available public or private funding sources to secure funding for the bicycle and pedestrian system.

10.2 Encourage multi-jurisdictional funding applications to implement the regional bicycle and pedestrian system.

10.3 Promote the availability of adequate regional, state and federal funding sources for bicycle and pedestrian transportation projects.

Relationship to Other Plans and Policies

Implementation of the Windsor Bicycle and Pedestrian Plan will require coordination, consistency, and cooperation among numerous jurisdictions and agencies with varied interests that share policy decisions within and immediately adjacent to Windsor and Sonoma County. There are myriad relevant federal, state, regional, county, and local agencies that have developed plans, programs, directives, policies, and regulations related to funding, planning, designing, operating, maintaining, and using bicycle and pedestrian facilities. In 2008 these agencies and their plans, policies, etc., were evaluated for coordination, consistency, and conformance with the Plan, with brief summaries of the 2008 local plans and policies provided below. Summaries of regional, state, and federal plans, policies, and other relevant resources are provided in the Overview section.

Windsor General Plan

The Windsor General Plan is a long-range comprehensive planning document required by state law and adopted by the Town in 1996 to set policy and guide future growth, development and conservation of resources. The following General Plan goals are relevant to bicycle and pedestrian improvements in Windsor.

Transportation

Provide an efficient circulation system to accommodate the movement of people and goods including rail, vehicular, pedestrian, and cyclist movement.

- Provide an interconnected street network that is accessible and friendly to all modes of travel.
- Develop guidelines for street design that meet travel demands but also create a safe and pleasant pedestrian and bicyclist environment.
- Provide opportunities for Windsor residents, visitors and employees to circulate about town without total reliance on the automobile.
- Require new development to pay its fair share of the costs of future transportation improvements.

A.19

Trails Plan. The Town should identify a conceptual framework for trails that utilizes riparian corridors, agricultural buffers, the railroad corridor, highvoltage power line easements, as well as critical street connections. Parks, schools, and neighborhoods should be targeted as important destinations. The Town should develop strategies for acquiring lands and/or easements in these locations and making appropriate trail improvements. See also Implementation Program A.20 below and Implementation Program E.8 in the Community Services and Facilities section, for further details on this Trails Plan in the context of the Town's overall bikeways and recreational services plan. (Planning, Community Services, Engineering, Public Works)

A.20

General Bikeway Plan. The Town should prepare a general bikeway plan to provide for and promote the safe use of bicycles by people of all ages within the Town and its surrounding environs for commuting or recreating. The plan should be designed to meet State standards, should be flexible and expandable, and should achieve the following goals:

a. Provide continuous bikeways for commuters to work, school, and shopping;
b. Link residential neighborhoods with schools and parks;

c. Provide adequate bicycle parking facilities at destinations such as schools, parks, and shopping centers throughout the Town;
d. Provide bicycle safety education;
e. Promote bicycle use as an alternative to automobile use and as a pleasurable form of fitness and recreation; and
f. Plan bicycle facilities to be an integral part of the Town's transportation network, including bicycle links to existing or future bus, rail, and airport facilities. (Planning, Community Services, Public Works, Engineering)

Alternative Modes of Travel

D.1 Provide an interconnected street network that is accessible and friendly to all modes of travel.

D.1.1 The Town should encourage a network of interconnected connector and local streets to avoid excessive congestion on any one street and allow the safe use by motorists, pedestrians, and bicyclists.

D.1.2 The Town should promote street designs in new developments to provide convenient connections to local destinations and to adjacent neighborhoods. Travel should be dispersed among several streets rather than a few high volume collectors that divide neighborhoods and discourage walking.

D.2 Develop guidelines for street design that meet travel demands but also create a safe and pleasant walking environment.

D.2.1 The Town should revise its current street classification system that defines the function of roadways in Windsor. The conventional hierarchy or street labels (i.e. arterials, collectors, and local streets) should be replaced with a hierarchy that considers the design of the street.

D.2.2 The Town should "calm", or slow, traffic in residential neighborhoods through a variety of techniques that have the effect of slowing through traffic, without compromising safety, emergency access, and reasonable flows. Examples of traffic slowing techniques include narrow traffic lanes, interrupted sight lines, changes in road texture or road direction to reduce speed, small radius curb returns to reduce pedestrian crossing times and vehicle turning speeds, curb extensions that narrow the streets at intersections by widening the sidewalks to reduce pedestrian crossing times, and round-abouts to reduce vehicular conflicts.

D.2.3 As much as possible, line streets with trees to create a more attractive, comfortable pedestrian environment.

D.2.4 The Town should encourage proper planning for goods movement to commercial properties. Connector streets that provide access to commercial development shall be designed to accommodate commercial vehicles.

D.2.5 The Town should retain certain streets as Rural Lanes in order to conserve their particular character and beauty. New development along Rural Lanes should be configured in terms of lot size, setbacks, and design standards so that traffic speeds are reduced.

D.2.6 The Town should establish level of service standards to define the minimum acceptable operating characteristics for intersections and streets. (The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and passengers.) A level of service D is defined as the minimum acceptable level of congestion for high-volume facilities such as freeways, boulevards, and signalized intersections. This standard should apply at all these locations except at the intersection of Old Redwood Highway/US 101 Northbound

off-ramps/Lakewood Drive. A level of service E is tolerated at this intersection by the Town because it is a "critical" location in the Town's commercial and civic areas, in addition to being located at the main northbound off-ramp from US 101. The five year periodic updates of the General Plan shall assess the traffic level of service (LOS) during p.m. peak periods at the intersection of Old Redwood Highways/ US 101 Northbound off-ramps/Lakewood Drive. The traffic review shall monitor conditions at key intersections and identify needed improvements to maintain acceptable levels of service and/or safety. For local streets, a more appropriate performance standard is daily traffic volume.

D.3 Provide opportunities for Windsor residents, visitors and employees to circulate about town without total reliance on the automobile.

D.3.1 The Town should use streets, off-street pathways and greenways for non-motorized modes of travel, including walking and bicycling. The basic framework for a trail system is to be developed only on public rights-of-way.

D.3.2 The Town should encourage higher density mixed land uses within walking distances of existing and future transit stops.

D.3.3 The Town should support expansion of local bus service, consistent with funding resources, to link residences with key local destinations and should continue to provide paratransit service to satisfy needs of qualified users.

D.3.4 The Town should require developers to construct, when appropriate, transit facilities including bus turnouts shelters and benches.

D.3.5 The Town should protect the Northwestern Pacific Railroad right-of-way for future rail commuter service. The Town should similarly identify and protect desired future commuter rail station from land uses that may later preclude development of a rail station.

Traffic Improvement Financing

D.4 Require new development to pay its fair share of the costs of future transportation improvements.

D.4.1 The Town should identify those transportation infrastructure improvements that are necessary to accommodate future growth envisioned by the General Plan. The cost for providing needed infrastructure should be shared by new development.

D.4.2 The Town should establish procedures for reviewing and adjusting its transportation needs and the costs of those improvements on a periodic basis.

Townwide Trail and Bikeways Plan, Second Edition

A. Goals and Objectives

1. <u>General Mission</u>

To provide for and promote the safe use of bicycles by people of all ages for both commuting and recreating within the Town and its surrounding environs. The four E's, education, enforcement, engineering and encouragement, are to be utilized to achieve this mission.

Education: Education of bicyclists, motorists and the general public.

Enforcement: Enforcement of the California Vehicle Code and local traffic regulations as they apply to operation of bicycles, including the rights given to cyclists.

Engineering: Proper design and planning of bikeways and bicycle facilities and integration of bicycle facilities and use into the transportation system and the community.

Encouragement: Encouragement of bicycle use for recreation and transportation and encouragement and promotion of each of the other three E's.

2. Specific Goals

a. Provide continuous bikeways for work, school and shopping commuters, therein reducing vehicular congestion by providing a viable alternative.
b. Link residential neighborhoods with schools and parks.
c. Provide adequate bicycle parking facilities at destinations such as school, parks and shopping centers throughout the Town.
d. Provide bicycle safety education for both cyclists and motorists and promote a cooperative "share the road" atmosphere.
e. Promote bicycle use as an alternative to automobile use and as a pleasurable form of fitness and recreation.
f. Plan bicycle facilities to be an integral part of the Town's transportation network including bicycle links to existing or future bus, rail, airport and park and ride facilities.

B. Bicycle Parking

Bicycle parking at the nodes identified in this plan and other destinations is key to the successful implementation of the plan. Convenient and adequate parking should be provided at each facility. Parking should be near the entrances to facilities but out of the path of pedestrians and motor vehicles and should not promote riding on sidewalks, except where walkways are designated as a multipurpose path. As part of the review and approval of all commercial development, parks, transit facilities and other destinations, adequate bicycle parking facilities should be required as conditions of approval.

Healthy Community, 2013

In June 2013, the Windsor Town Council adopted Healthy Community Goals and Implementation Strategies that support a healthy, sustainable, and livable community.

Goals

The following are specific goals of the Healthy Community:

A. Create a healthy community through physical infrastructure that connects neighborhoods designed to promote walking and bicycling, health and wellness, quality of life, and environmental sustainability.
B. Maintain and enhance existing parks and public facilities and prepare for future needs.
C. Continue to support healthy community efforts including Safe Routes to School program, Bicycle Pedestrian Advisory Committee, Windsor Wellness Partnership, and Sonoma County Health Actions 2020.

The Town is implementing a Parks and Recreation Master Plan as well as Health and Wellness Initiatives, which both affect the Healthy Community Goals and Strategies.

Parks and Recreation Master Plan Summary

The first and current Parks and Recreation Master Plan include standards and criteria to develop parks and recreation facilities. Adopted in 1999, the documents offer visions, objectives, and policies to guide development through 2015. The Master Plan as outlined a goal to develop park and facility improvements that are based on public input and patterns of growth and anticipated program demands. In updating the Master Plan, it is recommended that the plan parallel accreditation standards identified by the National Recreation and Park and Association and initiatives outlined by the California Parks and Recreation Society including a focus on trails, recreation program trends, health and wellness, art and culture, economic development, and alternative funding for capital improvements, maintenance, and operations.

Health and Wellness Initiatives

In September 2010, Council adopted a resolution to support Healthy Eating and Active Living (HEAL) Cities Campaign in an effort to prevent obesity as a statewide campaign led by the League of California Cities and the California Center for Public Health Advocacy (League). The resolution included specific policy examples to promote healthier lifestyles and communities, including healthy food access, the adoption of Town design and planning principles that enable citizens of allages and abilities to undertake exercise, and employee wellness. Based on established criteria and existing efforts of the Town, Windsor was recognized at the time as being a “Fit” city in 2012.

The Windsor Wellness Partnership was formed in January 2011. Windsor Town Council supported the Partnership becoming a “chapter” of Health Action Vision, sponsored and administered by the Sonoma County Health Services Department. The Partnership was endorsed by Health Action in November 2011 to be the first city to lead local efforts in Windsor.

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4 | Local Bicycle and Pedestrian Network

The Town of Windsor bicycle and pedestrian resources map is shown in Figure 4.1. The map includes both existing and proposed bicycle and pedestrian facilities.

Existing Conditions

Bicyclists and Bicycle Conditions

The existing bicycle network in Windsor consists of Class I pathways and Class II bike lanes. Approximately 2.5 miles of Class I pathways are provided throughout the community including segments along the Windsor Creek and East Windsor Creek Trails, the Pool Creek Trail, and the SMART Trail. Approximately 17 miles of Class II bike lanes existing including north-south segments on Hembree Lane, Windsor Road, Brooks Road, Los Amigos Road, Old Redwood Highway, and Conde Lane; and east-west segments on Arata Lane, Windsor River Road, and Shiloh Road. In recent years, Windsor has made significant steps in the development of its proposed Class II bikeway network, increasing bike lanes by more than 60 percent since 2008. Currently, segments of Class II bike lanes are provided on most of the Town's cross-town connectors with approximately 75 percent of the Townwide network completed. However, significant work still remains and with US 101, which bisects the community, is a significant a barrier to continuous east-west access. A Class III bikeway was also added since 2008, representing 10 percent of the Class III network completed. Furthermore, green-colored bike lanes have been installed on Old Redwood Highway near the Central Windsor exist for US 101, reflecting the Town's commitment to enhancing bicycle safety by a varity of means. A segment by segment breakdown of existing bikeways in Windsor is listed in Table 4.2.

Pedestrians, Pedestrian Districts, and Pedestrian Conditions

Today, pedestrian activity in Windsor is largely focused in three "pedestrian districts," places where walking is prioritized as a mode of travel. The central Windsor pedestrian district covers a large section of central Windsor on both sides of the highway, in recognition of the need to connect the newly constructed downtown improvements with the older housing supply and daily shopping necessities east of the highway. The district includes the Town Green, intermodal train station, high school, town hall, and other amenities on the west side of the highway, as well as the housing and shopping on the east side of the highway.

Windsor's four elementary schools, middle school, K-8 charter school, and co-located high schools also attract large numbers of pedestrians, particularly at certain times of day. (See Safe Routes to Schools discussion, below.) Other pedestrian nodes are Shiloh Shopping Center, Huerta Gymnasium (a public facility), Windsor Community Center, Windsor Senior Center, Keiser Park, Esposti Park, Hiram Lewis Park, Foothill Regional Park, Shiloh Ranch Regional Park and the Town's creek trails.

The primary challenge to walking in Windsor is the limited connectivity between the east and west sides of town, where Highway 101 is the barrier between the two. There are just three highway crossing locations for vehicles in Windsor, onto which all east/west traffic is funneled. Each of these arterials also serves the Town's three sets of freeway on- and off-ramps, which results in pedestrians encountering fast-moving vehicles and often inhospitable conditions. The situation is particularly difficult at the central Windsor interchange, where Old Redwood Highway/Windsor River Road crosses the

Figure 4.1: Windsor Bicycle and Pedestrian Map

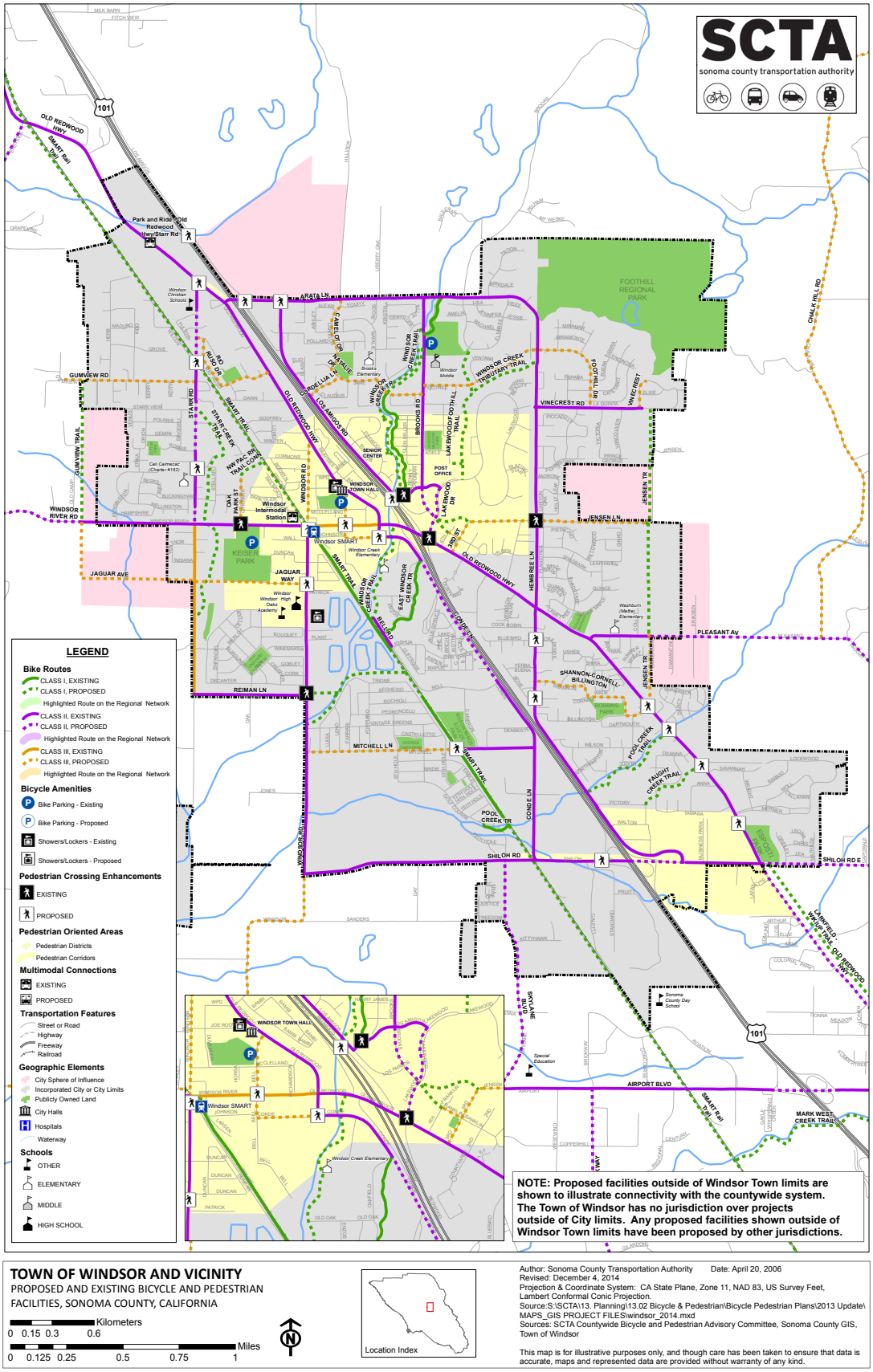


Table 4.2
Existing Bikeways and Multi-Use Paths

Project Corridor/ Street	Begin Point	End Point	Class	Length (miles)	Local (L) Regional (R)	Primary Network	SF Bay Area Regional Route	Use
East Windsor Creek Trail	Conde Lane	SMART Trail	I	0.41	L	No	No	Trans/ Rec
SMART Trail	North of Wilson Ranch Soccer Park	North of Shiloh Road	I	0.74	R	Yes	Yes	Trans
SMART Trail	Windsor River Road	Joshua Drive	I	0.65	R	Yes	Yes	Trans/ Rec
Pool Creek Trail	Golf Course Drive	SMART Trail	I	0.13	L	No	No	Trans/ Rec
Windsor Creek Trail	Arata Lane	Brooks Road	I	0.21	L	No	No	Trans
Windsor Creek Trail	Natalie Drive	Los Amigos Road	I	0.55	L	No	No	Trans/ Rec
Arata Lane	Old Redwood Hwy	Foothill Drive	II	1.57	L	No	No	Trans/ Rec
Brooks Road	Arata Lane	Los Amigos Road	II	0.95	L	No	No	Trans
Conde Lane – SB only	Old Redwood Highway	Johnson Street	II	0.05	L	No	No	Trans
Conde Lane	Mitchell Lane	Shiloh Road	II	0.5	L	No	No	Trans
Hembree Lane	Arata Lane/ Foothill Drive	Shiloh Road	II	2.6	L	No	No	Trans
Los Amigos Road	Arata Lane	Lakewood Drive	II	1.3	L	No	No	Trans
Mitchell Lane	SMART Trail	Conde Lane	II	0.34	L	No	No	Trans
Old Redwood Highway	North Town Limit	Windsor Road	II	1.45	R	Yes	No	Trans
Old Redwood Highway – SB only	Windsor Road	Conde Lane	II	0.5	R	Yes	No	Trans
Old Redwood Highway	Conde Lane	US 101 SB Ramps	II	0.1	R	Yes	No	Trans
Old Redwood Highway	NB Off-ramp/ Lakewood	South Town Limits*	II	2.1	R	Yes	No	Trans
Pleasant Ave – WB only	Old Redwood Hwy	Private Road	II	0.21	L	No	No	Trans
Reiman Lane	Starr Road	Windsor Road	II	0.5	L	No	No	Trans
Shiloh Road	Windsor Road	Caletti Avenue	II	1.25	R	Yes	No	Trans
Shiloh Road	Hembree Lane	Old Redwood Highway	II	0.35	R	Yes	No	Trans

Table 4.2
Existing Bikeways and Multi-Use Paths

Project Corridor/ Street	Begin Point	End Point	Class	Length (miles)	Local (L) Regional (R)	Primary Network	SF Bay Area Regional Route	Use
Vinecrest Road	Hembree Lane	Vinecrest Circle	II	0.53	L	No	No	Trans
Windsor River Road	West Town Limit	Windsor Road	II	1.0	R	Yes	No	Trans
Windsor Road	Windsor River Road	Shiloh Road	II	1.55	R	Yes	No	Trans
Starr Road	Windsor River Road	Reiman Lane	III	0.76	L	No	No	Trans
Windsor River Road	Windsor Road	Old Redwood Highway	III	0.32	R	No	No	Trans
			Class I	2.69				
			Class II	16.85				
			Class III	1.08				

highway. Windsor obtained a federal grant to enhance the pedestrian and bicycle facilities at this crossing, with construction to be completed in late 2014 or early 2015. In addition, a Transportation for Clean Air grant was obtained in 2013 with the funds slated for installation of countdown pedestrian signal head and pedestrian push buttons at traffic signals Townwide.

The SMART Railroad corridor creates another east/west pedestrian barrier in Windsor. The Public Utilities Commission limits track-crossing to the four existing roadway crossings of the rail line in Windsor. The limited-use tracks are not fenced, so pedestrians crossing elsewhere do so at their own risk. And because a majority of Windsor's housing stock is located in developments of cul-de-sacs—which force pedestrians, bicyclists and motorists alike to travel much farther than crow-flies distance—walking trips are much longer than they would be in a grid street network, which new development in Windsor is planned to have.

As a component of the General Plan Circulation Element, the Town of Windsor recently inventoried, and mapped in GIS, gaps in their sidewalk network. This information will be used to prioritize maintenance and to take advantage of maintenance and upgrade opportunities, such as those provided by new development or utility trenching. Sidewalk inventories are particularly useful in the implementation of Americans with Disabilities Act (ADA) transition plans, discussed below.

Disabled Access – ADA



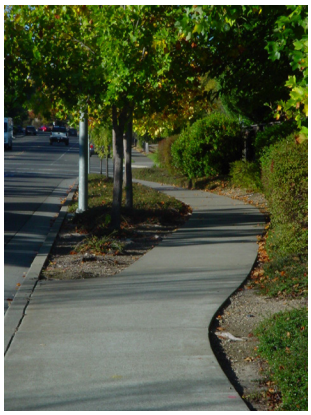
The Americans with Disabilities Act (ADA) was enacted in 1990, providing rights and protections to individuals with disabilities. To comply in the realm of the pedestrian network, local governments must bring sidewalks, curb ramps and roadway crossings up to a set of specified standards when constructing new facilities or making modifications within existing public rights-of-way. According to ADA, additions and alterations to existing facilities shall comply with R202.[1] Alterations include, but are not limited to, renovation, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, or changes or rearrangement

1 US Access Board, Revised Draft Guidelines for Accessible Public Rights-of-Way, R202 Alterations and Additions to Existing Facilities.

of structural parts or elements of a facility. Pavement patching and liquid-applied sealing, lane restriping, and short-term maintenance activities are not alterations.

In addition to providing individuals with disabilities with accessible sidewalk, curb ramp and crossing facilities, many ADA requirements help other populations as well. For instance, in addition to serving people who use wheelchairs or other mobility aids, curb ramps facilitate travel by those pushing strollers and inexperienced bicyclists who are not yet ready to ride in the street. Wide sidewalks, and a lack of obstructions, create a nicer environment for all pedestrians. These improvements can also reduce demand for paratransit services (demand-responsive transit for people whose disabilities prevent them from using public transit) by allowing some people with disabilities to access public transit stops.

Transit and Multi-Modal Access



Convenient multi-modal connections for bicyclists and pedestrians that are well-integrated into the transportation system are a vital component of the bicycle and pedestrian network. Transit has the potential to extend trip ranges for bicyclists and pedestrians to nearby communities and destinations outside of Sonoma County. This is especially important for Windsor, and Sonoma County in general, considering existing barriers to bicycle and pedestrian travel such as distances between communities, gaps in the existing bicycle and pedestrian networks between urban areas, heat during summer months and rain during winter months. While these obstacles likely serve as deterrents to existing and potential trips by bike or by foot, convenient multi-modal access can help to address these issues and extend trip ranges.

Since most transit passengers in Sonoma County walk to their bus stop, pedestrian facilities leading to each stop—including completed sidewalk networks, curb cuts and safe intersection crossings—are important components of Windsor's pedestrian environment. Two Sonoma County Transit routes serve the Town of Windsor, a regional route providing intercity service and a local route providing loop service around town. The Route 60 travels daily between the Santa Rosa Transit Mall and Cloverdale, and deviates from Old Redwood Highway in Windsor on Starr and Windsor River roads to serve the downtown. On weekdays, the local Route 66 is timed to connect to the Route 60, and loops through Windsor, serving downtown and the intermodal depot; Raley's Center, Boys & Girls Club, Foothill Regional Park, and senior center in the northeast part of town; and Old Redwood Highway and Shiloh Road in the south part of town. The Route 66 also serves Airport Boulevard, with its employment, theatres and other attractions. In Windsor, there are 15 bus shelters at Sonoma County Transit bus stops.

Sonoma Marin Area Rail Transit (SMART) – The SMART District is a regional transportation district that was established in 2003 by the California Legislature with the passage of California State Assembly Bill 2224 (Nation, District 6). The SMART District was established to oversee the development and implementation of passenger rail service in Sonoma and Marin counties along the Northwestern Pacific Railway. The District holds over seventy miles of railroad right-of-way in public ownership between the cities of Cloverdale and Larkspur, and is charged with planning, engineering, evaluating and implementing passenger train service and corridor maintenance from Cloverdale to Larkspur. Additionally, the development of a multi-use bicycle and pedestrian pathway within, or adjacent to, the rail corridor is included in the project.

The SMART passenger train would serve passengers at fourteen existing or planned multi-modal train stations between Cloverdale in Sonoma County and the terminal in Larkspur in Marin County, where a connection can be made to San Francisco via the existing ferry service. SMART also proposes to provide a critical north-south transportation route for bicyclists and pedestrians, with approximately 70 miles of multi-use pathway located along or adjacent to the right-of-way between Windsor and Larkspur. The SMART Path project will provide a continuous north-south route through Sonoma County comprised largely of Class I multi-use pathway along with short segments of Class II bike lanes or Class III bike routes, where right-of-way constraints occur, to connect seven of the County's nine cities: Cloverdale, Healdsburg, Windsor, Santa Rosa, Rohnert Park, Cotati, and Petaluma.

Support Facilities and Bicycle Parking

End-of-trip support facilities include bicycle parking, areas to change clothes and shower, and facilities for storing clothes and equipment. Bicycle parking in Windsor is provided at the Town Green, Windsor schools, some downtown businesses, parks, and most civic facilities. There are no existing shower or locker facilities designated for bicyclists, and none are proposed at this time.

Safety and Security

Safety is a major concern of both current and potential bicyclists and pedestrians. For those who walk or bicycle, it is typically an on-going concern or even a distraction. For those who avoid walking and/or bicycle riding, concern about safety is one of the most compelling reasons not to do so. In discussing bicycle safety, it is important to separate perceived dangers from actual safety hazards.

Riding a bicycle on the street is commonly perceived as unsafe because of the exposure of a lightweight, two-wheeled vehicle to heavier and faster moving motor vehicles including autos, trucks and buses. Actual accident statistics, however, show that bicyclists face only a marginally higher degree of sustaining an injury than a motorist, based on numbers of users and miles traveled. Death rates are essentially the same for bicyclists as motorists. Collisions between bicycles and vehicles are much less likely to happen than bicycle-with-bicycle, bicycle-with-pedestrian, or collisions caused by roadway facilities. Additionally, the majority of reported bicycle crashes show the bicyclist to be at fault; generally, this involves younger bicyclists riding on the wrong side of the road or being hit broadside by a vehicle at an intersection or driveway.

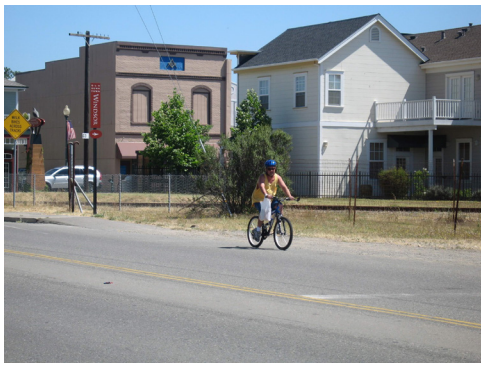
Local Enforcement Responsibilities – The Windsor Police Department enforces the California Vehicle Code and traffic laws in Windsor, including bicycle and pedestrian violations.

Existing and Proposed Safety and Education Programs – Currently there are no routine safety and/or education programs for bicyclists and pedestrians taught in Windsor. However, bicycle rodeo's have been delivered for students through a coalition of volunteers and safety courses and other education programs are available through the Sonoma County Bicycle Coalition, Safe Kids Sonoma County, and others.

Collision Analysis

The collision history for Sonoma was reviewed to determine any trends or patterns that could indicate safety issues. The collision data for 2007-2011 was obtained from the California Highway Patrol (CHP) as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The CHP Accident Investigation Unit maintains SWITRS. It was developed as a means to collect and process data from collision scenes. 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 may not reflect all conflicts that occur. A comprehensive review 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 the physical 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 bicycle riding in the wrong direction or those involving children may be addressed through education and/or enforcement activities.



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

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

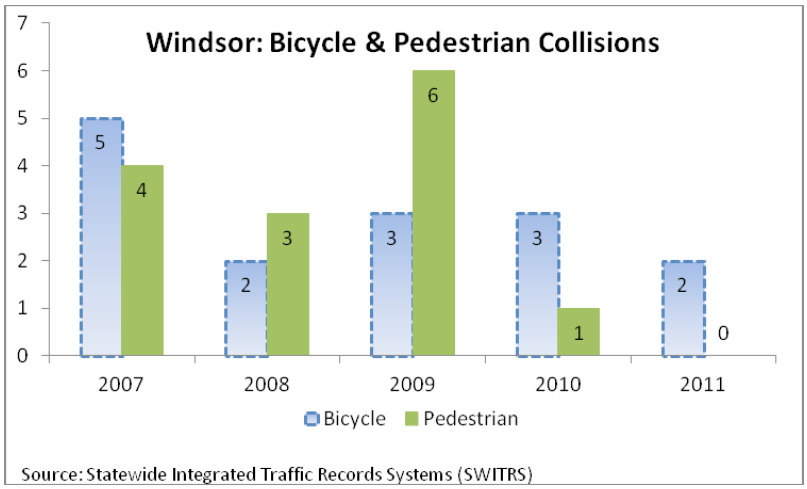
Graph 4.3 shows the number of collisions for each year betweeen 2007 and 2011.

4.3 Windsor Collisions (2007-2011)



For the five-year period reviewed, a total of 160 collisions were reported in Windsor. Of the 160 total collisions, there were 15 bicycle collisions and 14 pedestrian collisions. The numbers of bicycle and pedestrian collisions by year are included Graph 4.4.

4.4 Windsor Bicycle and Pedestrian Collisions



Bicycle Collisions

Of the 160 total collisions, there were 15 bicycle collisions, which represent 9 percent of the overall collisions. The year 2007 was a high bicycle collision year with 5 collisions, whereas the rest of the years in this period only had 2 or 3 collisions. Thirty-three percent (5 out of 15) of the bicycle collisions occurred on a Saturday. All bicycle collisions occurred in clear weather, and 60 percent occurred in daylight conditions. No fatal bike crashes occurred during the study period. Sixty percent of the bicycle collisions were at the fault of the driver, and only one bicycle collision was reported as due to the bicyclist traveling on the wrong side of the road.

Pedestrian Collisions

Over the five-year period Windsor experienced 14 collisions involving pedestrians. Similar to bicycle collisions, there were no fatal pedestrian collisions during this time period. Thirty-six percent of the pedestrian collisions occurred on Thursday, and 29 percent occurred in July. The year 2009 experienced the greatest number of pedestrian collisions with 6 out of 14, or 43 percent. The yearly average for pedestrian collisions is 2.8 for the 2007-2011 period.

Proposed Improvements

Bikeways

A segment by segment breakdown of the proposed bikeways including facility type, length, estimated cost of improvements, project priority, and other criteria are listed in Table 4.5. The proposed bikeways network has been developed to provide bicycle access to destinations throughout Windsor. The network consists of primary routes that connect through the Town and provide access to neighboring jurisdictions, and local bikeways that provide access to neighborhoods and destinations throughout the community. While the projects in this Plan have received a preliminary feasibility evaluation, engineering and environmental studies will be required prior to project implementation to determine project specific impacts such as right-of-way, traffic operations, parking, and environmental issues.

Just over 22 miles of bikeways are proposed in Windsor, including approximately 9 miles of Class I facilities, 7 miles of Class II bike lanes and 6 miles of Class III bike routes. The Class I facilities include the Town's portion of the SMART trail as well as several creek trails. The proposed Class II bike lanes would be located on Old Redwood Highway, Shiloh Road, Skylane Boulevard, Hembree Lane, Windsor Road and Starr Road. The Class III bike routes are located on various collector streets. Additionally, a signing campaign of warning signs and destination based 'wayfinding' signs is proposed. Approximately 15-20 signs placed strategically at community gateways, route junctions, and regular intervals along the primary network would provide coverage for the entire community. The total cost of the bicycle facility improvements proposed in this plan is estimated at approximately $6.2 million.

Pedestrian Facilities

The Bicycle and Pedestrian Facilities map shown in Figure 1 includes the following proposed pedestrian facilities:

Pedestrian Crossing Enhancements – Proposed pedestrian improvements in this Plan are focused on crossing enhancements at both trails crossings of arterial intersections, freeway undercrossings, signalized intersections that lack sufficient pedestrian crossing facilities, and arterial crossings adjacent to popular destinations.

Table 4.5
Proposed Bicycle and Pedestrian Paths

Project Corridor / Street	Begin Point	End Point	Class	Length (miles)	Local (L) Regional (R)	Primary Network	SF Bay Area Regional Route	Use	Cost	Priority
Brooks Road Parking Lot Extension	Lakewood Drive	3rd Street	I	0.16	L	No	No	Trans	$101,585	High
Faught Creek Trail	Victory Lane	Old Redwood Highway	I	0.34	L	No	No	Trans/ Rec	$215,808	High
Franklin Street Bridge	Brooks Road South	4th Street	I	0.09	L	No	No	Trans	$755,000	High
Gumview - Windsor River Rd Connector	Gumview Road	Windsor River Road	I	0.63	L	No	No	Trans	$430,171	High
Jensen Trail	Jensen Lane	Pleasant Avenue	I	0.5	L	No	No	Trans	$318,620	Medium
Jensen Trail	Emmerson Street	Old Redwood Highway	I	0.16	L	No	No	Trans/ Rec	$101,959	Medium
Lakewood/ Foothill Trail	Elsbree Lane	Lakewood Drive	I	0.67	L	No	No	Trans/ Rec	$430,597	High
SMART Railroad Trail Connector	Oak Park Street	SMART Trail	I	0.13	R	No	No	Trans/ Rec	$82,002	High
SMART Trail	Windsor Town Limits	Windsor River Road	I	1.59	R	Yes	Yes	Trans/ Rec	$164,816	High
SMART Trail	Joshua Drive	North of Mitchell Lane	I	0.26	R	Yes	Yes	Trans/ Rec	$328,099	Low
Pool Creek Trail	Hembree Lane	Old Redwood Highway	I	0.51	L	No	No	Trans	$684,211	Medium
Starr Creek Trail	Starr View Drive	Starr Road	I	1.07	L	No	No	Trans/ Rec	$178,384	High
Windsor Creek Trail	Brooks Road South	Natalie Drive	I	0.28	L	No	No	Trans/ Rec	$306,194	High
Windsor Creek Trail	Windsor River Road	SMART Trail	I	0.48	L	No	No	Trans/ Rec	$306,194	High
Windsor Creek Trail	Windsor Road	SMART Trail	I	0.55	L	No	No	Trans	$353,132	High

Table 4.5
Proposed Bicycle and Pedestrian Paths

Project Corridor / Street	Begin Point	End Point	Class	Length (miles)	Local (L) Regional (R)	Primary Network	SF Bay Area Regional Route	Use	Cost	Priority
Windsor Creek Trail	Windsor Road	Windsor Creek Trail	I	0.14	L	No	No	Trans	$89,494	High
Windsor Creek Tributary Trail	Lakewood/ Foothill Trail	Skylark Street	I	0.32	L	No	No	Trans	$205,648	High
Bell Road	650' south of Grayson Way	Conde Lane	II	1.3	L	No	No	Trans	$112,248	High
Brooks Road South	Los Amigos Road	Lakewood Drive	II	0.16	L	No	No	Trans	$13,688	High
Conde Lane	Windsor River Road	Mitchell Lane	II	1.27	L	No	No	Trans	$110,916	High
Lakewood Drive	Old Redwood Highway	Lakewood/ Foothill Trail	II	0.68	L	No	No	Trans	$58,715	Medium
Old Redwood Highway – NB	Windsor Road	Windsor River Road	II	0.5	R	Yes	No	Trans	$43,173	High
Pleasant Avenue – EB	Old Redwood Highway	Collet Lane	II	0.21	L	No	No	Trans	$18,132	High
Shiloh Road	Caletti Avenue	Hembree Lane	II	0.25	R	Yes	No	Trans	$21,586	High
Shiloh Road East	Windsor City Limits	Faught Road	II	0.81	R	Yes	No	Trans	$70,200	High
Skylane Boulevard	Shiloh Road	Windsor City Limits	II	0.53	R	Yes	No	Trans	$45,949	High
Starr Road	SMART Railroad/ Old Redwood Highway	Windsor River Road	II	1.08	L	No	No	Trans	$93,969	High
3rd Street	Jensen Lane	Old Redwood Highway	III	0.16	L	No	No	Trans	$2,868	High
Camelot Drive	Arata Lane	Jane Drive	III	0.33	L	No	No	Trans	$5,821	Medium

Table 4.5
Proposed Bicycle and Pedestrian Paths

Project Corridor / Street	Begin Point	End Point	Class	Length (miles)	Local (L) Regional (R)	Primary Network	SF Bay Area Regional Route	Use	Cost	Priority
Cardellia Lane	Los Amigos Road	Jane Drive	III	0.16	R	No	No	Trans	$2,749	Medium
Foothill Drive	Brooks Road	Vinecrest Road	III	1.0	R	No	No	Trans	$17,449	Medium
Franklin Street	4th Street	3rd Street	III	0.05	L	No	No	Trans	$945	Medium
Jaguar Way	Starr Road	Windsor Road	III	0.5	L	No	No	Trans	$8,708	Medium
Jensen Lane	3rd Street	End of Jensen Lane	III	0.79	L	No	No	Trans	$13,755	Medium
Emmerson Street	Pleasant Avenue	Jensen Trail/end of street	III	0.28	L	No	No	Trans	$4,917	Medium
Mitchell Lane	Winsor Road	SMART Trail	III	0.67	L	No	No	Trans	$11,714	Medium
Natalie Drive	Camelot Drive	Natalie Drive	III	0.22	L	No	No	Trans	$3,905	Medium
Natalie Drive	Jane Drive	Brooks Road	III	0.24	L	No	No	Trans	$4,168	Medium
Oak Park Street	Cul de sac	Windsor River Road	III	0.21	L	No	No	Trans	$3,682	Medium
Rio Ruso Drive	Starr Road	Old Redwood Highway	III	0.49	L	No	No	Trans	$8,583	Medium
Shannon-Carnell-Billington	Hembree Lane	Old Redwood Highway	III	0.63	L	No	No	Trans	$10,977	Medium
Vinecrest Road	Vinecrest Circle	Vinecrest Road	III	0.14	L	No	No	Trans	$2,406	Medium
Windsor Road	Old Redwood Highway	Windsor River Road	III	0.38	R	Yes	No	Trans	$6,596	Medium
Signing Program (Warning & Way-finding Signing)	Townwide	Townwide	NA	NA	R	Yes	No	Trans/ Rec	$7,540	Medium

Table 4.5
Proposed Bicycle and Pedestrian Paths

Project Corridor / Street	*Begin Point*	*End Point*	*Class*	*Length (miles)*	*Local (L) Regional (R)*	*Primary Network*	*SF Bay Area Regional Route*	*Use*	*Cost*	*Priority*
Bicycle Parking Program	*Townwide*	*Townwide*	*NA*	*NA*	*R*	*Yes*	*No*	*Trans*	*$7,540*	*High*
			Class I	*9.64*				***Total:***	***$5,509,093***	
			Class II	*7.56*						
			Class III	*6.57*						
Notes: The estimated costs for all projects, except TFCA signal enhancements, include new curb ramps or remove/replace existing curb ramps to meet current accessibility standards; NA = not applicable										

Unsignalized Crossings

- Arata Lane at Los Amigos Road
- Windsor River Road at Bell Road/Market Street
- Hembree Lane at Dove Street
- Hembree Lane at Bluebird Drive
- Old Redwood Highway at Kendall Way
- Conde Lane at Johnson Street

Signalized Crossing Modifications

- Old Redwood Highway at Lakewood Drive
- Old Redwood Highway at Starr Road
- US 101 NB Off-ramp at Arata Lane
- US 101 SB Off-ramp at Shiloh Road

Class I Trail Crossings

- Mitchell Lane at NWP Trail Crossing
- Old Redwood Highway at Billington Lane

Sidewalk Gaps – Gaps in the sidewalk are identified as critical improvements for pedestrian network completeness, especially at these locations:

- North side of Shiloh Road between Skylane Boulevard and Conde Lane
- North side of Shiloh Road between Conde Lane and US 101
- North side of Old Redwood Highway, between Starr Road and Arata Lane
- North side of Arata Lane between US 101 NB Off-ramp and Los Amigos Road
- South side of Arata Lane between Los Amigos Road and Marcella Lane

Sidewalk Gaps Across Creeks - Sidewalks need to cross creeks when and where a land development project is adjacent. Sidewalks need to be extended especially at these locations:

- Across Pool Creek on Old Redwood Highway
- Across Faught Creek on Old Redwood Highway

Proposed Bicycle and Pedestrian Projects and Priorities are shown in Table 4.6.

Pedestrian District – In addition to the areas surrounding the local schools, 'pedestrian districts' have been identified in the primary downtown core area spanning both sides of Highway 101 and the Shiloh Road corridor between Highway 101 and Old Redwood Highway. These districts are ones which either experience frequent pedestrian activity and street crossings

or are planned to have development which increase these activities. Therefore, the City should identify future pedestrian facilities and amenities in this district to serve this need.

Table 4.6
Proposed Bicycle and Pedestrian Projects and Priorities

Improvement Type	Intersection / Crossing Location	Begin Point	End Point	Year	Estimate	Description
Signal Modification to add Pedestrian Crossings	Old Redwood Highway/Starr Road	-	-	2017	$113,200	2 pedestrian crossings
Signal Modification to add Pedestrian Crossings	Shiloh Road/US 101 SB Ramps	-	-	2019	$70,000	1 pedestrian crossing, Caltrans
Signal Modification to add Pedestrian Crossings	Arata Lane/US 101 NB Off-ramp	-	-	2018	$145,000	2 pedestrian crossings, Caltrans
New Signal or Enhanced Crosswalk or Crossing Signs/Markings	Bell Road/Windsor River Road	-	-	2016	$463,000	Traffic signal
New Signal or Enhanced Crosswalk or Crossing Signs/Markings	Windsor Road/Jaguar Way	-	-	2015	$712,000	Traffic signal
New Signal or Enhanced Crosswalk or Crossing Signs/Markings	Johnson Street/Conde Lane	-	-	2017	$487,850	Traffic signal
Enhanced Crosswalk or Crossing Signs/Markings	Los Amigos Road/ Arata Lane	-	-	2016	$39,600	RRFB
Enhanced Crosswalk or Crossing Signs/Markings	Hembree Lane/Dove Street	-	-	2018	$14,200	Signs/Markings
Enhanced Crosswalk or Crossing Signs/Markings	Hembree Lane/ Bluebird Drive	-	-	2018	$14,200	Signs/Markings
Enhanced Crosswalk or Crossing Signs/Markings	Old Redwood Highway/Kendall Way	-	-	2019	$31,800	RRFB
Enhanced Crosswalk or Crossing Signs/Markings	Mitchell Lane/SMART Trail Crossing	-	-	2019	$14,200	Signs/Markings
East of Starr Road Sidewalk Gap Closure	Windsor River Road	Jaguar Way Extension	ROW	2019	$1,000,000	Sidewalk
Sidewalk for Gap Closure	North Side of Shiloh Road	Golf Course Drive	Conde Lane	2019	$58,900	Sidewalk
Sidewalk for Gap Closure	North Side of Shiloh Road	Conde Lane	705 Shiloh Road	2019	$118,700	Sidewalk
Sidewalk for Gap Closure	North Side of Old Redwood Highway	Starr Road	Arata Lane	2018	$64,200	Sidewalk
Sidewalk for Gap Closure	North Side of Arata Lane	US 101 NB Off-ramp	Los Amigos Road	2018	$70,300	Sidewalk
Sidewalk Bike Lanes	Across SMART Right of Way	North railroad ROW	South railroad ROW	2019	$534,000	Sidewalk/Striping

Table 4.6
Proposed Bicycle and Pedestrian Projects and Priorities

Improvement Type	*Intersection / Crossing Location*	*Begin Point*	*End Point*	*Year*	*Estimate*	*Description*
Sidewalk Gap Closure	*Old Redwood Hwy @ Pool Creek*	-	-	*2015*	*$500,000*	*Sidewalk*
Sidewalk Gap Closure	*Old Redwood Hwy @ Faught Creek*	-	-	*2015*	*$500,000*	*Sidewalk*
				Total:	***$2,459,000***	

Notes: The estimated costs for all projects, except TFCA signal enhancements, include new curb ramps or remove/replace existing curb ramps to meet current accessibility standards; RRFB = Rectangular Rapid Flashing Beacon

5 | Project Costs and Funding

Costs

Project costs for the improvement projects identified in this Plan are identified in Tables 4.5 and 4.6.

Past Expenditures

Windsor has invested an average of approximately $150,000 per year on bicycle and pedestrian improvements throughout the Town over the past ten years. This plan represents the Town's continued comprehensive approach to bicycle and pedestrian planning and includes nearly 23 miles of proposed bikeways at an estimated cost of $5.5 million dollars.

Funding Sources

The number of grants available for non-motorized transportation projects has been growing in recent years. A summary of these programs is included in the Overview section.

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Appendices

Appendix A: Bicycle and Pedestrian Count Data by Metropolitan Transportation Commission (MTC)

Appendix B: Bicycle and Pedestrian Count Data by Sonoma County Transportation Authority (SCTA)

Appendix C: Future Potential Bicycle and Pedestrian Count Locations

Appendix A: Bicycle and Pedestrian Count Data by Metropolitan Transportation Commission (MTC)

Bicycle Counts							
LOCATION	**CITY**	**2002**	**2010**	**2011**	**2012**	**2010-2012**	**2002-2012**
OLD REDWOOD HWY & COTATI AVE	*COTATI*	*45*	*16*	*25*	*67*	*319%*	*49%*
HEALDSBURG AVE & MATHESON	*HEALDSBURG*	*48*	*47*	*112*	*156*	*232%*	*225%*
PETALUMA HILL RD & ROHNERT EXPRWY	*ROHNERT PARK*	*17*	*24*	*16*	*8*	*-67%*	*-53%*
SANTA ROSA AVE & 2ND	*SANTA ROSA*	*46*	*66*	*128*	*158*	*139%*	*243%*
MENDOCINO AVE & PACIFIC	*SANTA ROSA*	*130*	*180*	*166*	*225*	*25%*	*73%*
PETALUMA AVE & JOE RODOTA TR	*SEBASTOPOL*	*34*	*82*	*107*	*180*	*120%*	*429%*
HWY 12 & VERANO AVE	*SONOMA*	*70*	*64*	*102*	*206*	*222%*	*194%*
BROADWAY & NAPA ST	*SONOMA*	*58*	*81*	*97*	*144*	*78%*	*148%*
SONOMA COUNTY TOTALS:		*448*	*560*	*753*	*1144*	*104%*	*155%*

Pedestrian Counts							
LOCATION	**CITY**	**2002**	**2010**	**2011**	**2012**	**2010-2012**	**2002-2012**
OLD REDWOOD HWY & COTATI AVE	*COTATI*	*62*	*54*	*54*	*72*	*33%*	*16%*
HEALDSBURG AVE & MATHESON	*HEALDSBURG*	*294*	*1070*	*1057*	*1113*	*4%*	*279%*
PETALUMA HILL RD & ROHNERT EXPRWY	*ROHNERT PARK*	*2*	*172*	*106*	*69*	*-60%*	*3350%*
SANTA ROSA AVE & 2ND	*SANTA ROSA*	*471*	*751*	*859*	*791*	*5%*	*68%*
MENDOCINO AVE & PACIFIC	*SANTA ROSA*	*643*	*542*	*584*	*680*	*25%*	*6%*
PETALUMA AVE & JOE RODOTA TR	*SEBASTOPOL*	*486*	*253*	*199*	*260*	*3%*	*-47%*
HWY 12 & VERANO AVE	*SONOMA*	*63*	*156*	*160*	*231*	*48%*	*267%*
BROADWAY & NAPA ST	*SONOMA*	*304*	*916*	*967*	*1078*	*18%*	*255%*
SONOMA COUNTY TOTALS:		*2325*	*3914*	*3986*	*4294*	*10%*	*85%*

Appendix B: Bicycle and Pedestrian Count Data by Sonoma County Transportation Authority (SCTA)

SCTA 2009-2012 Bicycle & Pedestrian Count Data												
			2009		2010		2011		2012		2013	
STREET NAME	CROSS STREET	CITY	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Bicycle												
Old Redwood Hwy.	Conde Ln./ Windsor River Rd.	Windsor	10	5					33	20	24	47
Old Redwood Hwy.	Starr Rd.	Windsor							16	25		
Windsor Rd.	Windsor River Rd.	Windsor			17	50	52	84	39	19		
Pedestrian												
Old Redwood Hwy.	Conde Ln./ Windsor River Rd.	Windsor	25	25					44	51	57	87
Old Redwood Hwy.	Starr Rd.	Windsor							6	29		
Windsor Rd.	Windsor River Rd.	Windsor			31	245	184	189	105	76		

Appendix C: Future Potential Bicycle and Pedestrian Count Locations

Town of Windsor			
#	Primary Street	Cross Street	Notes
1*	Old Redwood Highway	Starr Road	Primary Network / Transit (Park-and-Ride) / Community Gateway
2	Old Redwood Highway	Windsor Road	Primary Network / Downtown / Pedestrian District
3*	Old Redwood Highway	Windsor River Road	Primary Network Junction / Downtown / Pedestrian District
4	Old Redwood Highway	Lakewood Drive	Primary Network / Downtown / Pedestrian District / Commercial District
5	Old Redwood Highway	Hembree Lane	Primary Network / Local Bikeway
6	Old Redwood Highway	Shiloh Road	Primary Network Intersection / Pedestrian District / Local Park
7	Shiloh Road	Hembree Lane	Primary Network / Pedestrian District / Commerical District
8	Shiloh Road	Skylane Boulevard	Primary Network / Community Gateway
9	Shiloh Road	Windsor Road	Primary Network
10*	Windsor Road	Windsor River Road	Primary Network / Downtown / Intermodal Transit / Pedestrian District
11	Windsor Road	Reiman Lane	Primary Network / School / Local Bikeway
12	Windsor River Road	Starr Road	Primary Network / Community Gateway
13	Hembree Lane	Foothill Drive	Local Bikeway / Regional Park
14	Arata Lane	Brooks Road South	Local Bikeway / Local Park / Local Trail / School
15	Arata Lane	Los Amigos Road	Local Bikeway
16	Conde Lane	Mitchel Lane	Local Bikeway / Local Park
17	Windsor Creek Trail	Natalie Drive	Primary Network / Local Trail Junction
*Location has already been counted as part of the SCTA Bicycle and Pedestrian Count Program			