

PLANNING COMMISSION

TO: Planning Commission
FROM: Planning Staff
SUBJECT: BICYCLE FACILITIES MASTER PLAN – PHG 12-0018

STAFF RECOMMENDATION:

Approval

PROJECT DESCRIPTION:

A comprehensive update to the Bicycle Facilities Master Plan adopted in 1993.

LOCATION:

Citywide to include the Escondido General Plan Planning Area.

ENVIRONMENTAL REVIEW:

The proposal is exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Section 15061(b) "General Rule." The proposal does not have the possibility to have a significant effect on the environment. Therefore, the project is not subject to CEQA.

BACKGROUND:

In 1993, the City of Escondido adopted a comprehensive Bicycle Master Plan to plan and develop bicycle facilities in Escondido. This was the second such document prepared by the City. A previous Bicycle Master Plan was approved in 1975 that proposed a 45-mile network of facilities for bicyclists. When the 1993 Bicycle Master Plan was developed, approximately four miles of the 45 mile system initially proposed has been constructed.

The 1993 Master Plan identified a system of 93 miles consisting of approximately 84 miles of Class II bicycle lanes. The estimated cost to install the proposed bikeway system was approximately \$2.5 million dollars projected over a period of 15 years through build-out, as defined in the 1990 General Plan. Since then, the City has constructed approximately 35 miles of Class II bicycle lanes and an approximately 8.8 miles of Class I bicycle paths. Since adoption of the Master Plan, the City also has received more than \$9 million in bicycle facility grant funds that have gone towards a variety of bicycle and pedestrian improvements throughout the City.

This plan (in draft form) is a comprehensive update of the 1993 Bicycle Facilities Master Plan. The City's growth and new General Plan necessitated an update to better address not only local bicycle travel needs and better serve regional long-distance travel, but also to compliment the goals and policies of the General Plan. The new Bicycle Facilities Master Plan will provide a framework for the future development of the City's bicycle network and also makes the City eligible for local, State, and Federal funding for bicycle projects. The Master Plan update was primarily funded by a grant from SANDAG.

DISCUSSION:

The Escondido Bicycle Master Plan update presents a renewed vision for bicycle transportation, recreation, and quality of life in Escondido. This vision is closely aligned with the new General Plan's mobility, sustainability, health, economic, and social goals. In addition to a proposed system of bike facilities and infrastructure, the plan includes Caltrans bikeway standards, conceptual designs for bicycle lanes and paths, maps of existing and proposed bicycle facilities, funding sources, and an implementation plan. The bikeway system will endeavor to be a complete system emphasizing local and regional continuity and connectivity. The planned bikeway system builds upon existing bicycle facilities throughout the City with enhancements to overall connectivity, support facilities, safety and education programs, which will result in a more bicycle friendly community. It is understood that the bikeway system would be implemented over time, as funding opportunities become available through grant programs, implementation of roadway improvements, regular roadway maintenance, or during the planning of new development and other projects.

Staff feels the document provides the City with a strong framework for improving bicycling through 2030 and beyond. This document also satisfies the requirements of the California Bikeway Transportation Act (BTA) which upon approval by the California Department of Transportation (Caltrans), makes the City of Escondido eligible for federal bicycle funding. The bicycle master plan must address specific items of Section 891.2 of the California Streets and Highway Code, which describes specific requirements to be included in the Bicycle Master Plan.

Respectfully Submitted,



Jay Paul
Associate Planner



CITY OF ESCONDIDO
PLANNING DIVISION
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Notice of Exemption

To: San Diego County Recorder's Office
Attn: Deputy City Clerk
P.O. Box 121750
San Diego, CA 92112-1750

From: City of Escondido
201 North Broadway
Escondido, CA 92025

Project Title/Case No.: PHG 12-0018 (Bicycle Facilities Master Plan)

Project Location - Specific: Citywide

Project Location - City: Escondido, **Project Location - County:** San Diego

Description of Project: A comprehensive update to the previously adopted 1993 Bicycle Facilities Master Plan as directed by the City's General Plan policies (2012).

Name of Public Agency Approving Project: City of Escondido

Name of Person or Agency Carrying Out Project:

Name Jay Paul, Associate Planner, City of Escondido Telephone (760) 839-4537

Address 201 N. Broadway, Escondido, CA 92025

Private entity School district Local public agency State agency Other special district

Exempt Status: Categorical Exemption. Section 15301(c) "Existing Facilities" and 15304 (h) "Minor Alterations to Land."

Reasons why project is exempt:

The planned bikeway system builds upon existing bicycle facilities throughout the City with enhancements to overall connectivity, support facilities, safety and education programs. The proposed bicycle facilities contained in the plan would be located within the existing public right-of-way. The proposed bicycle network would not impact any sensitive resources or habitat areas. In addition to a proposed system of bike facilities and infrastructure, the plan includes Caltrans bikeway standards, conceptual designs for bicycle lanes and paths, maps of existing and proposed bicycle facilities, funding sources, and an implementation plan, which would not result in any adverse impacts to the environment.

In staff's opinion, the Bicycle Facilities Master Plan for planning and implementation of bicycle facilities and infrastructure throughout the City and planning area does not have the potential for causing a significant effect on the environment.

Lead Agency Contact Person: Jay Paul, Planning Division Area Code/Telephone/Extension (760) 839-4537

Signature:  August 27, 2012
Jay Paul, Associate Planner Date

Signed by Lead Agency Date received for filing at OPR: N/A

Bicycle Master Plan



City of Escondido

Case File No. PHG 12-0018 (*DRAFT*)

City Council

Sam Abed, Mayor

Marie Waldron, Deputy Mayor

Olga Diaz, Council Member

Ed Gallo, Council Member

Michael Morasco, Council Member

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September 6, 2012

Adopted by City Council Resolution No. _____



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EXECUTIVE SUMMARY



The Escondido Bicycle Master Plan is an update to the City's 1993 plan, presenting a renewed vision for bicycle transportation, recreation, and quality of life in Escondido. This vision is closely aligned with the City's 2012 General Plan's mobility, sustainability, health, economic, and social goals. The bicycle network, projects, policies, and programs included in this document provide the City with a strong framework for improving bicycling through 2030 and beyond.

1. Background

In 1993, the City of Escondido adopted a comprehensive Bicycle Master Plan to plan and develop bicycle facilities in Escondido. This was the second such document prepared by the City. A previous Bicycle Master Plan was approved in 1975 that proposed a 45-mile network of facilities for bicyclists. When the 1993 Bicycle Master Plan was developed, approximately 4 miles of the 45 miles system initial proposed had been constructed.

The 1993 Master Plan identified a system of 93 miles consisting of approximately 84 miles of Class II bicycle lanes. The estimated cost to install the proposed bikeway system and supports was approximately 2.5 million dollars projected over a period of 15 years through build-out, as defined in the 1990 General Plan. Since then, the City has constructed approximately 35 miles of Class II bicycle lanes and an approximately 8.8 miles of Class I bicycle paths. Service on the Sprinter Light Rail system began in 2008 with two Escondido Stations. The Inland-Rail Trail, which is Class I bike path and a regional link in the system parallels the Sprinter route. The 6.5-mile section from Escondido to San Marcos is the first section complete. The Inland-Rail Trail connects to the City's east-west Escondido Creek Class I bike path and the north-south Centre City Parkway Class II bike, which are both designated as regional links in the San Diego County Regional Bike Plan.

2. Project Scope

This plan is a comprehensive update of the 1993 Bicycle Facilities Master Plan. The Bicycle Master Plan will provide a framework for the future development of the City's bicycle network and also makes the City eligible for local, State, and Federal funding for bicycle projects. The City's growth necessitated an update to better address not only local bicycle travel needs, but also to better serve regional long-distance travel. This Bicycle Master Plan seeks to maximize the efficiencies offered by multi-modal connections between mass transit and bikeways and to promote a viable alternative to automobile travel in a climate particularly conducive to bicycle transportation. It also seeks to provide a more convenient bikeway system for cyclists who do not have ready access to motor vehicles.

The project study area was the City of Escondido and its planning sphere of influence of the surrounding communities and unincorporated County areas. Adjoining areas' bicycle systems were evaluated for opportunities as connections with San Marcos, the City and County of San Diego, and to extend the regional network via the Inland Rail Trail and Escondido Creek bikeway system. It is understood that the Bikeway System would be implemented over time, as



funding opportunities become available through grant programs, implementation of roadway improvements, regular roadway maintenance, or during the development of new development and other projects.

3. Relationship to other Plans and Policies

This Plan includes a summary of legislation and other planning or policy documents from the State of California, San Diego Association of Governments (SANDAG), and the City that are most pertinent to bicycling in Escondido. This includes a brief synopsis of important state policies such as the California Bikeway Transportation Act (BTA) as well as the bicycle-related General Plan policies. This document also satisfies the requirements of the BTA which, upon approval by the California Department of Transportation (Caltrans), makes the City of Escondido eligible for federal bicycle funding. The bicycle master plan must address specific items of Section 891.2 of the California Streets and Highway code, which describes specific requirements to be included in the Bicycle Master Plan.

4. Plan Goals and Objectives

There are three objectives for the Bicycle Master Plan: **1)** to assess the existing bicycle network in the City and identify gaps and deficiencies; **2)** to establish goals, objectives and policies that are consistent with and expand upon the City's General Plan's Circulation Elements; and **3)** to develop an bikeway plan with proposed projects that will connect the gaps in the existing system and integrate with the existing San Diego County regional bikeway system. The planned system builds upon existing bicycle facilities throughout the City with enhancements to overall connectivity, support facilities, safety and education programs, which will result in a more bicycle friendly community. The anticipated result is an increase in commuters choosing to ride a bicycle. Through discussions with City staff and the public, issues that needed to be considered during preparation of the plan included the following:

- The community's desire for a comprehensive, safe and complete bikeway system that will be destination-oriented, especially towards employment centers, residential areas and high use activity centers – including access to other modes of local and regional transportation systems.
- As the community continues to grow, the bikeway system should be extended and integrated into new developments and as a component of city improvements. Development of a Complete Streets framework encourages all modes of transportation and reduces traffic congestion, increases alternative transportation options, connectivity and improves public health, safety and create a more bike friendly community. The anticipated result is an increase in commuters choosing to ride a bicycle.
- Overall enforcements and education of both motorists and cyclists is needed to improve safety and awareness throughout the City. The bikeway master plan considers methods not only to promote the benefits of cycling, but also to enhance safety by educating both cyclists and drivers to coexist.
- Provide regular maintenance of bikeway system segments and facilities.



- Whenever possible, bikeway system design and layout will minimize potential financial burden to the City by engaging development to implement bike segments, locating segments within existing right-of-way and minimizing the need for acquisition, while still providing quality bicycle facilities and bicycle access.

5. Bicycle Facility Recommendations

This Bicycle Master Plan's recommendations are based on the best practices employed by their cities around the country and are in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities and the California Manual of Uniform Traffic Control Devices (CA MUTCD). Although the plan identifies connections to the City's trail network, it is primarily focused on paved bicycle facilities that meet the Caltrans classifications for Class I (paved trail separated from the road), Class II (signed lane on the road adjacent to the vehicle travel lane) and Class III facilities (shared roadway with vehicles). The bikeway classifications are further defined in Chapter 2 'Existing Conditions.'

Among the key aspects of this Plan is the Escondido Creek Trail, which provides an east-west corridor through the center of the City and is a component of a regional paved bikeway system connecting the cities of Escondido and San Marcos. Figure ES-1 illustrates the proposed bikeway system that resulted from city staff and community input. The proposed system includes a total of approximately 99.5 miles of new bikeway facilities in addition to the 49 miles currently in place. Table ES-1 shows the number of existing and proposed miles for each bikeway classification. A summary of system costs for each bikeway classification is presented in Table ES-2.



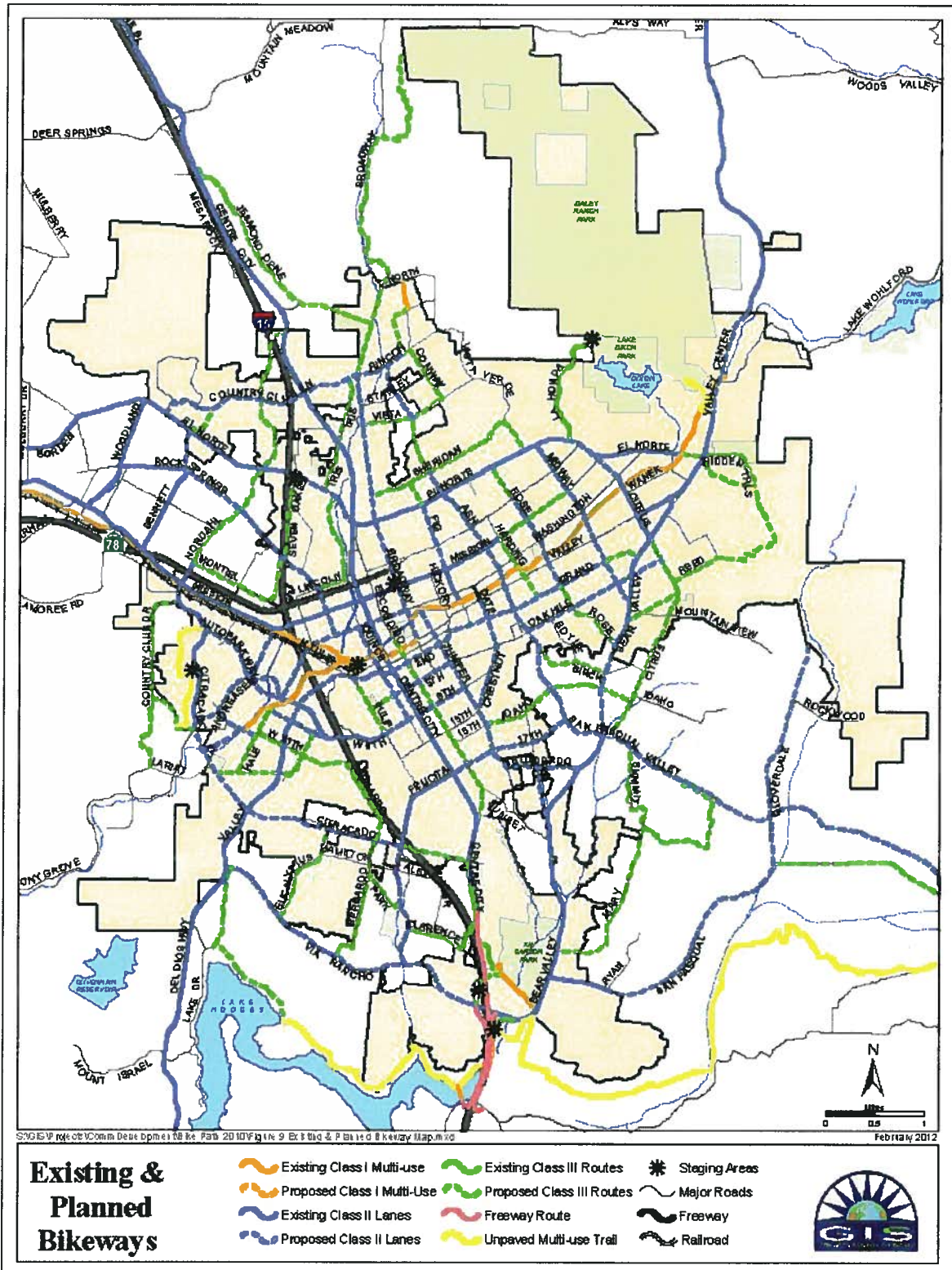
Table ES 1 Bicycle Classification by System Summary			
Length (Miles)			
Facilities	Existing	Proposed	Total
Class I Bike Path	8.85	1.75	10.6
Class II Bike Lane	35*	50.7*	85.7
Class III Bike Route	3.23*	47.1*	50.33
Freeway Shoulder	1.8	0	1.8
Total	49	99.5	148.4

*Includes portions of bike lanes and routes currently within the county jurisdiction but within the City's General Plan area providing connections to existing or planned bikeway facilities.

Table ES 2 Conceptual Cost Estimate Summary	
Facilities	Cost
Class I	\$2,300,000
Class II	\$2,230,800
Class III	\$169,560
Total	\$4,700,360



Figure ES 1 Existing and Proposed Bicycle Facilities



INTRODUCTION

1

1.1 Project Scope

The City of Escondido desires to promote a safe, convenient and efficient environment for bicycle travel that encourages the use of public streets and off-street facilities. This updated Bicycle Master Plan provides a comprehensive approach to identify bicycle needs throughout the City, including review of current conditions, defining optional improvements and prioritizing implementation strategies in line with viable funding sources. The plan addresses opportunities to connect and integrate existing and proposed facilities. The plan will be used for pursuing grant funds and coordinating improvements through Capital Improvement Projects. This plan is conceptual, since precise alignments and details will be determined during subsequent implementation. Understanding that an effective bikeway system can increase opportunities for commuting, reduce traffic, expand recreation facilities, improve air quality, enhance personal health, and increase tourism,

1.2 Project Goals

The key goals of the Master Plan is to identify existing circulation patterns for bicyclists, identify problem areas and safety concerns, and based on the information derived from the analysis of existing conditions and input through community workshops, develop a Bikeway Master Plan that will be a tool for further implementation of safe, efficient and cost effective bikeways throughout Escondido. The Master Plan includes Caltrans bikeway standards, conceptual designs for bicycle paths and trails, maps of existing and proposed bicycle facilities, phasing plan for improvements, funding sources, and an implementation plan. The bikeway system will endeavor to be a complete system emphasizing local and regional continuity and connectivity.



1.3 The Cyclist's Perspective

This plan was developed with a "cyclist's perspective" by planners and other city staff who routinely commute by bicycle and fully understand the implications of bicycle travel. Potential routes were ridden to experience them firsthand, including those routes planners felt would be forbidding to most users due to high motor vehicle speeds or volumes. The planners' thorough analysis resulted in supportable recommendations portrayed in clear text and graphic format.



Benefits of Cycling

There are numerous benefits to cycling which include health, environmental and economic reasons. The following describes the benefits of each.

Health Benefits

Stress reduction: Exercise in general has been shown to decrease anxiety and stress levels, and bicycling is a fun way to exercise.

Weight loss: The general population of the U.S. is becoming increasingly obese. Cycling is a great way to help lose weight. Cycling burns fat, which helps cyclists look and feel better.

Health benefits: Studies have shown that regular exercise, such as cycling, lowers the risk of high blood pressure, heart attacks and strokes. In addition to heart disease, regular exercise can also help to avoid other health problems such as non-insulin dependent diabetes, osteoarthritis and osteoporosis. Exercise also relieves symptoms of depression and improves mental health.

Improved cardiovascular fitness: Cycling increases heart and lung fitness, as well as strength and stamina.

Environmental Benefits

Fewer people cycle per capita in the U.S. than in many other parts of the world and the U.S. is a leader in petroleum consumption. These high levels of consumption are leading to many negative effects on the environment, such as increased emissions of harmful greenhouse gases including carbon dioxide, carbon monoxide, methane, nitrous oxide and volatile organic compounds. These pollutants and irritants in the air can cause asthma, bronchitis, pneumonia and decreased resistance to respiratory infections. Increased cycling reduces fossil fuel emissions and helps clean up the air.

Individual Economic Benefit

Cycling is a low cost activity that is easy to incorporate into an individual's daily life such as cycling to work or running errands. In mild climate areas, such as Santee, cycling can occur year round. Cycling to work can also save money. Based on an hourly wage of \$10.00, a motorist must work 300 hours per year to pay for his or her annual commute. A cyclist only has to work about 30 hours per year to operate his or her bike.

1.4 Project Approach

The overall approach taken in this master plan can be summarized as the following:

- The Bicycle Master Plan should be integrated into all transportation plans, especially if the bicycle will use general purpose roads shared with other forms of transportation. The recent passage of AB 1358, the California Complete Streets Act, now mandates such consideration.
- An administrative framework and the support of public interest groups is critical for the success of a master plan effort.
- The aim of planning for bicycles should not be focused on any particular product so much as it should be focused on the safe and efficient travel of cyclists. This will generally require both the use of the existing transportation infrastructure and the construction of special facilities for cyclists.



- The maintenance of bicycle facilities must ensure continuing safe and efficient travel for cyclists. Planning for cyclists is an on-going process.

1.5 Field Work and Methodology

Field work was conducted through 2011 and 2012 under a mix of conditions ranging from heavy rain and strong winds to sunny, calm skies and in temperatures of between 55 and 85 degrees. Much of the fieldwork consisted of cycling existing bicycle facilities and other streets to obtain first-hand experience of the City. The rest of the field work consisted of driving potential routes, review of aerial photos and examining areas where public input had been given.

The project methodology included a review of applicable documents, field work and geographic information systems (GIS) analysis of the field work data. Escondido's existing bikeway system was analyzed for a number of factors using both traditional field survey, GIS techniques and with the assistance of Escondido residents and City staff. This plan incorporated the latest in Geographic Information Systems (GIS) technology to support its mapping and planning recommendations. GIS data were used to characterize facility siting factors such as age, commuting, population and employment densities.

1.6 Community Input

The City conducted two public workshops at the Escondido City Hall in January 20, 2007 and March 12, 2012 to solicit input and identify key concerns of bicyclists. The first workshop was intended to solicit comments on existing conditions and concerns residents had regarding the City's bikeway system, develop a vision statement, along with goals and objectives for implementation. The second workshop was a presentation on the recommendations for bicycle facilities, goals and policies, and a review of the draft plan. A questionnaire also was posted on the City's web site to solicit more comments through the second workshop.

1.7 Complete Streets Considerations

Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able to safely move along and across a complete street. The complete streets framework includes not only retrofitting existing streets to increase safety for all, but changing design standards so that streets are designed with all users in mind from the outset. Complete street policies direct transportation planners and engineers to consistently design streets for all users. Places that adopt complete streets policies are making sure that their streets and roads work for drivers, transit riders, pedestrians and bicyclists as well as for older people, children and people with disabilities. Some design techniques typically used for creating complete streets include reducing lane widths, reducing the number of lanes, adding sidewalks, installing raised medians and enhanced pedestrian crossings, adding on-street parking and improving public transit accommodations.

1.8 Transportation and Mobility

(Escondido General Plan Community Context and Vision, 2012)

Opportunities for a more robust multi-modal transportation system will be attained with additional population growth focused in Escondido's central core. Convenient commuting



choices include the North County Transit District (NCTD) SPRINTER rail service, complemented by bus and shuttle lines providing frequent headways and conveniently sited bus shelters. Pedestrian and bicycle friendly streets and the Escondido Creek trail also work effectively to reduce auto-mobile trips in the community. Pedestrian needs become the focus in downtown as streets are reprioritized to facilitate moving people as well as vehicles. Sidewalks, pedestrian crossings and street lighting are enhanced for pedestrian safety. Enhanced bicycle routes, pedestrian walkways, and a network of urban trails, including the Escondido Creek Path and Escondido-Oceanside trail, improve the linkages that provide additional com-muting and recreational opportunities and also foster better health. Perimeter areas of Escondido transition to estate and open space areas (above) Escondido Creek bicycle path Escondido General Plan Vision and Purpose.

A variety of measures are implemented communitywide to enhance the efficient movement of pedestrians and vehicles along the network of streets and thoroughfares. Consolidating access driveways, in-stalling raised medians, and coordinating traffic signals effectively reduce potential conflicts with motorized vehicles, bicyclists, and pedestrians. Park-and-ride facilities are coordinated with CalTrans to promote ride sharing and reduce vehicle miles traveled. Towards the end of the planning horizon year the NCTD SPRINTER is extended to Westfield Shopping Town and efforts to provide High Speed Rail are introduced to the community.

1.9 Compliance with State Law

Pursuant to California law, this plan is to complement the City of Santee's *General Plan 2020* to direct roadway improvements to include bikeway facilities. By law, California cities must adopt their bikeway master plans (termed "Bicycle Transportation Plans" (BTPs) by the California Department of Transportation (Caltrans)) no earlier than five years prior to July 1 of the fiscal year in which the state's Bicycle Transportation Account (BTA) funds are to be granted. This five year cycle should help to make certain that *General Plan* changes affecting bicycle transportation will be accommodated in a timely manner.

1.10 Trip Origin and Destination Analysis

Analysis of specific types of bicycle trip origin and destination points are required by Caltrans for its approval of bikeway master plans. The standard Caltrans list includes residential neighborhoods, schools, shopping centers, public buildings and major employment centers (Bicycle Transportation Account Compliance - *Code Section 891.2*). These were identified and analyzed and further supplemented by additional types of origin and destination points such as the City Hall, hospitals, transportation centers and parks. (See Figure 2.5: Activity Centers and Figure 2-13: Existing Land Use)

1.11 Opportunities and Constraints

Most of the bikeways proposed in this bikeway transportation plan update have been proposed in other documents, such as in the Previous General Plan 2000, the current General Plan 2012, and the Parks, Trails and Open Space Master Plan. Whenever possible, routes were proposed to take advantage of opportunities to make connections between bicycle trip origin points and destination points in sections of the City that may not have an existing or convenient bikeway facility. This was generally feasible due to overall manageable grades within the City. Existing street configurations and proposed buildout conditions are the major constraint for building bicycle facilities in the City. The opportunities for a viable bikeway system in the City of Escondido are fully explored in the plan. (See Chapter 6: Proposed Bikeway Plan).



Current Constraints to Cycling

High Motor Vehicle Speeds

Fortunately, some of the major roads that have high speeds have bike lanes built into them, except for portions of Valley Parkway, Via Rancho Parkway and Bear Valley Parkway. Experienced cyclists are generally not deterred by adjacent motor vehicle speeds when on a Class II bike lane, but where facilities do not exist, it becomes more of a concern. Less experienced cyclists are more likely to find such conditions very uncomfortable and may be less likely to use high speed roadways.

Highway Crossings

The City of Escondido has two highways through the City. These are Interstate 15, a north-south freeway and State Route 78, an east-west connection. Bicycle travel is allowed on portions of Interstate 15 where it crosses Lake Hodges. Highways can be a barrier to bicycle travel when bicyclists have to cross high speed vehicular off and on ramps, in many cases maneuvering through both within a relatively short distance.

Narrow Roadways

Many roadways in Escondido on which Class II bike lanes are proposed have adequate rights of way. However, implementation of some proposed routes may be constrained by the lack of available physical space because the same roadways on which they are proposed may have limited lane width and on-street parking, such as Second Avenue and Washington Avenue.

1.11 Recommendations and Priorities

Bicycle Route Recommendations

The recommended routes are intended to take advantage of and to be integrated with existing and programmed roadways and existing bicycle facilities to resolve cyclists' concerns for safety and connectivity. Class I facilities are proposed along the Escondido Creek Trail to provide an east-west corridor through the center of the City. Class II bike lanes are proposed on routes with higher speeds and volumes, but that also provide connectivity to major activity centers. Bikeways that connect to schools and parks on low volume and/or residential streets are normally planned as Class 3 bike routes. The City of Escondido has a system of Class II bikeways on its major roadways, but has limited connectivity within existing neighborhoods to attractions such as schools and parks for which Class 3 bike routes are recommended. The facilities are shown in Figures 5-1 through 5-3 in Chapter 6: Bikeway Plan.

Bikeway Development Priorities

The factors used in prioritizing the implementation of potential bikeway project types included probable demand, regional significance, transportation efficiency, right of way and likely funding sources. Using these criteria, completion of the Escondido Creek Trail bike path has the highest priority, followed by routes that would most benefit bicycle transportation. It is impractical to prioritize all of the proposed bikeway facilities across the facility classes because several Class 3 routes could be implemented at far less cost than a single Class 2 lane segment. Therefore, it is recommended that the Class I, II and III facilities be regarded as parallel lists and be implemented as appropriate funds become available for each type of facility.

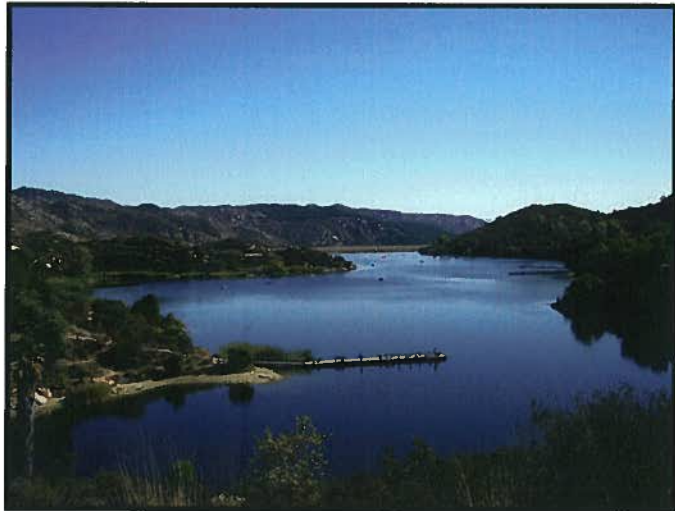


EXISTING CONDITIONS

2

2.1 Setting, Existing and Proposed Land Use

Escondido is located in north San Diego County approximately 30 miles north of downtown San Diego and 18 miles east of the Pacific Ocean. The Planning Area encompasses about 80 square miles, of which 68 square miles are within the City's Sphere of Influence and 37.5 square miles are within the corporate boundaries. Escondido is surrounded by prominent hills and ridgelines to the north, east and southwest, and Lake Hodges on the south. The City is bounded on the north by the unincorporated communities of Valley Center and Hidden Meadows, on the west by the City of San Marcos, on the south by the City of San Diego, and the east by unincorporated San Diego County. Escondido provides many opportunities for the avid cyclist who enjoys cycling along fairly level terrain on surface streets to a specific destination, or for more challenging rides on dirt trails of surrounding hillsides such as Lake Wohlford, Dixon Lake, Daley Ranch, Lake Hodges and San Pasqual Valley (San Dieguito Riverpark).

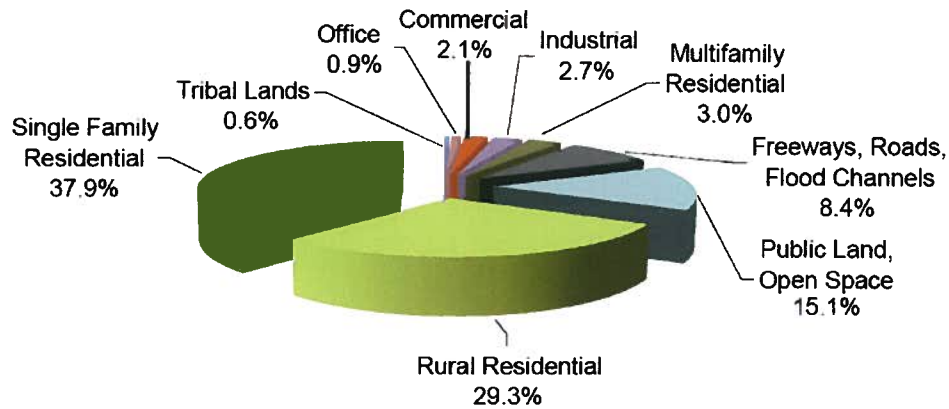


Lake Dixon Reservoir

Interstate 15 bisects Escondido in a north-south direction and State Route 78 transitions from freeway to surface streets in an east-west direction through the community. The City's roadway system is predominantly a grid systems with the major east west streets are Valley Parkway, Grand Avenue, Second Street, Washington Avenue, Mission Avenue, and El Norte Parkway. North-south major roadways include Centre City Parkway, Escondido Boulevard, Broadway, and Citrus Avenue. Each of these major roadways connects residential development with urbanized areas of the city. These major roadways, in spite of the lack of limited bicycle facilities and high traffic volumes, are frequently used by bicyclists since these roadways connect to stores, employment, schools, and parks.

Escondido's current land uses are arranged in a pattern largely defined by the community's historic growth and transition from an agricultural center at the terminus of a rail line to a town core surrounded by residential neighborhoods with supporting businesses and services. Based on an inventory conducted for the updated General Plan land use categories (*General Plan 2012*), single and multifamily residential uses represented the dominate land uses occupying 36,145 acres and 71% percent of Escondido's General Plan. The pie chart identifies the division of General Plan land uses (Figure 2.1).

Figure 2.1
General Plan Land Uses



According to the US Census Bureau (2010 figures, Oct. 2011 update estimates) the population of the City of Escondido is approximately 147,500 people with an additional 12,000 – 15,000 persons residing in Escondido’s surrounding unincorporated General Plan Area. The community’s 2010 median age is 32.7 and the household median size is 3.23 persons (Jan. 1 2010 figures). SANDAG estimates by the year 2030, the City’s population will increase by 15 percent to 165,812 people. The population density increase follows the single-family residential increase patterns throughout the City. Additional population growth is focused along transit corridors, such as Escondido Boulevard, East Valley Parkway and areas north of Downtown and incorporates ‘smart growth’ principles (as defined in the General Plan Land Use and Community Form Element). Planned land uses are depicted in the General Plan Land-Use Map (Figure 2.2).

2.2 Bikeway Facilities and Infrastructure

The existing bikeway system mapping was derived from the San Diego Association of Governments’ (SANDAG) regional bikeway GIS data, field analysis and input from City staff. The following recommended facilities represent all three types of proposed bikeways. Bikeway facilities considered for this study include Class 1 bike paths, Class 2 bike lanes and Class 3 bike routes. The graphics describe their relative uses and attributes.

2.2.1 Class I Facilities

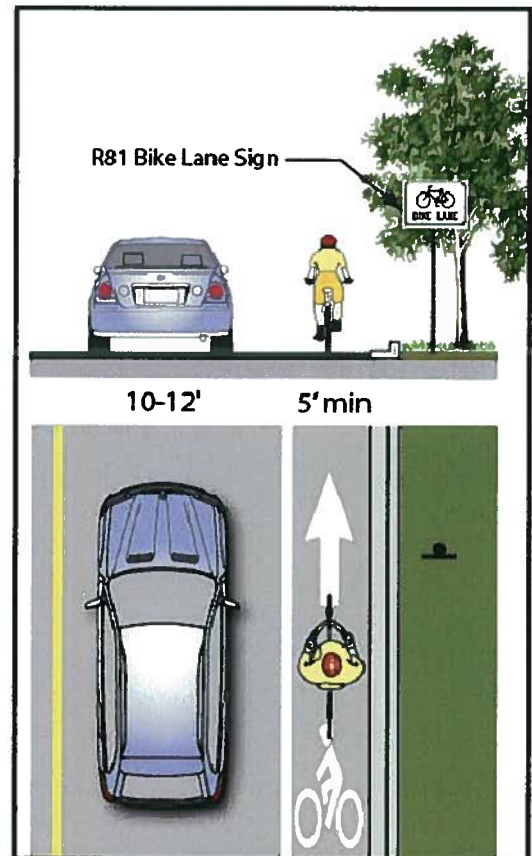
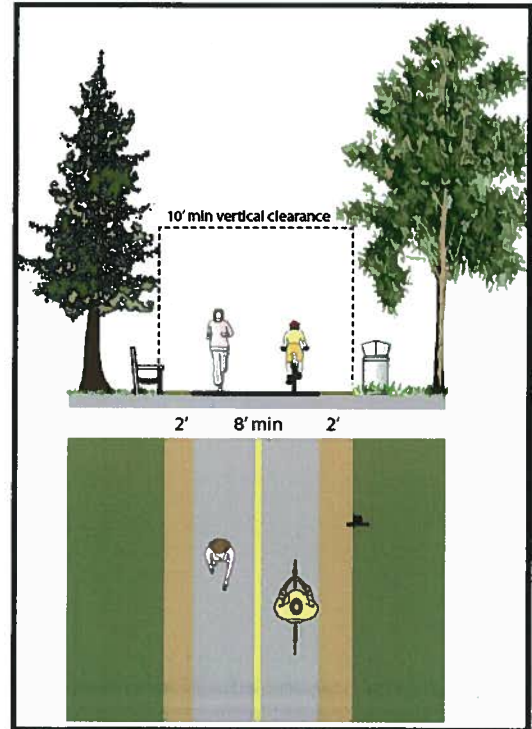
Class 1 bikeways (frequently referred to as bike paths) are facilities physically separated from motor vehicle routes, with exclusive right-of-way for bicycles and pedestrians and with motor vehicle cross flows kept to a minimum. They generally are two-way with center striping, with a minimum paved width of eight feet, with an additional two feet of graded edge on each side, for a total of twelve feet. Wherever possible, a minimum paved width of ten feet is preferred for a total of fourteen feet where high volumes of use or patrol vehicles are expected. A wide physical



separation is recommended where a Class 1 facility parallels a motor vehicle route. Any separation of less than five feet from the pavement edge of a motor vehicle route requires a physical barrier to prevent encroachment between the bike path and roadway. In locations with high use, or on curves with limited sight distance, a yellow centerline should be used to separate travel in opposite directions. High use areas of the trail should also provide additional width of up to 12 feet. Lighting should be provided in locations where evening use is anticipated or where paths cross below structures.

2.2.2 Class II Facilities

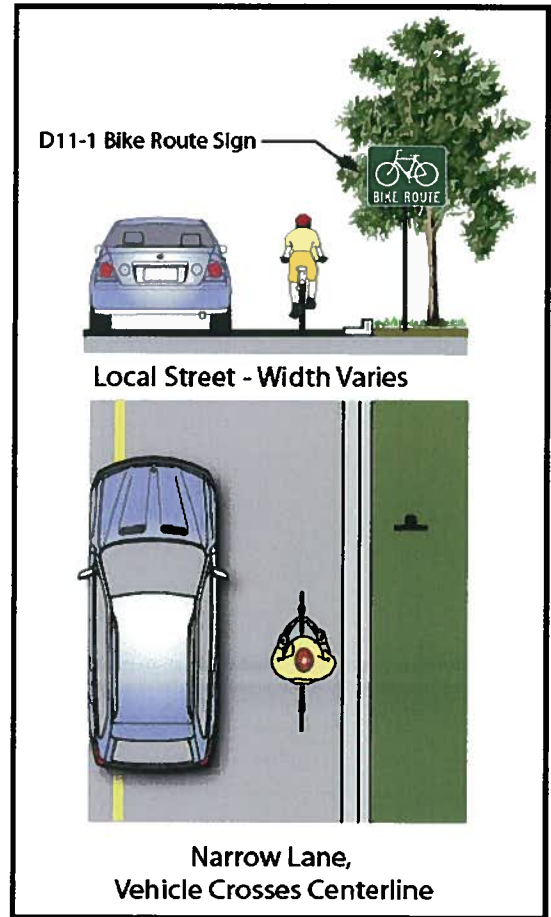
Class 2 facilities are marked bicycle lanes within roadways adjacent to the curb lane, delineated by appropriate striping and signage. Bicycle lanes help to delineate available road space for preferential use by cyclists and motorists, and to promote more predictable movements by each. Bicycle lane markings can increase a cyclist's confidence in motorists not straying into his/her path of travel. Likewise, passing motorists are less likely to swerve to the left out of their lane to avoid cyclists on their right. Bicycle lanes must be one-way facilities and carry traffic in the same direction as adjacent motor vehicle traffic. The minimum bicycle lane width is five feet, but certain edge conditions can dictate additional desirable bicycle lane width. However, even where roadway width is available, Class 2 bike lanes should be no wider than eight feet to prevent the appearance of a travel lane that could encourage motorists to drive or park in them.



Source SANDAG Bicycle Design Guidelines
Alta Planning + Design 2009

2.2.3 Class III Facilities

A Class 3 facility is a suggested bicycle route marked by a series of signs designating a preferred route between destinations such as residential and shopping areas. A network of such routes can provide access to a number of destinations throughout the community. In addition, such routes can provide relatively safe connections for commuting to workplaces or schools. The designation of a roadway as a Class 3 facility should be based primarily on the advisability of encouraging bicycle use on that particular roadway. While the roadways chosen for bicycle routes may not be free of problems, they should offer the best balance of safety and convenience of the available alternatives. In general, the most important considerations are pavement width and geometrics, traffic conditions and appropriateness of the intended purpose. A certain amount of risk and liability exists for any area that is signed as a Class 3 bike route. The message to the user public is that the facility is a safe route. Therefore, routes should not be placed on streets that do not meet appropriate safety standards.



Typical



Typical Bike 3 signs-symbols

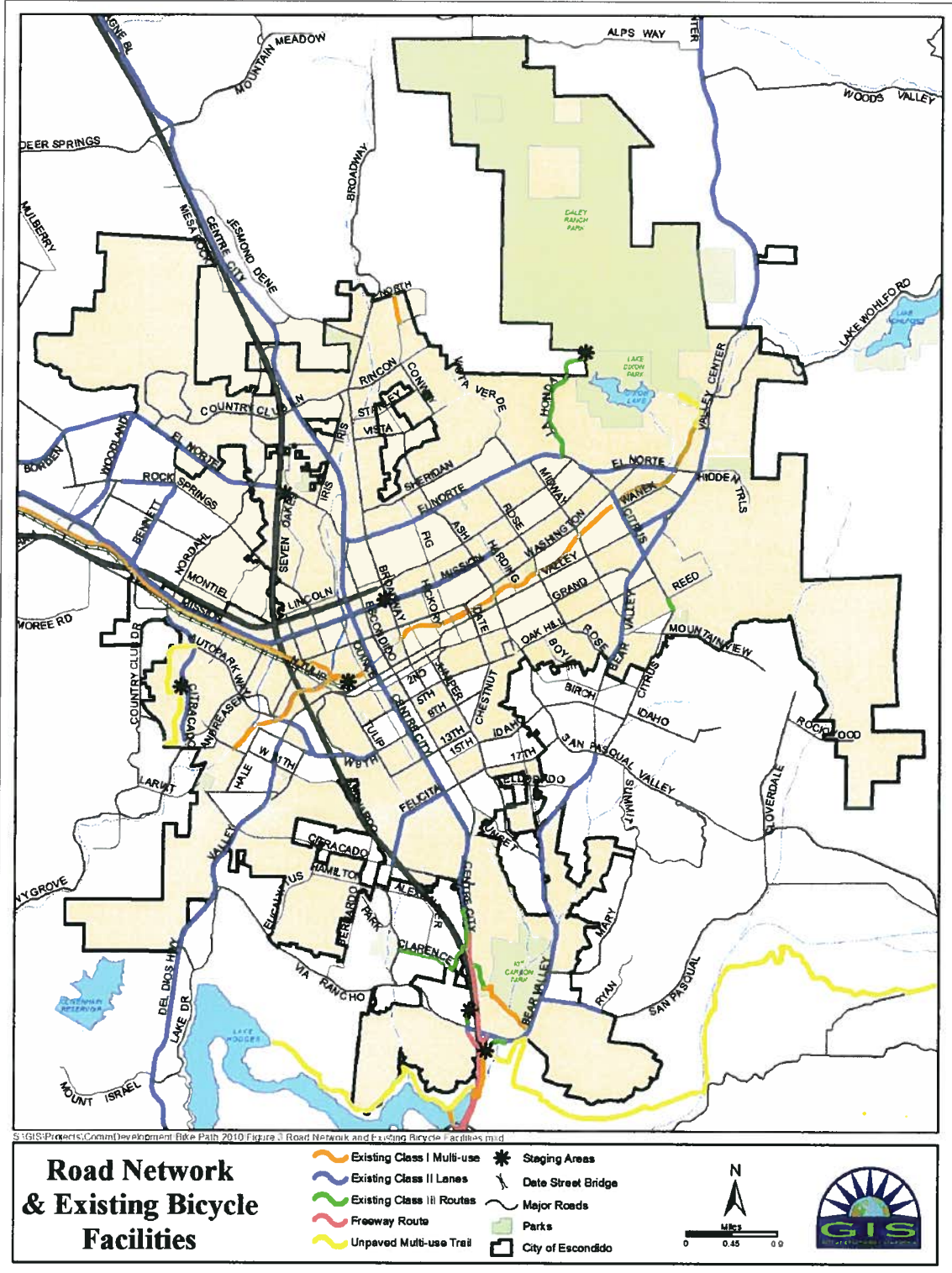
2.3 Existing Bicycle Facilities

Since the adoption of the 1993 Bicycle Master Plan, the City has completed approximately 35 miles of bicycle lanes and a 8.8 miles of Class I pathways utilizing CIP funds and state and federal grant funds. Transnet funds and development impact fees were used to install bike lanes along Citracado, El Norte Parkway, SR78 Bridge widening at Nordahl, and, in conjunction with Transportation Act Funds, construct the Escondido Creek Undercrossing at Auto Park Way and at Ash Street. Bike lanes and traffic signal loop detectors were installed along Washington and El Norte and El Norte and Citrus and improvements for the bicycle path along Escondido Creek north of Washington Avenue with developer fees. In conjunction with Capital Improvement Program funds, the city installed bicycle lanes and loop detectors along Centre City Parkway, bike lanes along Bear Valley Parkway, Date Street Bridge, and participated in the



Escondido Creek Path improvements for phase II, Harding to Broadway, and phase III, Broadway to Harding.

Figure 2.2 Road Network and Existing Bicycle Facilities





The following table represents bicycle facilities implemented since adoption of the 1993 Bicycle Facilities Master Plan through TransNet and TDA grant funding administered by SANDAG.

TABLE 2.1 BICYCLE EXPENDITURES TRANSNET/TDA GRANT FUNDS (AS OF 8/30/2012)			
FY	Project Name	Amount	Comment
2010	Bike Racks (downtown area)	\$14,378	Project Completed
2010	Escondido Creek Bike Path Undercrossing at Ash St. (construction)	\$457,357	Project Completed in 2012. Total funds awarded for project at \$2,285,406.
2010	Escondido Creek Bike Path lighting and restriping (Broadway to Ash)	\$157,500	Under design. Community Services to match with \$157,500 in Fed. grant funds.
2010	Lake Hodges Bridge (2) Cantilever project. San Dieguito River Park JPA	\$1,425,000	City of Escondido acting as pass-through for JPA. Project completed
2009	No projects submitted. No call for projects that fiscal year.		
2008	Escondido Creek Bike Path Undercrossing at Ash St. (construction)	\$996,100	Project Completed. Part of additional construction funds for previously approved project.
2007	Lake Hodges Bridge Project San Dieguito River Park JPA	\$1,875,000	City of Escondido acting as pass-through for JPA. Project completed
2007	Escondido Creek Bike Path Undercrossing at Ash St. (construction)	\$30,000	Awarded and budgeted. This was a reimbursement from a transfer of FY 2001 funds from the Bear Valley Pkwy. bike lanes to the undercrossing at Auto Park Way.
2006	No request submitted		
2005	Escondido Creek Class I bicycle path, Missing Link study (Transit Center to Broadway)	\$12,770	Project included as part of the Bicycle Master Plan Update. Draft completed in 2012.
2005	Bicycle Facilities Master Plan	\$56,274	To be completed 2012
2005	Escondido Creek Class I bicycle path undercrossing design at Ash Street/SR 78 (construction)	\$601,949	Project Completed. Initial construction estimate as part of preliminary design study. Funds allocated over FY 2006, 2007, 2008)
2004	Escondido Creek Bike Path Undercrossing Design at Ash	\$100,000	Final design completed in 2011 by City Engineering staff.



	Street/SR 78 (Final Design)		
2004	9 th Avenue Sidewalks (Maple to Chestnut)	\$166,244	Project completed
2004	Bike Lanes El Norte Pkwy. (Las Villas to Broadway)	\$55,299	Project completed
2004	San Dieguito River Park JPA pass-through funding for Lake Hodges Bicycle/Pedestrian Bridge	\$500,000	Project completed
2003	Escondido Creek Bike Path Undercrossing at Ash Street/SR 78 (Preliminary Design and Env. Review)	\$100,000	Completed by Dokken Engineering in 2005.
2003	Date Street Bridge across Escondido Creek Channel/Bike Path	\$144,000	Project completed
2002	No funds requested		
2001	Bike Lanes Bear Valley Pkwy (Hinrichs Way to Citrus Ave)	\$157,764	Project completed
2001	Bike Lanes El Norte Pkwy. (Rincon Villa Dr. to La Honda Dr.)	\$151,229	Project completed
2001	Via Rancho Parkway bike path connection to San Dieguito River Park trail.	\$274,400	Project completed (0.1 miles)
2000	Escondido Creek Undercrossing at Auto Parkway	\$161,000	Project completed
1999	Escondido Creek Class I bike path, Phase III (Broadway to Rose)	\$274,400	Project completed (1.6 miles)
1998	Escondido Creek Class I bike path, Phase II (E. Washington to Rose)	\$266,900	Project completed (1.8 miles)
1998	Escondido Creek Class I bike path undercrossing at Auto Parkway	\$444,000	Project completed. Project required \$65,000 from FY 2001 funding.
1997	El Norte Parkway bicycle lanes, N. Broadway to Fig Street	\$58,200	Project completed (0.8 miles)
1997	El Norte Parkway bicycle lanes, Ash Street to Rose Street	\$84,300	Project completed (1.2 miles)
1997	Ash Street bicycle lanes, Vista Avenue to Lincoln Avenue	\$8,600	Project completed (2.1 miles)
1997	Auto Parkway bicycle lanes, West Valley Parkway to 9 th Avenue	\$3,800	Project completed (0.9 miles)
1997	Bear Valley Parkway, bicycle loop detectors at Ranchito Drive	\$2,800	Project completed



1996	North Broadway Class I bicycle path at Jesmond Dene Road	\$36,225	Project completed (0.3 miles)
1995	North Broadway bicycle lanes, El Norte Parkway to Country Club Lane	\$32,500	Project completed (1.4 miles)
1995	Country Club Lane bicycle lanes, El Norte Parkway to Broadway	\$55,300	Project completed (2.5 miles)
1995	Escondido Creek Path undercrossing at Auto Parkway	\$62,000	Design
1995	Escondido Creek Auto Parkway undercrossing	\$478,000	Partial funding. Project completed in 1998
1994	Bear Valley Parkway/Via Rancho Parkway bicycle lanes, Canyon Road to I-15	\$15,800	Project completed (1.7 miles)
1994	Escondido Creek Class I bicycle path, Hale Avenue to Escondido Transit Center	\$159,300	Project completed (1.2 miles)
1994	Escondido Creek feasibility	\$25,000	Study
1994	Felicita Avenue bicycle lanes, Citracado Parkway to Escondido Blvd.	\$71,000	Project completed (1.0 miles)
1994	Mission Avenue bicycle lane, Mission Road to Fig Street	\$24,400	Project completed (1.8 miles)
1994	Seven Oaks Road bicycle lane, Rock Springs Road to El Norte Parkway	\$112,900	Project completed (0.8 miles)
1992	Bicycle Master Plan	\$65,000	Project completed. Plan adopted in 1993
Totals		\$9,716,689	



2.4 Trail Connections

The trail heads/staging area on La Honda Drive serve the Daley Ranch open space preserve and the trail head on Sunset Drive and also as the Lake Hodges boat ramp serves the San Dieguito River Park multi-use trails through the San Pasqual Valley and around Lake Hodges. These trails also provide access to the bicycle/pedestrian bridge across Lake Hodges. These trails are popular on weekends with the mountain biking and hiking communities.

2.5 Bicycle Parking

Bicycle parking can be found at most major commercial centers and schools within the City. Many of the commercial racks are ribbon racks in front of stores, or grid-style racks at the schools. Bicycle lockers can be found at the Escondido Transit Station. The City also installed a variety of decorative racks around the City Hall complex, Grape Day Park and along Grand Avenue within the Downtown Retail Core.

Bicycle theft is one of the deterrents to bicycle travel, but it can be overcome by providing quality bicycle parking facilities. Fortunately, good bicycling parking can be provided at a very modest cost. In contrast, poor quality bike parking is often underutilized because it is either inconvenient, does not effectively secure the bike, or both. Through its Bicycle-Pedestrian Advisory Committee, SANDAG has developed bicycle parking guidelines that should be disseminated and adopted around the region. For bicycle commuting trips, employers should be encouraged to provide bike lockers or other high security parking.

2.6 Transit Connections

The City of Escondido's public transportation is provided by the North County Transit District (NCTD), which provides a number of bus routes throughout the City, and also provides light rail service from Escondido to Oceanside on the Sprinter rail line. All of NCTD's transit vehicles can accommodate bikes. The Metropolitan Transit Service (MTS) also serves the Escondido area with express route 810 to downtown San Diego. NCTD Breeze buses carry passengers in the north San Diego County area and stop wherever you see the blue and white NCTD bus stop signs. Stops are usually located every few blocks on city routes but may be several miles apart in rural areas. All Breeze buses can accommodate up to two bicycles and up to three wheelchairs and almost half the fleet have "kneeling" buses. Many Breeze bus routes connect with the Coaster and Sprinter trains. The Sprinter runs 22 miles along Highway 78 corridor, making short trips to 15 stations, for a total travelling time of 53 minutes from end to end. Each European-style light rail vehicle has a maximum capacity of 226 passengers and travels at a maximum speed of 55 mph. The Sprinter offers easy connections to the Coaster, Breeze, Amtrak, Metrolink, Greyhound, and a future Bus Rapid Transit project in Escondido. There are two NCTD Sprinter stations in Escondido, with one at the main Transit Center in the center of town on West Valley Parkway, and the other on the western side of town along Mission Avenue.

2.7 Locations of Shower Facilities and Public Restrooms

There are a limited number of public showers available for the public throughout Escondido, with one at the City's James Stone pool facility at City Hall. Public restrooms can be found at all local parks and commercial areas. There are no public restrooms available at the trail heads.



Support facilities such as clothing lockers and showers greatly enhance the experience of bicycling to and from the workplace and also serve to encourage employees to consider bicycling as a viable commute choice. Where employment density warrants, local agencies should consider policies that encourage building owners and employers to provide clothing lockers and showers for their employees to accommodate longer bike trips.

2.8 Locations of Key Destinations

Key destinations such as schools, parks and commercial areas are located throughout the City. The largest commercial districts can be found along East and West Valley Parkway, the Westfield Mall North County, along west El Norte Parkway, Centre City Parkway and Escondido Boulevard, and within the City's Downtown Commercial Core. The Escondido Skate and BMX Park is located within Kit Carson Park off of Bear Valley/Via Rancho Parkway towards the southern end of the City. Schools can be found throughout the City with Escondido High School to the north, San Pasqual High School to the southeast, Orange Glen High School to the east, and the new Del Lago Academy School to the southwest. Trail access into the San Dieguito River Park can be found in the southern end of the City along Via Rancho Parkway, and Daley Ranch towards the northern area of the City from La Honda Drive. There are several bike shops located throughout City including: Bike Bling, Hidden Valley Bicycle, Centre City Cycles, and Bicycle Warehouse, Bike Vault, and T.RYX.

2.9 Existing Education and Enforcement

When grant funds are available bicycle safety programs, "Bicycle Rodeos", have been conducted by the police department at local schools. However, staffing levels and budget limitations has been a challenge to continued outreach. Bicycle rodeos are conducted to educate parents and children about the safety of bicycling on roadways. These rodeos include:

- Helmet use
- Choosing the right bike
- Proper bicycling clothing
- Recognition and avoidance of common bicycling collisions
- Bicycle registration
- Selecting safe bike routes to and from school
- Consequences of unsafe bicycle use
- Bicycle operation, such as braking techniques, use of hand signals, turning techniques, proper mounting and dismounting, maneuvering, and safety precautions

The Police Department enforces bicycle related traffic laws for both bicyclists and motorists in Escondido throughout the year by the Traffic Enforcement Division. More attention is focused on the established bicycle routes, including streets identified under the "Safe Route to Schools" program. Citations and written warnings are both issued with this enforcement. Enforcement of bicycle related traffic laws was more proactive when the Police Department's Bicycle Patrol Team was fully staffed with six full-time officers. There currently only are two full-time officers assigned to the Bicycle Patrol Team.

The most frequently cited reason for not riding a bicycle is concern for personal safety. This is understandable since bicyclists are very vulnerable in collisions with motor vehicles. However, education on proper bicycle riding can significantly improve the bicyclist's safety, which in turn



can help to overcome some of this resistance. Since there is no region-wide bicycle safety education program, efforts should be made to make bicycle safety information available to both adults and children. Safety education programs should target cyclists of all ages and motorists as well. Emphasis should focus on the rules of the road, riding on the street, advantages to using helmets, using lights at night, and selecting appropriate routes for cycling. The purpose of an education program is to reduce bicycle injuries and fatalities and to encourage bicycling as an alternate mode of transportation to motor vehicle travel. An education program aimed at both students and adults which promote the advantages of cycling and explain how to cycle effectively and defensively are key to improving cycling in the community. To further encourage both bicycling and walking, the Plan recommends continued support education and promotional programs such as RideLink's annual Bike to Work Day and support for events like the annual Walk Your Child to School Day.

Figure 2.3 General Plan Circulation Element

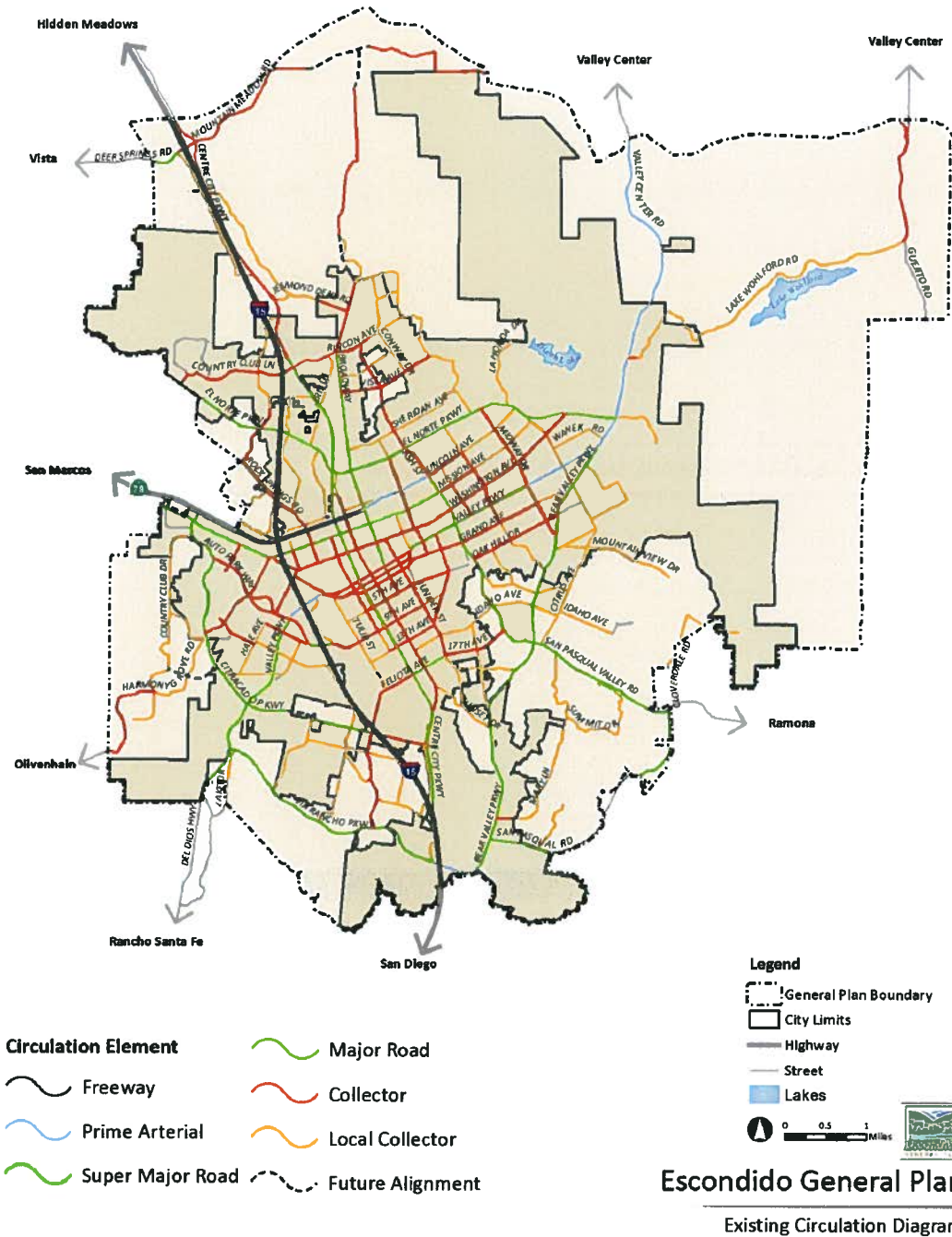


Figure 2.4 General Plan Land Use Map 2012

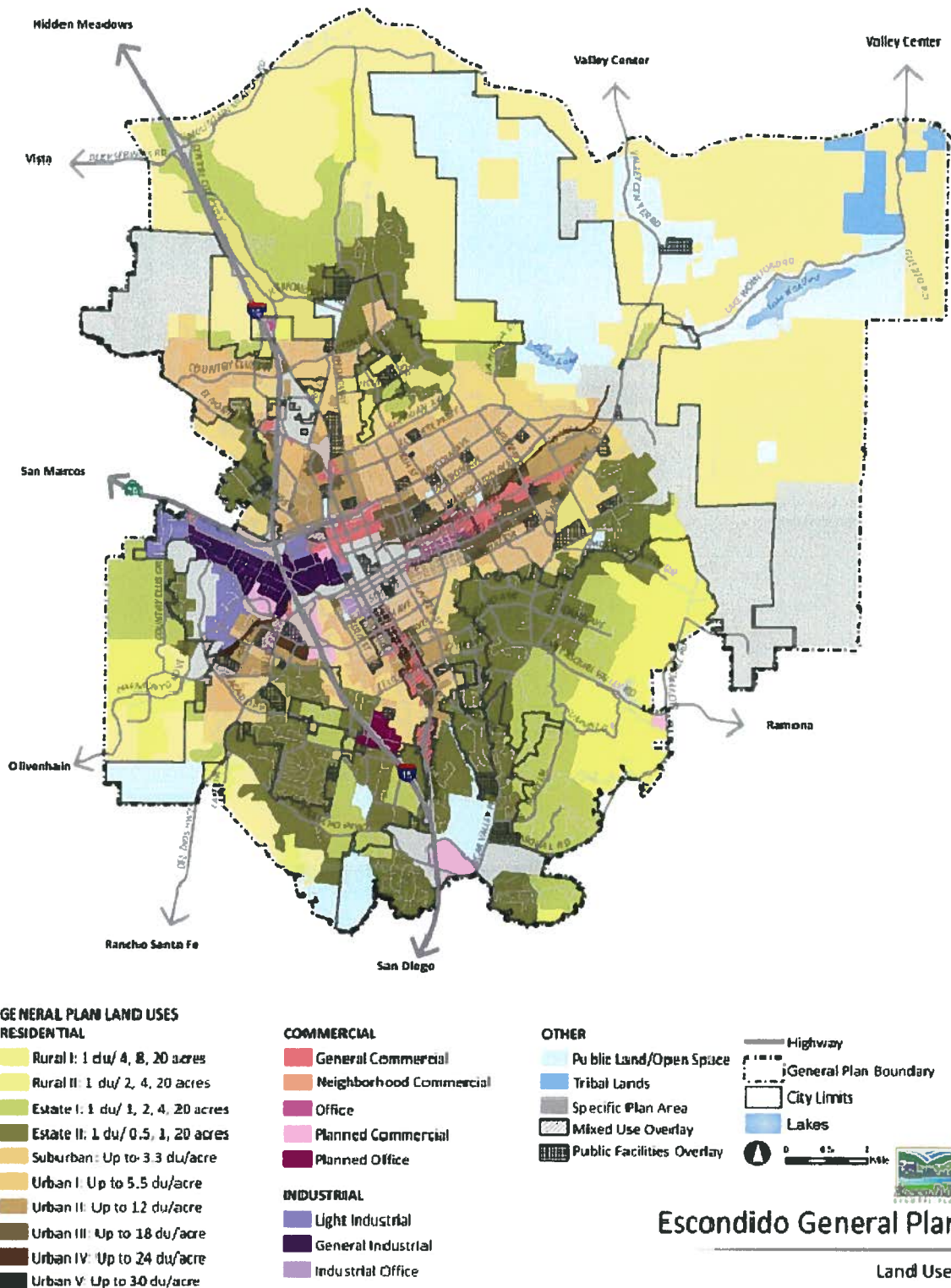
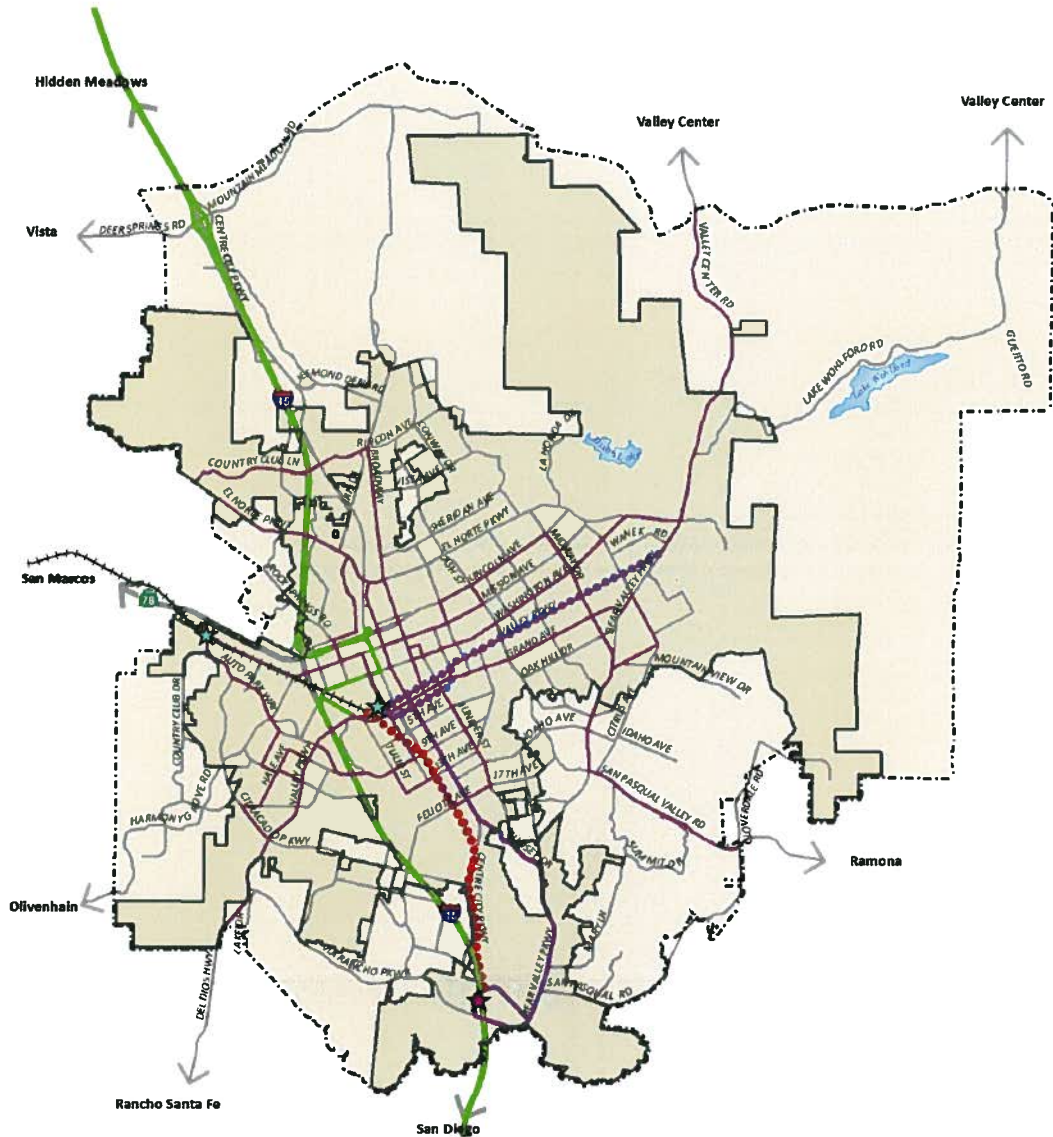


Figure 2.5 General Plan Transit Routes 2012



North County Transit District Bus/Rail Routes*

- Existing SPRINTER Rail Line
- Projected NCTD Rail Line
- Local Bus
- Existing NCTD Rapid Bus
- Projected Future NCTD Rapid Bus
- BRT (Bus Rapid Transit) Routes
- ★ Transit Station
- ★ Del Lago Park & Ride

*Note: Additional NCTD bus transit servicing the community is not depicted. Projected NCTD rail service from the existing transit center to Westfield Shoppingtown requires additional evaluation and approval.

Source: City Of Escondido

Legend

- General Plan Boundary
- City Limits
- Highway
- Lakes
- 0 0.5 1 Miles

Escondido General Plan
Existing & Proposed Transit Routes

Figure 2.6 General Plan Existing Land Uses 2012

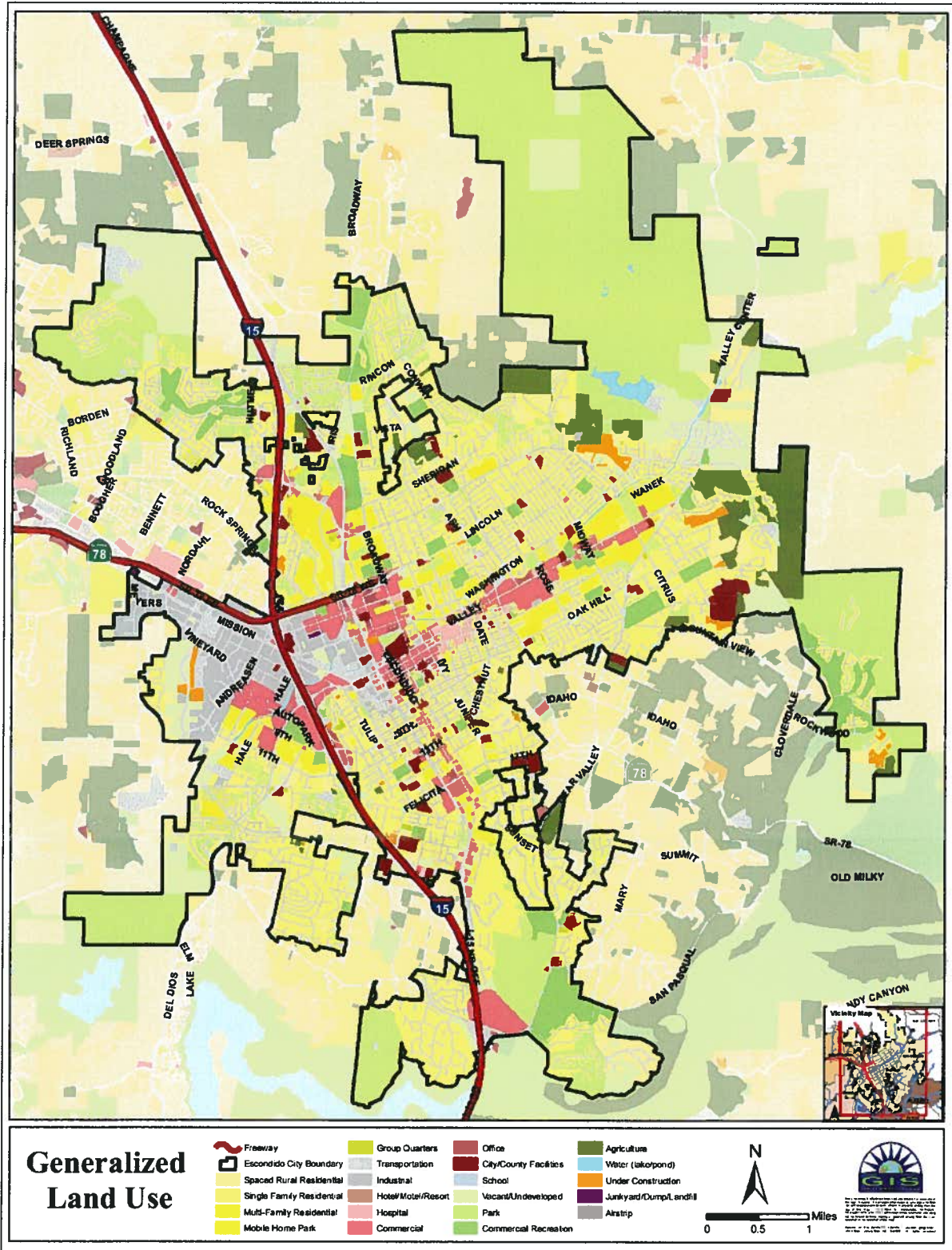
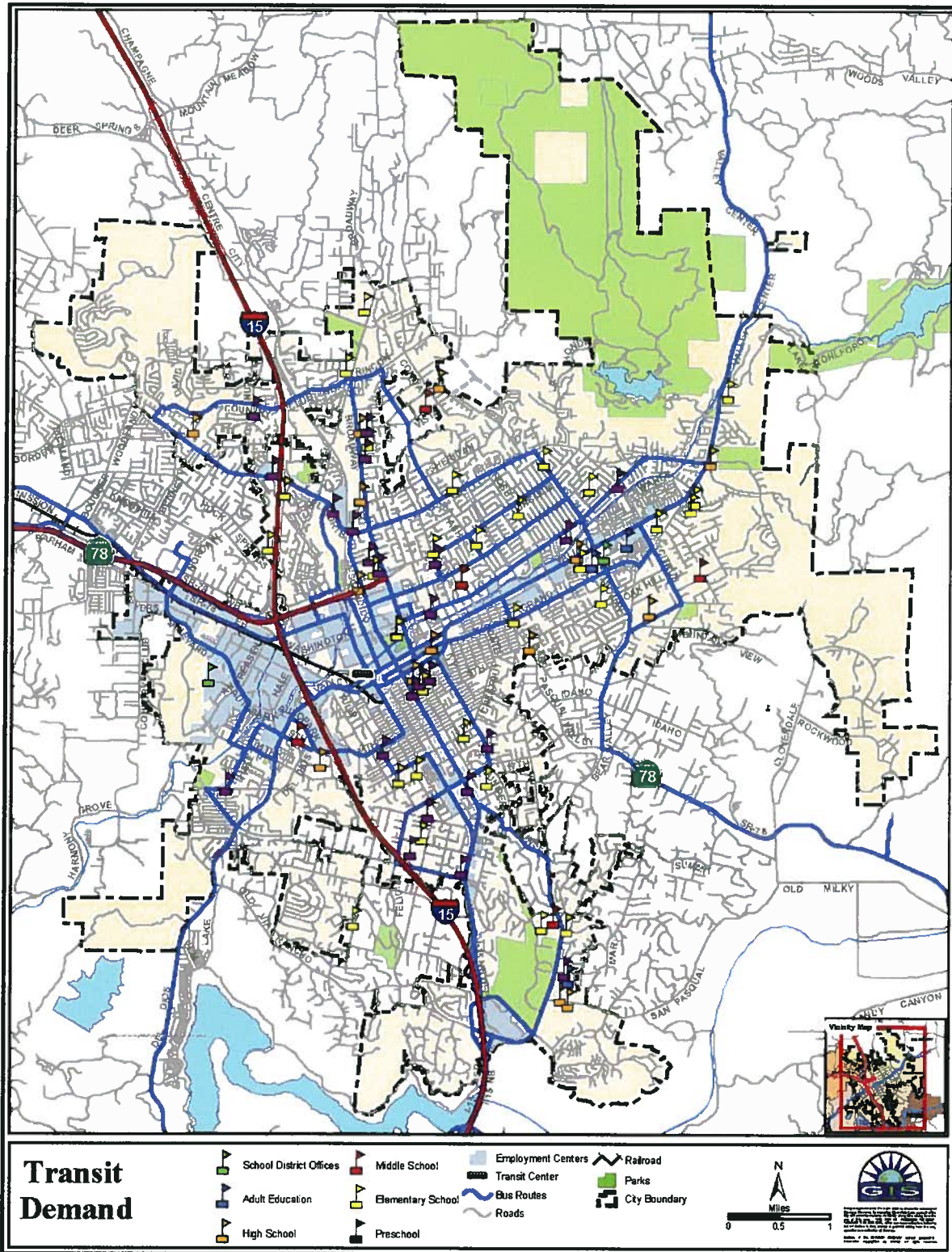


Figure 2.7 General Plan Transit Demand-Activity Centers 2012





BICYCLE NEEDS ASSESSMENT

3

4.1 Needs Assessment Summary

One of the initial steps in the planning process for any transportation project is the assessment of needs. Existing and planned land use, current and projected traffic levels and the special needs of the area population are examined. There are circumstances in which a portion of the transportation need might be served by non-motorized means, as well as locations where existing bicycle demand would be better served by improved facilities. The following land use and location factors assist in recognizing the potential for non-motorized travel and evaluating the needs of cyclists at the street level. The roadway may be suitable for bicycle travel if it:

- *Serves an activity center, which could generate bicycle trips*
- *Is included on a county or municipal bicycle master plan;*
- *Provides continuity with or between existing bicycle facilities, including those of adjacent cities;*
- *Is located on a roadway, which is part of a mapped bike route or utilized regularly by local bicycle clubs;*
- *Passes within two miles of a transit center;*
- *Passes within two miles of a high school or college;*
- *Passes within a half mile of an elementary school or middle school;*
- *Passes through an employment center, especially if there is a significant residential area within a three mile radius; or*
- *Provides access to a recreation area or otherwise serves a recreation purpose.*

If any one of these factors exists, the roadway has the potential to attract less experienced bicycle riders and/or significant numbers of advanced riders. As a result, it should be considered as potentially appropriate for designation as a bikeway.

This chapter will review other factors such as safety issues, gaps and deficiencies, potential bike amenities and general guidelines for a bicycle friendly city. This chapter will review other needs such as safety issues, gaps and deficiencies, potential trail connections, consistency with ongoing regional plans and future development. These topics all relate to one another and help identify what the City needs to develop a complete bikeway system. For example, safety concerns are analyzed by using bicycle related collisions to identify their locations and cause of collision to investigate the frequency at a certain location. Cross referencing the collisions and locations help identify where it is best to install a bicycle facility to connect with other facilities and amenities such as trails, as well as future development.

3.2 Areas of Concern and Accident Data

Safety is a primary concern in evaluating an existing bikeway facility system or in proposing new facilities or extensions. Careful consideration must be given to the installation of bicycle facilities in order to avoid creating problematic safety situations. Safety is a major concern for both avid and future bicyclists. For those who ride frequently, the selection of the route and the ease of utilization is an on-going consideration. Perceived danger is one of the primary reasons



why people do not commute by bicycle. The size of vehicles, speed at which they travel, levels of traffic, design of the roadway, contribute to this feeling of perceived danger. In addition, lack of confidence and knowledge of bicycle rules of the road contribute to reasons for not cycling.

To identify areas of concern within the City, a GIS model was created utilizing collision data generated from the Statewide Integrated Traffic Records System (SWITRS) to highlight areas that had high frequencies of bicycle related collisions. The collisions were delineated by year and combined to identify where most of the bicycle related collisions have occurred. Figure 3.1 displays the citywide bicycle collisions. Based on the assessment, there were 242 bicyclists-involved collisions reported during the period between 2006 and 2010. There were 19 locations that experienced more than one bicycle collision over the study period. The analysis shows areas that have a high frequency of bicycle related collisions and Tables 3.2 and 3.3 shows a five-year history of the number of collisions per year from 2006-2010.

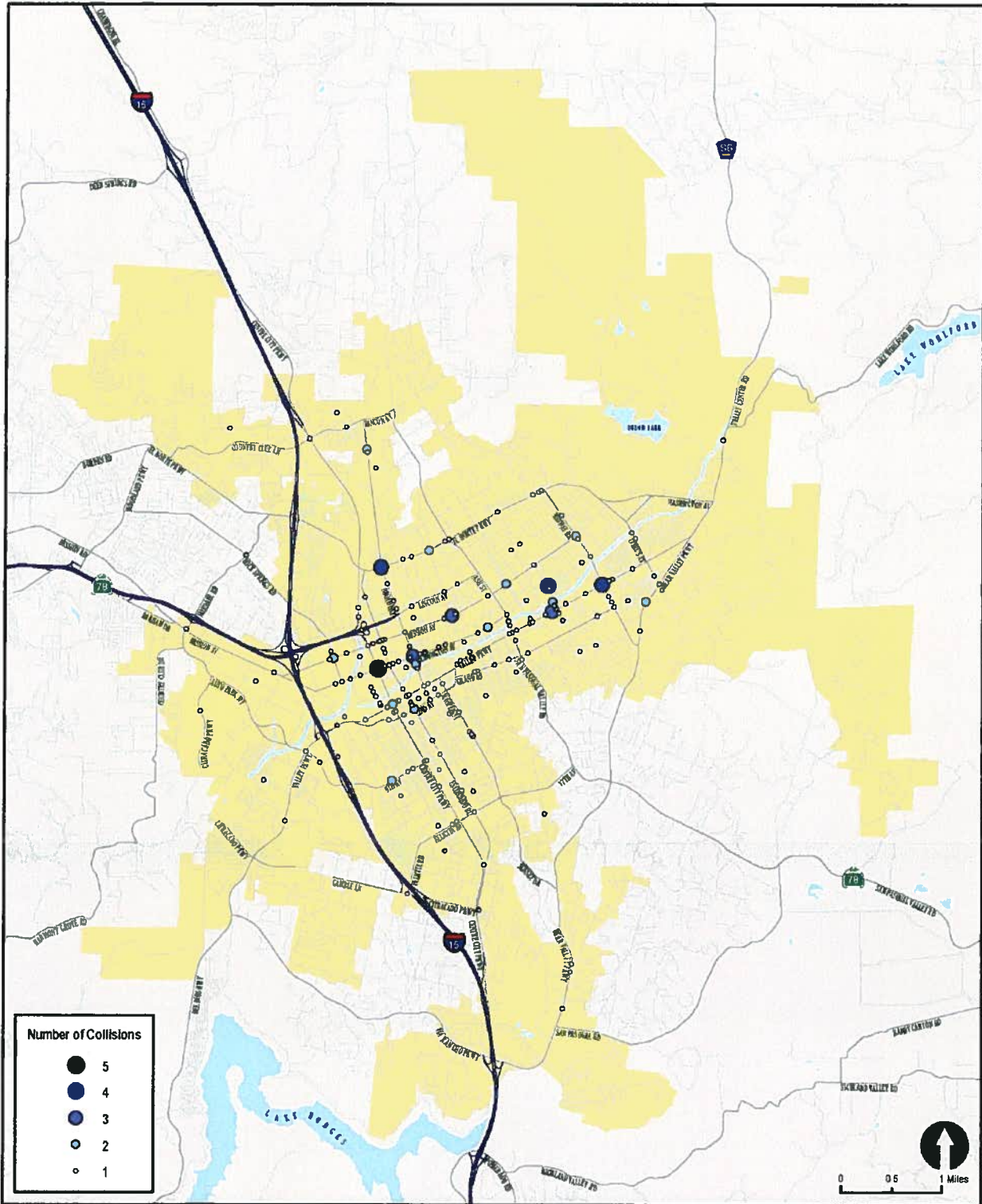
**Table 3.1
Intersections with Highest Bicycle Collision Rates**

Intersection	Number of Collisions (2006 – 2010)
Centre City Parkway/Washington Avenue	5
Broadway/El Norte Parkway	4
Rose Street/Washington Avenue	4
Midway Drive/Valley Parkway	4
Broadway/Washington Avenue	3
Fig Street/Mission Avenue	3
Shopping Center Entrance/Valley Parkway	3

**Table 3.2
Roadway Segments with Highest Bicycle Collision Rates**

Street	From	To	Number of Collisions (2006 – 2010)
Rose Street	Washington Avenue	Valley Parkway	10
Broadway	Washington Avenue	Valley Parkway	7
Midway Drive	Valley Parkway	Grand Avenue	7
Valley Parkway	Midway Drive	Citrus Avenue	7
Washington Avenue	Centre City Parkway	Escondido Boulevard	7
Washington Avenue	Escondido Boulevard	Broadway	7

Figure 3.1 Traffic Accident Data



Source SWITRS (2010)

While comparing these high collision rates to areas of lower collision rates, it is clear that most



of the areas with frequent collisions were major arterials that lacked bicycle facilities, as seen in Figure 3.1. In a review of bicycle-motorist crash causes, it appears that the fault lies equally with motorists and bicyclists. These historical records revealed that bicycle-related accidents Escondido are primarily due to 1) biking against traffic, 2) vehicle and bicyclist conflicts at intersections, and 3) not cycling safely involving falls or collisions with stationary objects, other cyclists and pedestrians, and disobeying rules of the road. Most collisions with vehicles occur where two roadways or a roadway and a driveway intersect, and one user fails to yield the right of way to the other. The most common is a left turn across the path of an oncoming bicycle. A frequent and unexpected error between both adult and child bicyclists is riding the wrong way against traffic. There appears to be nothing more likely to reduce the frequency of car-bike crashes than increased enforcement and education efforts to facilitate proper and legal cycling practices of riding with traffic on the roadway, regardless of whether or not Class 2 or 3 bike facilities exist.

3.3 Public Outreach

The City conducted two public workshops at the Escondido City Hall in January 20, 2007 and March 12, 2012 to solicit input and identify key concerns of bicyclists. The first workshop was intended to solicit comments on existing conditions and concerns residents had regarding the City's bikeway system, develop a vision statement, along with goals and objectives for implementation. Large plots were available for attendees to add additional comments and suggestions. The second workshop was a presentation on the recommendations for bicycle facilities, goals and policies, and a review of the draft plan. A questionnaire also was posted on the City's web site and hard copies distributed to solicit more comments through the second workshop. A copy of the sample survey is attached with Appendix C. There were 69 responses received from the on-line survey and 15 hard copies completed. The majority of respondents indicated they bike for recreational purposes rather than commute. The also felt the biggest impediment to riding a bike includes the following:

- Existing conditions of roadways and lack of bike facilities/lanes (55.4%)
- Speed and volume of traffic (47%)
- Biking not a safe method of transportation (24.6%)
- Not enough time (15.4%)

When riding a bike, the major areas of concern or issues encountered were:

- Lack of bike facilities/lanes
- Gaps in the system
- Vehicles not sharing the roadway
- Difficulty crossing intersections
- Debris in bike lane/along shoulder

Additional Public Outreach

During the preparation of the 'Revealing Escondido Creek' Vision Plan, a series of community outreach efforts were done to engage residents and the business community in the process. The Escondido Creek Trail provides the backbone east-west link in the Regional and City of Escondido bikeway system. An initial step in the process was stakeholders meetings conducted by the design team in December-January of 2009-2010 with the Chamber of Commerce and the Escondido Creek Conservancy Communications Director. Two community events also were



held, which included a bike-walk survey of the creek in February 2010 and a design charrette in March 2010 to discuss possible design solutions, prioritize the issues with the creek trail. A community survey also was conducted in 2010 to gather quantifiable data regarding the creek. The results of the public outreach concluded the communities desire to see the Escondido Creek Trail become a safe, pleasant conduit through the city that addresses basic environmental concerns and provides destinations, features, and amenities.

3.4 Demand for Bicycle Facilities

Most residents own bicycles and typically cycle for recreation. It is estimated 46% of Americans bicycle for pleasure which would mean roughly 67,850 persons in Escondido bicycle or would like to bicycle (*based on 2010 population figures*). School children between the ages of 6 and 14 comprise a large percentage of bicycle riders, riding to school, parks, school events, and with friends. Adult cyclists are frequently serious competitors or off road mountain cyclists who enjoy riding on trails and dirt roads.

The latent “need” for bikeways is the unrealized potential that more cyclists would bike if there were adequate bicycle facilities. This latent need is difficult to quantify and requires reliance on evaluating other comparable communities to determine potential usage. The Bureau of Transportation Statistics (BTS) conducted studies during that the summer of 2002 that revealed 27.3% of people surveyed used a bicycle during that period. The U.S. Census Bureau, Journey to Work data estimates (*2000 Census*) that reflect areas of dense development and intense commercial development. It is in these areas that more people will bicycle for commuting for work and shopping.

Using the Journey to Work data (*2000 Census*), it can be assumed that roughly 1.0% or 892 of all employed Escondido residents commute primarily by bicycle. This does not include those who ride to work less than 50% of the time, nor does it always include those who may walk or ride to transit and list “transit” as their primary mode. The U.S. Department of Transportation in their publication entitled “National Walking and Bicycling Study” (1995) sets as a national goal to double current walking and bicycling mode shares by the year 2010. Assuming that if there are adequate bicycling facilities available throughout the City, a commute bicycle mode share would be 2% or 1,784 bicycle commuters in Escondido. Figure 2.6 reflects areas within the city where there is existing multi-family development along the major transportation corridors of Escondido. In these areas, the potential for bicycle commuting is greater.

To assess the travel patterns in Escondido, a journey-to-work mode share assessment was conducted and is included in Table 4-1. As indicated in the table, in comparison with the region, the City is more auto dependent in comparison to the San Diego Region. However, it should be noted that the public transportation and bicycling mode share in Escondido are similar to the region as a whole.



**Table 4-1
Journey To Work Mode Share**

Travel Mode	City of Escondido	San Diego Region
Automobile (including Carpool)	90%	87%
Public Transportation	3%	3%
Walking	2%	3%
Bicycling	1%	1%
Other	4%	6%

*Other includes worked from home, motorcycle and other means

Source: US Census (2000)

3.5 Gaps and Deficiencies

In order for the City to make bicycling a viable and recognized transportation alternative and a recreational choice, and identifiable and improved bicycle system of bike routes, lanes and paths is essential. Although much has been accomplished since the adoption of the 1993 Bicycle Facilities Master Plan, the City's bicycle network has numerous gaps and areas without any identified routes. Gaps and deficiencies in the bikeway system were identified through data analysis, field investigations, public comments and City staff input. This will lay the foundation for development of the City's future bicycle network. Major gaps and deficiencies include the following:

1. Escondido Creek Class I bike path incomplete within downtown core area ('Missing Link' between Broadway and Transit Center along Quince Street) and towards western area of City (from Harmony Grove Road to City's western boundary).
2. Class II bike lanes along major roadways lacking or inconsistent, especially along Citracado Parkway, Valley Parkway, Via Rancho Parkway, Bear Valley Parkway and Washington Avenue.
3. Few Class 3 routes within the City have been identified or signed.
4. Access to the business district along Grand Avenue lacking due to relatively narrow lanes to share-the-road, and potential conflicts with on-street parking.

The gaps in existing bike facilities were also noted by the community through the public workshop and online survey. Adding bike lanes, routes and paths and improved roadway safety to include enhanced crosswalk designs for bicycle and pedestrian safety at key major intersections were the top comments from public input, along with increased maintenance of existing facilities.

3.6 Destination Analysis

Using the census data, it is assumed that the majority of Escondido workers commute by vehicle, 71.8% driving alone traveling approximately 21.7 minutes (U.S. Census 2000). Other forms of transportation include carpooling (14.5%), public transportation (5.1%), walking (2.9%), or bicycling or other means (1.9%), and the balance worked at home (3.8%). The three top employers include the Escondido School District with 1,847 employees, Palomar Hospital with 1,450 employees and the City of Escondido with 1,118 employees. Other primary employers



fall within the retail sales including auto sales, medical services, and utilities. See figure 3, Road Network and Existing Bicycle Facilities reflects existing bicycle facilities that offer facilities for cyclists throughout the city.

The major retail employers are located primarily along the Valley Parkway/East Valley Parkway corridor and at North County Fair. This also corresponds with the major employers who are located along this corridor or in general proximity such as the industrial areas south of the Autopark, including the newly developing industrial areas known as ERTC located off of Vineyard and Harmony Grove Road. Located within the ERTC Industrial Park, the new Palomar Pomerado Hospital became operational in August 2012. Next to retail trade providing 16% of the jobs, 14% of the work force are employed in construction industry. These construction jobs are scattered throughout the county as the construction trade moves where building is occurring and the larger construction employers are located outside of Escondido.

Based on the 2000 Travel to Work Census data 49.5% of the work force work within 20 minutes of their home and actually 3.0% work at home. Of the 49.5% who live within 20 minutes of their home, 3.9% are less than 5 minutes from their place of employment. Therefore, installation of bicycle facilities within a 3.5 mile radius from the major employers, schools, and the retail center, would benefit commuters who desire to cycle to work.

Student Destinations

There are 47 public and private schools in Escondido offering a variety of educational opportunities. There are public schools include 16 elementary schools, 5 middle schools, 3 high schools, a continuation school, an independent school, and an adult education school providing classes at over 23 sites. Additionally, private schools consist of 8 elementary schools and 3 private high schools; charter schools comprise of three schools offering one elementary school, one elementary/middle school and a high school. The total public school enrollment for elementary through high school is 32,660 and there are over 10,000 adult students. Assuming that most private schools either provide their own transportation or students arrive by vehicles, there are potentially 19,926 students at public schools (4th graders and above) who potentially would travel to school by bike. School sites are identified on Figure 5.

Recreation Destinations

Recreational bicycling in Escondido typically falls into one of four categories:

1. Exercise or training
2. Non-work destination such as a park or shopping
3. Mountain cycling
4. Park or recreation destination

A direct route may not be an important factor in selecting a more enjoyable route away from traffic such as a bicycle path; a bicycle lane along a not so frequently traveled roadway; or a dirt pathway up a steep terrain. Visual interest, shade, protection from wind, moderate gradients, views or other features are also a consideration. While the central valley of the city is relatively level, mountain cyclists select dirt trails along the steep hillsides of Daley Ranch or rolling hillsides of the Coast to Crest trail. Cyclists prefer a loop route rather than having to backtrack. The distance of a loop route is on the average 25 miles. Connecting routes that link residential neighborhoods with destination points and separate bicycle pathways will result in a noticeable increase in bicycle use for recreational bicyclists.

While it is not practical to install bicycle facilities on all streets, a good plan will identify where

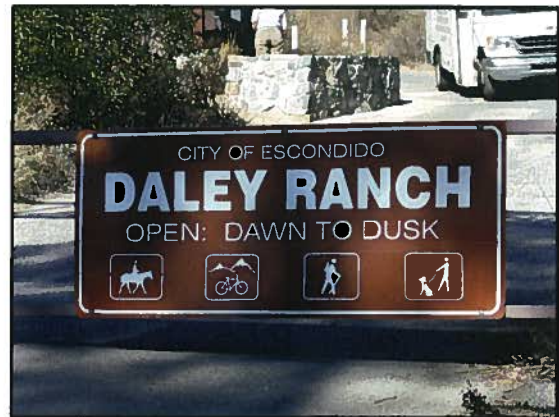
recreational destinations are located and integrate these locations with bicycle facilities to the surrounding community to the largest extent possible. The City offers twelve parks, sports center and skate park, a dog park, two libraries, East Valley Community Center, the Joslyn Senior Center, and two public golf courses. Most of the parks are located along the Valley Parkway/East Valley Parkway corridor or along Bear Valley Parkway. The largest of the parks, Kit Carson Park or the Escondido Sports Center and Skate Park is situated just to the north of North County Fair along Bear Valley Parkway and walking distance to three public schools: San Pasqual High School and L.R. Green Middle and Elementary Schools. Kit Carson Park provides 300 acres of playing fields and natural walking paths along with roller hockey, soccer, a skate park, and an amphitheatre. Daley Ranch, at the end of La Honda Drive, adjacent to Dixon Lake, provides miles of dirt single-track trails for mountain cycling enthusiasts. Multi-use trails, known as the Coast to Crest Trail, along Lake Hodges and San Pasqual Valley, offer unpaved bicycle facilities that are planned to connect from the coast in Del Mar to the Vulcan Mountain in Julian.

Daley Ranch

Daley Ranch is a 3,058-acre conservation area acquired in 1996 by the City of Escondido and is managed in perpetuity for the preservation of a lush oak woodlands, coastal sage scrub and chaparral, grasslands, and riparian areas.

Daley Ranch offers over 20 miles of multipurpose trails for hiking, mountain biking, and equestrian use. Six distinct trails cover most of the property. Most popular are the Boulder Loop Trail (2.4 miles) which affords outstanding views of Escondido, and the Ranch House Loop (2.5 miles), which passes two small ponds and the site of Daley's original log cabin.

Since private motorized vehicles are not permitted within Daley Ranch, the City sponsors a free shuttle service, which runs every Sunday from 8:00 a.m. to 4:00 p.m. The shuttle picks up passengers at the La Honda Drive entrance gate on the half-hour and on the hour, and picks up passengers at the Ranch House for the return trip on the quarter hour. The shuttle van is wheelchair accessible.
(www.ci.escondido.ca.us/glance/uniquely/daley)



San Dieguito Riverpark

The San Dieguito River Park, is a planned natural open space will someday extend from the ocean at Del Mar to Volcan Mountain, just north of Julian. A planned "Coast to Crest" trail system will offer trail experiences for the hikers, mountain bicyclists, and equestrians.

The trail system adjacent to Escondido includes an 8 foot wide concrete Class I bike path with adjacent 4 foot wide dirt hiking/equestrian trail. It connects trails on the east side of I-15 with trails on the west side of the freeway via a trail undercrossing constructed under the freeway bridge at Lake Hodges. The trail was constructed on top of the existing "rip-rap" (or boulders) that support the freeway bridge. This linkage permits people to park on the east side of the



freeway at the Sunset Drive cul de sac (take the Via Rancho Parkway exit east) and access the existing trail on the north side of the lake west of the freeway. Funding for the undercrossing project was provided by state, federal and local funds. These included \$420,000 in state Environmental Enhancement Mitigation grant funds, \$715,000 in federal Interstate Surface Transportation Efficiency Act funds (ISTEA), and \$60,000 in design funds from the SANDAG Bicycle Facilities Committee.

A 990-foot pedestrian/bicycle bridge was recently completed that spans across Lake Hodges, crossing the lake from north to south, about 1,000 feet west of the I-15 freeway bridge. The project was funded with federal, state and local funds: \$3,000,000 federal TEA grant, with Caltrans District 11 as the River Park's state partner on the project; \$1,500,000 State River Parkway Bond Act funds (Prop 13) and \$625,000 from State River Parkway Bond Act funds (Prop 40); and \$500,000 from SANDAG. Additional \$2,000,000 in Federal/State RIP funds were awarded by SANDAG in 2006, and \$1,875,000 in SANDAG Transnet funds in 2007.

www.sdrp.org/trails

Del Dios Preserve

The County of San Diego offers a 464 acres wildlife park with miles of hiking, mountain biking, and equestrian trails. The passive trail system meanders from Escondido Creek at the Elfin Forest Recreational Reserve, managed by the Olivenhain Municipal Water District to the hills overlooking Lake Hodges. The trails stretch from Elfin Forest to the Del Dios community.

www.sdcounty.ca.gov/parks/hikes

3.7 Bicycle Parking Assessment

For a bikeway network to be used to its full potential, secure bicycle parking should be provided at likely destination points. Bicycle thefts are common and lack of secure parking is often cited as a reason people hesitate to ride a bicycle to certain destinations. The same consideration should be given to cyclists as to motorists, who expect convenient and secure parking at their destinations. Currently bicycle racks can be found at most major destination points such as schools, parks, Downtown, Escondido Public Library, Westfield North County Regional Shopping Center and various other shopping centers throughout Escondido.



Although bicycle parking exists at these locations, they are not provided in great quantity. For example, bicycle parking in Downtown Escondido is limited to a few racks recently installed along Grand Avenue, within Grape Day Park and around the City Hall complex. Other bikes

generally are secured to trees, benches or sign posts. Some individual business provide bike racks, but these also are limited. Bike lockers are present at the Escondido Transit and Sprinter Station on Valley Parkway/Quince Street. Schoolyard or wheelwell racks and undulating bicycle racks are the most common bicycle racks throughout the City. The schoolyard racks are adequate if they are in a secured or fenced in area. These racks do not secure the bike frame, only the front wheel. Handlebar conflicts are also common on these racks. Undulating, or ribbonracks, improve space efficiency and allows at least one wheel and the bike frame to be locked when properly designed and sited. When bikes are secured improperly, bike parking is minimized. Inverted U-racks, or racks that can secure the entire bike are preferred and recommended for installation in commercial areas, schools, parks and local businesses. Custom racks that showcase the local businesses are also encouraged to improve aesthetics as long as the racks provide adequate security. A variety of custom racks have been installed throughout the Downtown area.



Adequate bicycle parking should be incorporated into any new development of redevelopment project within the City. Bicycle parking should be given a balanced level of importance when considering vehicle parking improvements or development. Increased adequate bicycle parking in high pedestrian and commercial areas will help encourage the use of cycling as a means





of transportation and multi-modal trips. In high commercial areas where bicycle traffic is more prevalent, increased in bicycle parking is recommended. Bicycle rack type plays a role in the utilization of the bike racks. A successful bicycle rack design enables proper locking. Enabling proper locking means the user must be able to secure a typical size U-lock around the frame and one wheel to the locking area of the rack. Racks that support the bicycle but either provide no way to lock the frame or require awkward lifting to enable locking are not acceptable unless security is provided by other means such as a locked enclosure or monitoring by attendants.



Bike Racks Installed Throughout the Downtown Area



GOALS, OBJECTIVES AND POLICIES 4

4.1 Goals and Objectives

A balanced circulation system uses multiple modes of travel, including bicycles and pedestrian facilities. Goals provide the context for specific objectives and policy actions discussed in the Bicycle Master Plan. The goals support the long-term vision and serve as the foundation of the plan. Goals are broad statements of purpose while objectives provide direction and serve as implementation tools. In addition to the supporting goals and objective provided in the City's General Plan, the following are key goals and objectives of the Bicycle Master Plan that were established with input from the community at the public workshops:

Goal 1

The Bicycle Master Plan will identify a integrated system of complete streets that include bicycle lanes, routes or paths throughout the city, along with support facilities which when implemented will serve local and regional commuting and recreating bicyclists.

Objectives

1. Continue to plan for and recommend funding with SANDAG and cities within the County of San Diego for non-motorized transportation plans to ensure a regional connected system of bicycle facilities.
2. Actively apply for regional, state, and federal grant funds to implement bikeway projects.
3. Update the City's Bikeway Plan on a regular basis to reflect new policies and/or requirements for bicycle and pedestrian funding.
4. Monitor regularly bicycle-related accidents, and review the data to determine if facility improvements are needed to reduce accident levels.
5. Adopt bicycle parking standards for new and expanding employment centers, schools, transit centers, park-and-ride lots, bus routes, shopping centers and public and semi-public recreational areas to enhance and encourage cycling as a viable mode of transportation.
6. Accommodate cyclists on all major roadways as funding becomes available or when roadway improvements are made.
7. Increase bike lane width by reducing vehicle lane width where available and appropriate.
8. Coordinate efforts with the Chamber of Commerce and business community to encourage bicycling and offer educational programs to inform the community about the benefits and safety of cycling.



9. Encourage the installation of bicycle racks on buses and rail service and bicycle racks and lockers at transit stations, employment centers, and shopping centers.

Goal 2

Provide a network of bicycle facilities that promote, encourage, and accommodate nonmotorized travel will serve to reduce the dependence on motor vehicles while improving air quality, cycling safety, and the individual health of cyclists.

Objectives

1. Coordinate roadway improvements to ensure that bicycle facilities are temporarily accommodated by identifying alternate routes during roadway construction projects.
2. Coordinate roadway improvements to ensure that existing bicycle facilities are integrated and constructed with Capital Improvement Projects (CIP) and other development projects.
3. Prioritize and implement bikeway improvements based on considerations of safety, commuting needs, and route connectivity.
4. Accommodate a wide range of user ages and abilities with a Class I bicycle facilities along public easements, railways, and utilities to further enhance the bicycle network.
5. Develop and implement a destination-based signing system for the bikeway network.
6. Continue to improve Class I bikeways along Escondido Creek and the Sprinter railway and identify opportunities for other Class I bikeways along public utility easements and linkages to the San Dieguito River Park's Coast to Crest Trail.
7. Regularly conduct bicycle safety and education programs to encourage safe cycling as an alternative to motorized transportation and encourage healthy, active lifestyles through various cycling programs.
8. Employ effective traffic control devices such as loop detectors, call buttons, and signage along Class I and Class III bicycle facilities, where appropriate, to increase bicycle safety and ease of cycling.

4.2 Relationship to the General Plan

The Bicycle Master Plan represents an implementation tool of the City's General Plan. The General Plan, adopted in 1990 and updated in 2012, identifies key goals and objectives supporting and encouraging the development and maintenance of bicycle facilities throughout the community as part of its complete streets network. Escondido is committed to supporting bicycling as a form of mobility and recreation. An underlying principle in planning for cyclists is



to provide a system that allows users significant mode choices and that creates a reasonable balance in accommodating those choices, without favoring one mode at the expense of all others. Bicycling is a basic, fundamental mode of transportation that in today's motorized world of travel is often overlooked as an option to help manage circulation issues and concerns. As part of the city's long-term vision contained in the General Plan, Escondido supports the planning and development of bicycle-friendly projects, streets and neighborhoods for both commuter and recreational bikers. The Bicycle Master Plan is consistent with the General Plan which is adopted by the City Council to use as a planning tool to identify bicycle facilities. Specific Goals and Policies related to bicycle facilities are contained in Section G 'Mobility and Infrastructure Goals and Policies' of the General Plan that support and encourage the interests of the cycling community and alternative transportation modes of travel.

General Plan Mobility and Infrastructure Goals

Goals 1

An accessible, safe, convenient and integrated multimodal network that connects all uses....

General Plan Bicycle Network

Bicycle Network Policy 4.1

Maintain and implement a Bicycle Master Plan that enhances existing bicycle routes and facilities; defines gaps and needed improvements; prescribes an appropriate Level of Service; outlines standards for their design and safety; describes funding resources; and involves the community.

Bicycle Network Policy 4.2

Develop and manage bicycle facilities to maintain an acceptable Level of Service as defined in the Bicycle Master Plan.

Bicycle Network Policy 4.3

Promote bicycling as a common mode of transportation and recreation to help reduce traffic congestion and improve public health.

Bicycle Network Policy 4.4

Develop bicycle routes and facilities that connect to transit stations, employment and commercial centers, schools, libraries, cultural centers, parks, the Escondido Creek trail, and other frequently visited destinations throughout the community and region where they do not already exist.

Bicycle Network Policy 4.5

Coordinate with adjacent jurisdictions the development of bicycle routes that provide connectivity between the communities.

Bicycle Network Policy 4.6

Incorporate bicycle parking facilities in public places such as transit stops, libraries, and parks where feasible.

Bicycle Network Policy 4.7

Require larger new development projects (e.g., employment centers, educational institutions, and commercial centers) to provide connections to existing and proposed bicycle routes, as well



as bicycle parking, personal lockers, showers, and other bicycle support facilities to encourage biking.

Bicycle Network Policy 4.8

Support education programs for motorists and bicyclists regarding bicycling safety and the public health and environmental benefits of bicycling.

General Plan – Complete Streets Assessment

Complete Streets Policy 2.1

Ensure that the existing and future transportation system is inter-connected and serves multiple modes of travel, such as walking, biking, transit, and driving for safe and convenient travel.

Complete Streets Policy 2.4

Evaluate access, safety, and convenience of various transportation modes for every project involving the following eight user groups: pedestrians, children, disabled individuals, seniors, bicyclists, transit riders, motorists, and goods and services

A Complete Streets Element is one of the recently mandated components that each local government in California must include in any update to their General Plan. The purpose is to ensure that a balanced transportation system is provided. Creating complete streets involves instituting smart growth policies that ensure roads function as a truly “multimodal” transportation network. Efficiency, access, and safety for all modes of travel, including pedestrian, bicycling, and transit will afford residents options when trip planning and lessen dependence on single passenger auto-mobile travel and reduce Vehicle Miles Traveled (VMT).

Escondido's General Plan's Quality of Life standard strives for a Level-of-Service (LOS) 'C' that provides for minimal delays. The Complete Streets Street Network Policy B.1.13 establishes a lower Level-of-Service (LOS) standard for vehicular traffic, which will permit increased densities and mix of uses to increase transit ridership, biking and walking. However, LOS D shall be maintained for pedestrian, bicycle and transit facilities.

General Plan - Transit System

Transit System Policy 5.4

Coordinate with the NCTD to accommodate transit centers and major stops with adequate bicycle and pedestrian access and secure bicycle storage where appropriate. Include facilities that are well designed, provide appropriate lighting and are safe, comfortable, and attractive

Transit System Policy 5.6

Work with the High Speed Rail Authority (HSRA), SANDAG, and other pertinent agencies to coordinate the development of a high-speed rail station and ensure its compatibility with adjoining uses and connectivity with local pedestrian, bicycle, transit, and automobile transportation systems.

Transit System Policy 5.7

Provide connections to transit stations by identifying roadway, bikeway, and pedestrian way improvements to be constructed within ½ mile of every major transit station.

General Plan Resource Conservation – Trail Network



Goal 2

A network of trails that connect the community and provide opportunities for recreation and alternative transportation use.

Trail Network Policy 2.2

Expand and improve the Escondido Creek trail within the city's trail network that links urban areas with rural and open space areas to promote opportunities for recreation, education, interpretation, and alternative transportation.

Trail Network Policy 2.4

Establish a continuous network of landscaped pedestrian and bicycle paths within urbanized areas that provides internal circulation and links Escondido's districts and neighborhoods.

Complete Streets Assessment - Bicycles

Bicycle Network Policy B.3.1

Maintain and implement a Bicycle Master Plan that enhances existing bicycle routes and facilities; defines gaps and needed improvements; outlines standards for their design and safety; describes funding resources; and involves the community. All new development shall be consistent with the applicable provisions of the Bicycle Master Plan.

Bicycle Network Policy B.3.2

Promote bicycling as a common mode of transportation and recreation to help reduce traffic congestion and improve public health.

Bicycle Network Policy B.3.3

Coordinate with adjacent jurisdictions to develop bicycle routes that provide connectivity between the communities.

Bicycle Network Policy B.3.4

Incorporate bicycle parking facilities in public places such as transit stops, libraries, and parks, where feasible.

Bicycle Network Policy B.3.5

Require large new development projects (e.g., employment centers, educational institutions, and commercial centers) to provide bicycle support facilities such as bicycle parking, personal lockers, showers, etc., to encourage biking.

Bicycle Network Policy B.3.6

Support education programs for motorists and bicyclists regarding bicycling safety and the public health and environmental benefits of bicycling.

Bicycle Network Policy B.3.7

Require that new development provide connections to existing and proposed bicycle facilities.

Bicycle Network Policy B.3.8

Develop and manage bicycle facilities to maintain LOS D or better during all times.

COORDINATION WITH EXISTING PLANS 5

5.1. Applicable Legislation

Reduced greenhouse gas (GHG) emissions, energy efficiency and reduced traffic fatalities and injuries are significant benefits attributable to cycling. It will be especially difficult to reach State of California GHG reduction targets for transportation without increasing the amount of cycling. The future impact of several recent legislative acts may therefore be enhanced by the implementation of effective bikeway master plans. The California Environmental Protection Agency – Air Resource Board has indicated that replacing one percent of vehicle trips with bicycle trips in San Diego County would reduce vehicle miles traveled by 229,525 miles per year, as well as reduce smog-forming gases by 0.31 tons/day, particulates by 0.06 tons/day and carbon monoxide by 1.74 tons/day. The City recently prepared a draft Climate Action Plan as part of the 2012 General Plan Update. Through this Escondido Climate Action Plan (E-CAP), the City has established goals and policies that incorporate environmental responsibility into its daily management of residential, commercial and industrial growth, education, energy and water use, air quality, transportation, waste reduction, economic development, and open space and natural habitats to further their commitment.

Assembly Bill 32 - Global Warming Solutions Act

AB 32 calls for the reduction of greenhouse gas emissions and sets the 2020 emissions reduction goal into law. This act also directs the California Air Resources Board to develop specific early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit.

Senate Bill 375 - Redesigning Communities to Reduce Greenhouse Gases

This bill seeks to reduce vehicle miles traveled through land use and planning incentives. Key provisions require the larger regional transportation planning agencies to develop more sophisticated transportation planning models, and to use them for the purpose of creating “preferred growth scenarios” in their regional plans that limit greenhouse gas emissions. The bill also provides incentives for local governments to incorporate these preferred growth scenarios into the transportation elements of their general land use plans.

Federal Goals and Policies - Congress recognized that bicyclists and pedestrians have the same origins and destinations as other transportation system users and that it is important for them to have safe and convenient access to airports, ports, ferry services, transit terminals, and other intermodal facilities as well as to jobs, services, recreation facilities, and neighborhoods. The Transportation Equity Act for the 21st Century (TEA-21), like its predecessor the Intermodal Surface Transportation Efficiency Act (ISTEA), has laws and policies that apply to non-motorized transportation. TEA-21 placed a strong emphasis on creating a seamless transportation system that all users can enjoy and use efficiently and safely. The TEA program provides approximately thirty million dollars to fund approximately fifty bicycle and pedestrian projects annually in California.

Federal goals related to non-motorized transportation are to increase non-motorized travel to 15% of all trips and to reduce the number of non-motorized travelers killed or injured in traffic



collisions by at least 10% (TEA-21, 1998). TEA-21 provides the funding opportunities, planning processes, and policy language by which states and metropolitan areas can achieve these ambitious national goals.

Compliance with State Law, Goals and Policies - Pursuant to California law, this plan is to complement the City of Escondido's General Plan Circulation Element to direct roadway improvements to include bikeway facilities. By law, California cities must adopt their bikeway master plans (termed "Bicycle Transportation Plans" (BTPs) by the California Department of Transportation (Caltrans)) no earlier than five years prior to July 1 of the fiscal year in which the state's Bicycle Transportation Account (BTA) funds are to be granted. This five year cycle should help to make certain that *General Plan* changes affecting bicycle transportation will be accommodated in a timely manner.

The California Vehicle Code and Streets and Highway Code (CVC Sections 21200-21212 and 39000-39011 and SHC Sections 885-886, 887-888.8, and 890-894.2) states that "Every person riding a bicycle upon a roadway has all the rights and is subject to all the provisions applicable to the driver of a vehicle."

Assembly Bill 1358 - Complete Streets - The Complete Streets Act, enacted in 2008, requires city and counties to incorporate provisions for multi-modal streets into their General Plan Circulation Elements starting in 2011. Complete streets are streets that provide for all modes of transportation, including pedestrians, bicyclists, and vehicles. A network of complete streets enables safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities can safely move along and across a network of multimodal streets. Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able to safely move along and across a complete street. The complete streets framework includes not only retrofitting existing streets to increase safety for all, but changing design standards so that streets are designed with all users in mind from the outset. Complete street policies direct transportation planners and engineers to consistently design streets for all users. Some design techniques typically used for creating complete streets include reducing lane widths, reducing the number of lanes, adding sidewalks, installing raised medians and enhanced pedestrian crossings, adding on-street parking and improving public transit accommodations.

SANDAG Mobility 2030

A goal of SANDAG's Mobility 2030 is to improve the transportation component of a much larger vision to sustain and improve our region's quality of life. The premises of Mobility 2030 lies in better connecting our freeway, transit, and road networks, to our homes, schools, work, shopping, and other activities. The ultimate success of this Plan will be measured by how well smart growth is implemented as our communities are developed and redeveloped over time. This helps strengthen the land use – transportation connection and offers regional transportation funding incentives to support smarter, more sustainable land use. The plan emphasizes alternative transportation needs through planning for pedestrians and cyclists. The region's transportation system needs to provide a full range of transportation choices in a balanced and integrated manner. Sidewalks and streets do not accomplish this alone. A complementary relationship must exist between the transportation system and land uses that it serves. Emphasis areas include: making bicycle and pedestrian friendly communities, designing and planning for pedestrians and access to public transit and bicycle facilities. The importance of adequate bike parking and other support facilities along with ongoing education and promotional programs is emphasized as a key component to a successful bicycle mode of



transportation. Amenities that are discussed in detail include; bike parking, on-demand bike lockers, support facilities and bicycle education. The City of La Mesa's Bicycle Facilities Plan contains policies and that will be consistent with the goals and action items of SANDAG's Mobility 2030.

SANDAG Regional Bicycle Plan (2010)

The development of the City of Escondido Bikeway Master Plan is consistent with the development of SANDAG's San Diego Regional Bicycle Plan. Regional corridors within the City must be consistent in both plans to reflect the best possible route through the City. Regional corridors through the City include the following:

- Escondido Creek Channel Class I bike path
- Centre City Parkway Class II bike lane
- Inland Rail Trail Class I bike path

SANDAG policy No. 031, Accommodating Bicyclists and Pedestrians

Section 4(E)(3) of the TransNet Ordinance reads: "All new projects, or major reconstruction projects, funded by revenues provided under this Ordinance shall accommodate travel by pedestrians and bicyclists, except where pedestrians and bicyclists are prohibited by law from using a given facility or where the cost of including bikeways and walkways would be excessively disproportionate to the need or probable use. Such facilities for pedestrian and bicycle use shall be designed to the best currently available standards and guidelines."

This amendment to the TransNet Ordinance utilizes existing bicycle and pedestrian design standards from the California Highway Design Manual, Chapter 1000 regarding bicycle facilities and the American Association of State Highway Transportation Officials (AASHTO) publishes the Guide for the Planning, Design, and Operation of Pedestrian Facilities. This document provides reasonable and widely recognized designs standards that are proposed as the standard under this amendment. The table within the new policy, *Appropriate Bicycle and Pedestrian Accommodation Measures* simplifies the bicycle and pedestrian measures for each type of roadway.

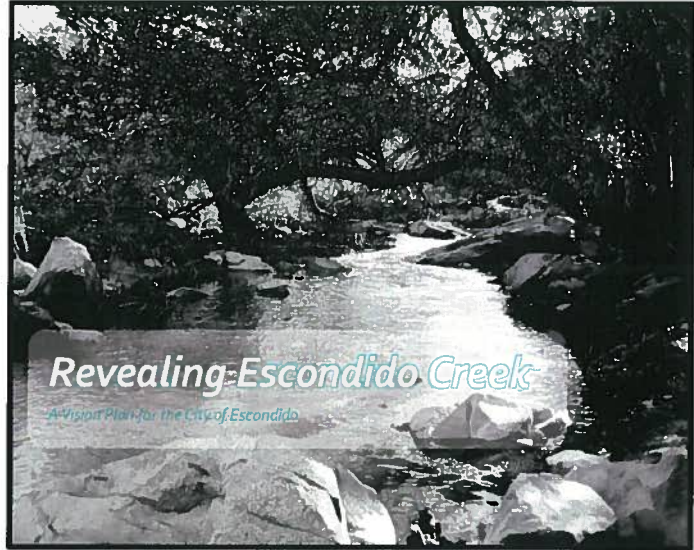
5.2 CONNECTION WITH NEIGHBORING JURISDICTIONS

The development of the City of Escondido Bikeway Master Plan coordinates bicycle onnections between neighboring jurisdictions to include the following:

- **City of San Diego Bicycle Master Plan Update (2011)**
Bikeway connections include the bike/pedestrian bridge over Lake Hodges connecting the southern area of the city to neighboring Rancho Bernardo to the south.
- **County of San Diego Bicycle Transportation Plan (2003)**
Major connections to county areas to the north and the Community of Valley Center generally are located along East Valley Parkway-Valley Center Road. Bear Valley Parkway and San Pasqual Valley Road/Highway 78 provide connection within the eastern area of the City. West Valley Parkway provides the transitions to SR 6/Del Dis Highway towards the southwestern boundary of the City.
- **CITY OF SAN MARCOS TRAILS MAP AND BIKEWAY MASTER PLAN**
Bikeway connections include the Inland Rail Trail generally located along Mission Avenue, and the Class II bike lane along El Norte Parkway.

5.3 Revealing Escondido Creek

In 2010 a study titled “Revealing Escondido Creek Vision Plan” (Vision Plan) was prepared by students of Studio 606 at the landscape architecture department at California State Polytechnic University, Pomona. The Plan was commissioned by the City of Escondido to explore opportunities to revitalize the creek and neighborhood landscapes along all portions of the creek that fall within the city limits. The Vision Plan is intended to serve as a guide illustrating how the plan may evolve over time and proposes a variety of design solutions for the issues affecting Escondido Creek, the watershed, the trail, and the community. The ‘Missing Link’



section of the bike path/trail is detailed in the “Creekfront” section of the document. Some features of the plan include a channel modification on the west side of Broadway, extending the Escondido Creek Trail through and beyond Grape Day Park from Broadway to Escondido Boulevard, and a separated bike trail bypass for cyclists on the north side of the creek, which would continue through the shopping center and require mid-block crossings at Escondido Boulevard and Centre City Parkway. There currently is an existing mid-block signalized crossing along Escondido Boulevard that provides access to the shopping center and the CCAE complex. The shopping center is private property and any proposed improvements that would affect the property would require approval by the owners of the center, and would require easements and/or purchase of appropriate area for public access.

5.4 Escondido Creek Trail Master Plan

In 2011, the Escondido City Council adopted “The Escondido Creek Trail Master Plan” which was the next step towards implementing many of the ideas set forth in the Escondido Creek Vision Plan. The study area for the Trail Master Plan is from the Escondido Transit Center on the west to Daley Ranch on the east. A central focus of the master plan is to foster healthy and active communities by improving, safety, accessibility, and aesthetics for pedestrians and bicyclists along the Escondido Creek Trail. Funding for this study was provided by the City of Escondido and a Healthy Communities Planning grant from the San Diego Association of Governments (SANDAG) and the County of San Diego Health and Human Services Agency. The study was prepared by Schmidt Design Group.



5.5 Maple Street Pedestrian Corridor Master Plan

The Maple Street Pedestrian Corridor Master Plan, which was adopted by the City Council in 2010 provides a framework for the future development of pedestrian amenities and sidewalk enhancements along Maple Street, within the existing public right-of-way, from the public parking lot #2 at Maple Street and 2nd Avenue, north on Maple Street, through the proposed plaza area, along the west side of City Hall and extending through Grape Day Park and the public parking lot to Woodward Avenue. The corridor would include design elements such as paving enhancements, addition of interpretive panels on Escondido history, signage, lighting, public art, bicycle racks and other street furniture. The plan does not include provisions for dedicated bicycle paths through Grape Day Park. The Corridor Master Plan was prepared by Schmidt Design Group, Inc. This would be accomplished with further refinements/modifications to the Grape Day Park Plan and the Corridor Master Plan.





BIKEWAY PLAN

6

6.1 Bicycle Project Prioritization

The projects in this chapter are a combination of planned and recommended bicycle facilities. Planned projects are projects that are present in existing City plans and documents but have yet to be implemented. Since these projects have yet to be implemented, prioritizing them along with the recommended projects subjects all of them to the same priority and implementation criteria. The City's implementation goals are to direct available resources towards those projects that will have a significant impact on the existing bikeway system, such as closing completing the regional links and major gaps in the existing system, and extending or developing bike paths, lanes or routes along major transportation corridors. The numbering used to identify projects within each bikeway facility class in the following sections does not necessarily imply order of implementation. Bikeway facility implementation has no specific time line, since the availability of funds for implementation is variable and tied to the priorities of the City's capital projects.

6.2 Typical Construction Costs

Bikeway facility construction costs vary widely depending on facility type. A list of typical unit construction costs in dollars is shown in Table 5.1. Though useful for preliminary cost estimates, they do not reflect potential special circumstances such as the long bridges that would be needed to span rail lines or freeways, for instance. The following sections provide generalized costs per mile for each class of bicycle facility, as well as what these costs cover, and just as importantly, what they do not. Because typical cost references often do not accurately reflect local construction cost realities, these cost estimates were based on comparisons of bikeway facility projects recently completed in the San Diego County metropolitan region.

6.2.1 Class 1 Bike Path Facilities

Because they are constructed independently of existing or programmed motor vehicle facilities, Class 1 paths are by far the most expensive of all bicycle facilities. Typical costs per mile can vary a great deal due to possible right of way acquisition, bridges, undercrossing and other potential major expenses such as extensive grading or improvements that can result from topographical constraints, utilities and facility width. For example, a Class 1 facility being incorporated into an existing utility access/maintenance road across flat terrain will require far less grubbing, grading and structural enhancements than a facility being constructed through an undeveloped area with hilly topography or sensitive resources. The cost used to determine Class 1 priority varies between \$173 to \$326 per linear foot, or approximately \$913,440 to \$1,722,507 per mile (average \$1.32 million). This cost came from two previous projects that included on the low end, minor grading and construction on flat terrain, to the higher end that included extensive construction, grading, bridges and environmental review. (*Source: City of Escondido and Santee*) Some projects do recommend the further investigation of implementing Class 1 facilities when opportunities present themselves.



6.2.2 Class 2 Bike Lane Facilities

Class 2 facility costs are approximately \$30,000 to \$44,000 per mile. This cost includes all necessary lane striping and signage, but does not include roadway widening. The cost variation is primarily due to the amount of striping and signage installed. For example, costs will be higher where substantial restriping is needed, or right of way acquisition required. The cost used in the Class 2 priority list is approximately \$44,000 per mile because most of the facilities will need to re-stripe vehicular centerlines, parking lanes, bike lanes, pavement markings, adding additional signage and in some cases painting bike lanes at conflict points.

Table 6.1 Typical Construction Costs

Description	Unit	Unit Cost*
Clearing and Grubbing	Linear Foot (LF)	\$10.00 - \$30.00
Excavation	Cubic Yard (CY)	\$30.00 - \$40.00
Asphalt Pavement (4")	Square Foot (SF)	\$3.00 - \$3.50
Asphalt Sub Base	Square Foot (SF)	\$1.00 - \$3.00
Polymer-Stabilized Soil Square Foot	Square Foot (SF)	\$1.00 - \$2.50
Bike Lane Striping and Signing	Linear Foot (LF)	\$0.60 - \$0.80 \$4.00 with signing
Pavement Markings	Each (EA)	\$40.00 - \$50.00
Fencing (Chain Link)	Linear Foot (LF)	\$20.00 - \$40.00
6' High Handrail and Black Steel Fence	Linear Foot (LF)	\$10.00
Guardrail Linear Foot	Linear Foot (LF)	\$70.00 - \$90.00
8' Steel or Concrete Bridge	Linear Foot (LF)	\$1,200 - \$1,800
36" Retaining Wall (Concrete)	Square Foot (SF)	\$32.00 - \$40.00
Lighting	Each (EA)	\$2,500.00
Traffic Control	Linear Foot (LF)	\$0.20 - \$0.40
Clean Up	Linear Foot (LF)	\$0.10 - \$0.20

To subtotal above, add 20% for contingencies, 10% for engineering and design, 5% for administration and 7% for construction management.

*2009 Estimates used for planning purposes only. Detailed estimates should be conducted during project implementation

6.2.3 Class 3 Bike Route Facilities

Class 3 routes costs are the lowest of all facility types because the only physical improvement required to be installed is route signage. The cost range of \$1,500 to \$5,000 per mile is due to the distance between signs, which can vary considerably depending upon factors such as horizontal and vertical curvature, the number the intersections and curb cuts, and how often the route changes direction onto different roadways. The cost used in the Class 3 priority lists was \$0.70 per linear foot, or approximately \$3,600 per mile. Shared Roadway Bicycle Markings or "Sharrows" are recommended where roadway speeds and ADTs are fairly low (40 MPH or less), and where route directness and the number of users is not likely to be significant. It is estimated that Shared Lane Markings cost \$150-\$200 per symbol to paint onto the roadway. Markings are to be painted on the street at no more than 250 foot intervals along the length of the route. The Class 3 priority table includes the cost of these markings if the City decides to utilize them.