Bicycle Master Plan

City of Escondido

Case File No. PHG 12-0018

City Council
Sam Abed, Mayor
Marie Waldron, Deputy Mayor
Olga Diaz, Council Member
Ed Gallo, Council Member
Michael Morasco, Council Member

Staff Recognition
Jay Paul, Associate Planner-Project Manager
Jay Petrek-Principal Planner
Peggy Chapin – Contract Planner
Homi Namdari-Assistant City Engineer
Ali Shahzad-Associate Engineer, Traffic
Samuel Cottrell-Associate Engineer, Design
Daniel Hildebrand-GIS Manager
Jennifer Kay-GIS Technician
Lori Asper – Graphics/GIS, Planning

(Final Adopted Version)

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EXECUTIVE SUMMARY

1. Project Scope

The Escondido Bicycle Master Plan is an update to the City's 1993 Bicycle Facilities Master Plan, presenting an updated and broad vision for bicycle transportation, recreation, and quality of life in Escondido. This updated Bicycle Master Plan focuses on developing a feasible plan for an interconnected network of on- and off-street bicycle facilities that serves all of Escondido's neighborhoods, and provides connections to transit centers, shopping districts, parks and other local amenities. 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 long-range plan for improving bicycling through 2030 and beyond.

The Bicycle Master Plan provide a framework for the future development of the City's bicycle network and also makes the City eligible for certain local, State, and Federal funding for bicycle projects. The City's growth over that past two decades necessitated an update to 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 or may choose to ride a bike.

The project study area was the City of Escondido and its planning sphere of influence consisting of the surrounding communities and unincorporated County areas. Adjoining areas' bicycle systems were evaluated to provide appropriate connections with the City of San Marcos, the City and County of San Diego, and 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 and Capital Improvement Projects (CIP), regular roadway maintenance, or during the development of various projects throughout the City.

2. Background

In 1993, the City of Escondido adopted a Bicycle Facilities Master Plan to plan and develop bicycle facilities throughout 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 proposed 45 miles system had been constructed.

The 1993 Bicycle Facilities Master Plan identified a system of 93 miles consisting of recreational loops and commuter bike routes, with approximately 84 miles of Class II bicycle lanes. The estimated cost to install the proposed bikeway system and support facilities 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, approximately 37 miles of Class II bicycle lanes and an approximately 9.1 miles of Class I bicycle paths have been constructed throughout the City's planning area. The City also has received over $9 million dollars in bicycle grants, which have

been used to develop a variety of bicycle facilities throughout Escondido such as bike lanes along Bear Valley Parkway, El Norte Parkway, Mission Avenue and Felicita Avenue; the Escondido Creek Bike Path; and the undercrossings at Auto Park Way and at Ash Street/Hwy 78.

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 and connects to the City's east-west Escondido Creek Class I bike path and the north-south Centre City Parkway (Old Hwy 395) Class II bike lane, which are designated as regional links in the San Diego County Regional Bike Plan. These regional links provide the backbone for the Escondido bicycle system.

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 Account (BTA) as well as 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 certain state bicycle funding. In order to qualify for available funding, the State of California requires that applicants have a master plan adopted or updated within the past five years that includes a number of specific elements related to bicycle commuting, land uses, multi-modal connections, funding, and public input. The complete list of required BTA elements and their locations in this document is provided in the Appendices of this document.

4. Plan Goals and Objectives

The recommended goals, objectives and policies provide the long-term vision and serve as the foundation of the Escondido Bicycle Master Plan, while the policies provide more specific descriptions of actions to undertake to implement the plan. There are three key objectives for the Bicycle Master Plan: **1)** to evaluate the existing bicycle network in the City and identify gaps, deficiencies and bicyclists needs; **2)** to establish goals, objectives and policies that are consistent with and expand upon the City's General Plan's Mobility and Infrastructure Element; and **3)** to develop a feasible bikeway plan with proposed projects that will provide safe, efficient and convenient bicycle travel in Escondido and to provide connection to regional destinations.

The planned system builds upon existing bicycle facilities throughout the City with enhancements to overall connectivity, support facilities and safety and education programs, which ultimately will result in a more bicycle friendly community. The anticipated result is an increase in overall bicycling and 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:

5. Key Findings and Recommendations

Findings

The commuter and recreation needs analysis identified existing deficiencies in system continuity, linkage to regional destinations, and concerns about safety. A demand analysis based on public workshops and survey indicated that most people own bicycles and the

average owner typically rides for casual recreation. Comments and suggestions from the public workshops included many specific requests such as completing the gaps in the system along the higher traveled roadways in addition to improving safety along these major arterial streets. Many of these suggestions have been incorporated into the plan. An opportunity and constraints analysis resulted in several key findings. *First*, the existing network of bike lanes is well used, but the lanes are frequently disconnected and require improved signage, markings and continued maintenance. *Second*, several of the arterial streets identified for Class II bike lanes have not been installed, which force bicyclists to negotiate heavy traffic or ride on the sidewalks.

Recommendations

This Bicycle Plan recommends the enhancement of the existing network and development of feasible projects to complete gaps in the network. The proposed bikeway system will serve all neighborhoods in Escondido, linking people with schools, parks, shopping areas, work centers, and other destinations. Bike paths will provide the important linkages and allow bicyclists to travel without having to ride along busy streets. Bike lanes and routes will provide an extra level of comfort for bicyclists negotiating city streets. Intersection, street and driveway crossing improvements would help minimize conflicts between motorists and bicyclists. New bicycle racks, secure bicycle storage/parking and support facilities would encourage bicycle commuters. Descriptions of proposed bikeway segment are provided, along with implementation issues and general costs. The Plan provides specific recommendations on safety improvements, design standards, implementation, operations and maintenance, educational programs, performance standards, and funding sources.

Among the key aspects of this Plan is the Escondido Creek Trail, which provides and 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. Another key aspect of the plan is an emphasis on improving safety, accessibility, amenities and aesthetics along the Escondido Creek pathway, as detailed in the Escondido Creek Trail Master Plan. The priority Class I missing segments along Escondido Creek include the following:

Escondido Creek Trail Gaps

- 0.6-mile section “Missing Link” between Broadway and the North County Transit Center/Sprinter Station at Quince Street.
- 0.47-mile section between Harmony Grove Road and the proposed Citracado Parkway extension project (Hwy 78 to West Valley Parkway)
- 0.46-mile section from Bevin Drive to East Valley Parkway/Lake Wohlford Road

Additional improvements along the Creek Trail include appropriate at-grade crossings and signalization at major intersections (as depicted in the Escondido Creek Trails Master Plan) and an appropriate at-grade or undercrossing at El Norte Parkway.

The proposed system includes a total of approximately 100 miles of new bikeway facilities in addition to the 49 miles currently in place, which includes up to 50 miles in recommended bike routes. Figure ES 1 illustrates the proposed bikeway system that resulted from community input, plan development and the refinement process. The total cost of the recommended projects is estimated to be about $4.38 million, with the majority of that cost split equally between completion of the Class I bike paths and Class II bike lanes. 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 *	9.11	1.07	10.18
Class II Bike Lane **	37.57	49.68	87.25
Class III Bike Route **	1.33	50.19	51.52
Freeway Shoulder	1.8	0	1.8
Total	49.8	100.94	150.75

* Only includes paths planned within Escondido or Planning Area, does not include existing paths in City of San Diego or across Lake Hodges Bridge.

**Includes portions of bike lanes and routes currently within or planned within the county jurisdiction, but within the City's General Plan area providing connections to existing or planned bikeway facilities. Does not include those sections in the City of San Marcos and City of San Diego.

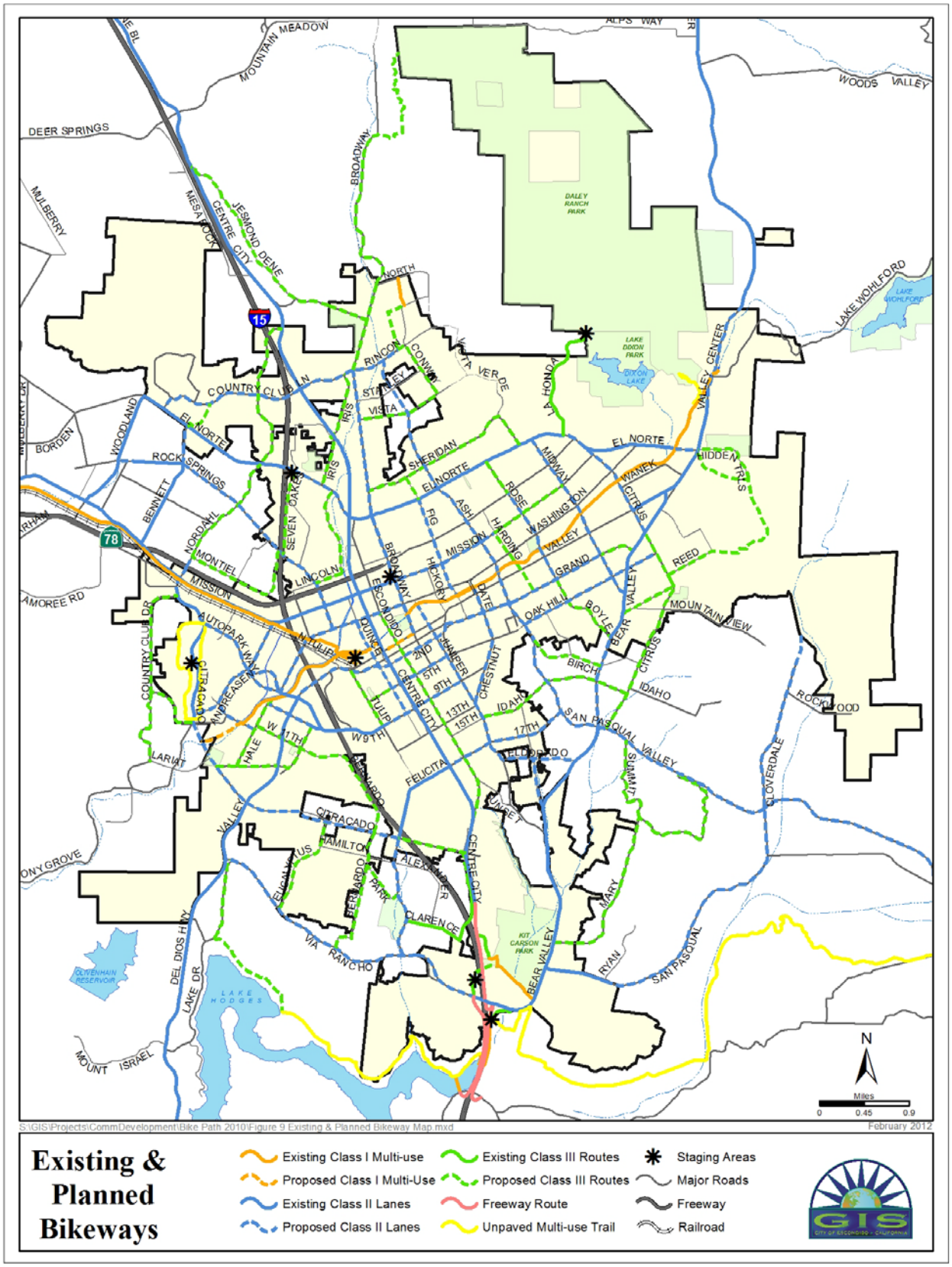
Table ES 2
Conceptual Cost Estimate Summary

Facilities	Cost
Class I	$2,022,240
Class II	$2,185,964
Class III	$180,687
Total	**$4,388,891**

* Costs do not reflect any right-of-way, enhanced street crossings, traffic signals, undercrossing, etc.

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).

Figure ES 1 Existing and Proposed Bicycle Facilities



INTRODUCTION 1

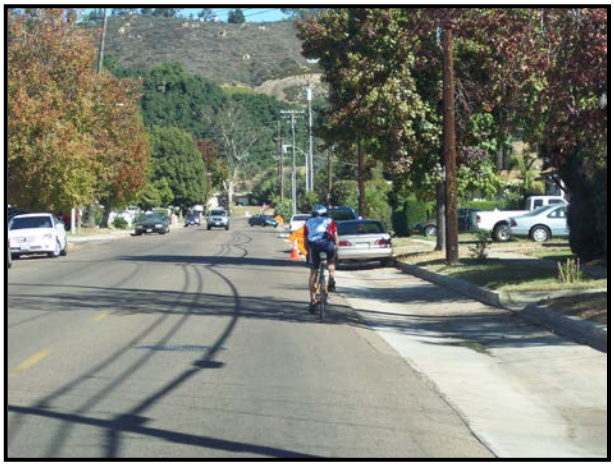
1.1 Project Scope

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. Included in this report is the current circulation element, existing and proposed land uses, existing and proposed bicycle facilities along with accident data, bikeway facility types, activity locations, public transportation and policies related to bicycle facilities. The plan also will be used for pursuing grant funds and to coordinate improvements through Capital Improvement Projects. This plan is conceptual, since precise alignments and details will be determined during subsequent implementation of specific facilities.

Escondido Creek Trail adjacent to NCTD Station

1.2 Project Objectives

The key objectives 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, recommended 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.

Design Consideration

Bicycles can be accommodated on streets through good design at the project level; but in order for bicycle planning efforts to be most effective, projects must be planned and integrated as part of a systems approach. Rather than building bike facilities individually and/or in isolation, it is important to consider developing projects that support the overall vision of a continuous, interconnected bicycle network. The network should include multiple bikeway elements and serve a range of user types and bicycle skills/comfort levels. A common typology describing this range of biking abilities and comfort levels (and mnemonic for remembering them) is found by remembering the "ABCs."

> **"A"** is for Advanced Cyclist — These are the experienced cyclists with a high comfort level who will bike under most traffic conditions and on most street types. Advanced bikers will likely ride even when no bicycle facilities are present, even on heavy volume arterials. As such, they may be the most visible and outspoken bikers in a community before bicycle facilities are developed.
>
> **"B"** is for Basic Cyclist — These are the interested but less experienced adult or teenaged cyclists who are less confident and comfortable biking in traffic without special facilities or provisions. They may feel very comfortable riding on a separated path but are not likely to ride on city streets unless bike lanes or other facilities are present.
>
> **"C"** is for Child Cyclist — These are the least experienced and most vulnerable cyclists who should never ride on heavy volume streets without bicycle facilities, special safety provisions, or parental accompaniment/supervision.

The bikeway system should plan for and accommodate all three experience/comfort levels. The selection of which facilities to build and where to build them should reflect the existence of all three levels and their varying degrees of comfort and safety using different facility types. Only about 5 percent of all bikers fit into the "advanced cyclist" category; 95 percent of cyclists overall are "basic" or "child" cyclists. In order to design a system that meets everyone's needs, planners and engineers must think more intentionally about how to accommodate bikers with relatively less experience and comfort riding.

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.

Source: Google Images

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 Escondido, 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.

- The bikeway system should 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.

- 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 generally would 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.

- The bikeway master plan should consider methods not only to promote the benefits of cycling, but also to enhance safety by educating both cyclists and drivers to coexist. Encouragement, education and enforcement are as important as physical planning and design.

1.5 Field Work and Methodology

Initial field work began in 2007 and updated field work was conducted in 2011 and 2012. Much of the fieldwork consisted of either driving or cycling existing bicycle facilities and other streets to obtain first-hand experience of the City. The rest of the field work consisted of the 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 was used to characterize facility siting factors such as age, commuting, population, employment densities and accidents.

1.6 Community Input

The City conducted two public workshops at the Escondido City Hall on 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

Complete Streets refers to design concepts and principles that focus more specifically on the design of the street for all potential users – transit, bicyclists and pedestrians as well as cars. In the past, modes other than the auto may not have been prioritized and many performance measures of our roadways have focused on moving autos. Assembly Bill 1358, the California Complete Streets Act of 2008, requires cities and counties to include complete streets policies as part of their general plans so that roadways are designed to safely accommodate all users. There is no singular design prescription for Complete Streets; each one is unique and responds to its community context. 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. A complete street may include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more. A complete street in a rural area will look quite different from a complete street in a highly urban area, but both are designed to balance safety and convenience for everyone using the road (National Complete Streets Coalition). 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.

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, the Escondido Creek Trail and the Inland Rail Trail also work effectively to reduce auto-mobile trips throughout 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 Trail and Escondido-Oceanside Inland Rail Trail, improve the linkages that provide additional commuting and recreational opportunities, and also foster better health.

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, installing raised medians, and coordinating traffic signals effectively reduce potential conflicts between motorized vehicles, bicyclists, and pedestrians. Park-and-ride facilities continue to be coordinated with Caltrans to promote ride sharing and reduce vehicle miles traveled.

1.9 Compliance with State Law

Pursuant to California law, this plan is to complement the City of Escondido General Plan 2012 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 Escondido 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, the Parks, Trails and Open Space Master Plan, and the Escondido Creek Trail Master Plan. Whenever possible, Class III 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 and Implementation Plan).

Current Constraints to Cycling

High Motor Vehicle Speeds
Fortunately, some of the major roads that have higher speeds and traffic counts have bike lanes built into them, such as Bear Valley Parkway, Centre City Parkway and El Norte Parkway. Experienced cyclists generally are not deterred by adjacent motor vehicle speeds when on a Class II bike lane. However, 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 these roadways.

Highway Crossings
The City of Escondido has two major 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 crossings, major intersection crossings and midblock crossing of major roadways can be a barrier to bicycle travel. In some instances, bicyclists have to cross high speed vehicular off and on ramps, in many cases maneuvering through both within a relatively short distance. Undercrossing are provided along the Escondido Creek Trail at Auto Park Way and Ash Street, but bicyclists and pedestrians still find it difficult or intimidating to cross mid-block at some major roadway crossings such as El Norte Parkway and Midway Drive, and may find it inconvenient to walk or bicycle to nearby signalized intersections.

Narrow Roadways
Many roadways in Escondido on which Class II bike lanes are proposed (generally Collector Roads) have adequate rights of way to accommodate bike lanes. However, implementation of some of the proposed lanes may be constrained due to a lack of available physical space under existing conditions. The width of the existing lanes, center median/turn lane, presence of on-street parking and/or physical condition of the outside lane/shoulder (such as Second Avenue, Country Club Lane, and Washington Avenue) may preclude the striping of bike lanes. Installation of Class II bike lanes on these roadways would require restriping, possible reduction of lane widths and removal of on-street parking. Some missing sections of Class II bike lanes also currently are located within the County's jurisdiction (such as Bear Valley Parkway. San Pasqual Valley Road and Citracado Parkway/Gamble Lane). Improvement of these sections generally would require road widening as part of a County related project. Class III bike routes (with Sharrows) may be an interim solution for these routes where appropriate.

1.12 Recommendations and Priorities

Bicycle Route Recommendations
The recommended bike routes are intended to take advantage of and to be integrated with existing and programmed roadways, and existing bicycle facilities to address cyclists' concerns for safety and connectivity. Class I facilities are proposed along the Escondido Creek Trial 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 and certain neighborhood areas. Bikeways that connect to schools and parks on low volume and/or residential streets are normally planned as Class III 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 III bike routes are recommended. The facilities are shown in Figures 6-1 through 6-3 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

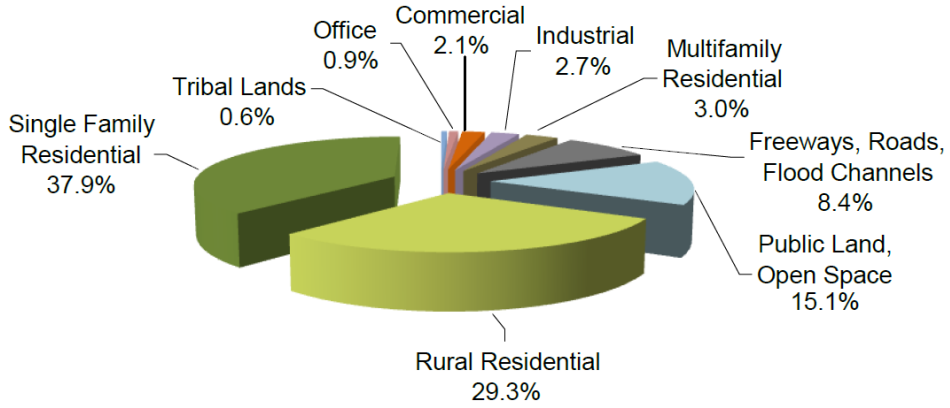
Lake Dixon Reservoir

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 Lake Hodges and the City of San Diego, and on 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).

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 and 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 limited bicycle facilities and high traffic volumes, are frequently used by bicyclists since these roadways connect to stores, employment area, 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 represent 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 *(SANDAG update estimates Sept. 11, 2012)* Escondido's population is approximately 143,944 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 32.9 and the household median size is 3.12 persons. 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 2.4).

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 and 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 of patrol vehicles are expected. A wide physical separation is recommended where a Class 1

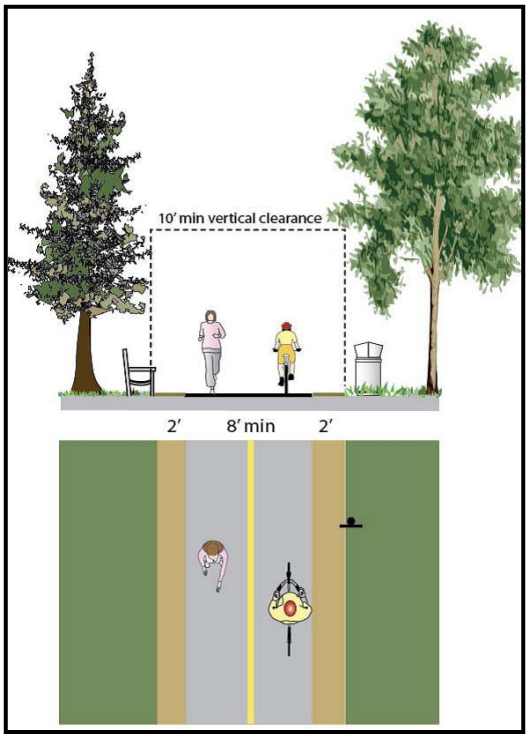
Inland Rail Trail along Escondido Creek

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. Lighting should be provided in locations where evening use is anticipated or where paths cross below structures.

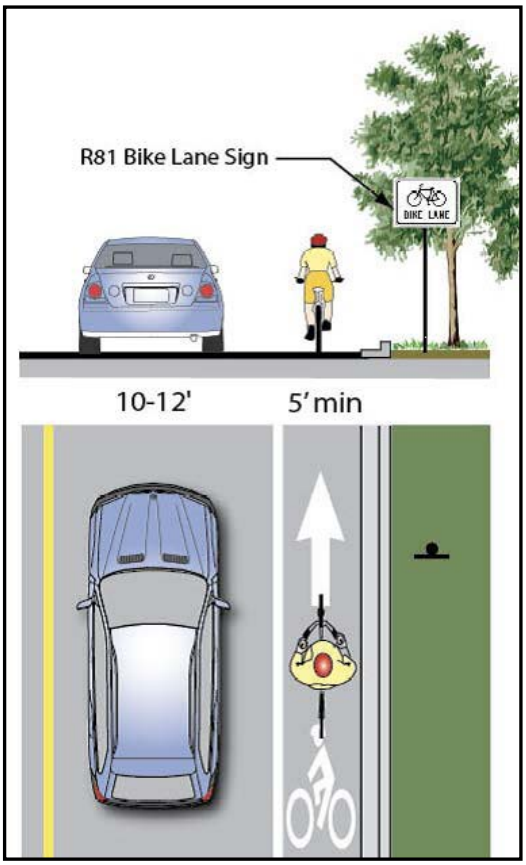
2.2.2 Class II Facilities

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.

Class 2 Bike Lane El Norte Parkway



Class 1 Bike Path

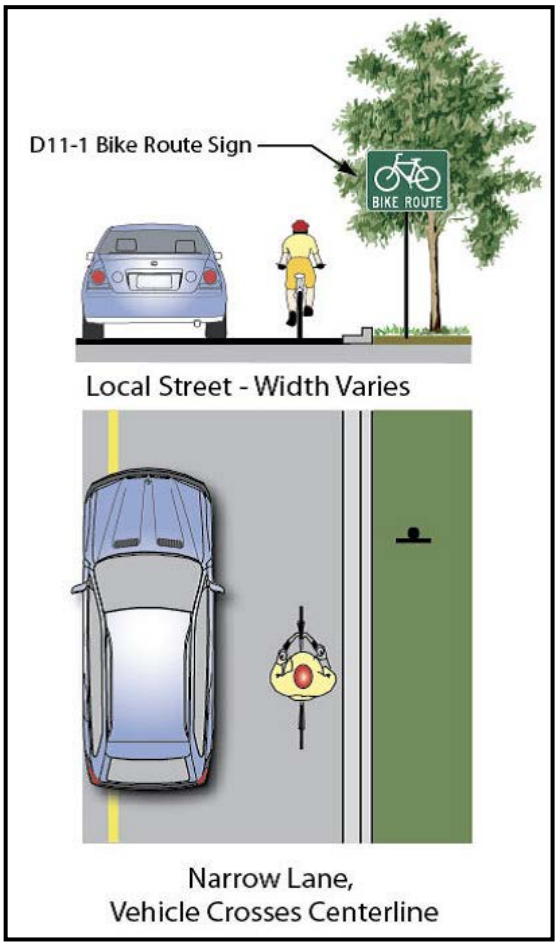


Class 2 Bike Lane
Source SANDAG Bicycle Design Guidelines Alta Planning + Design 2009

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.

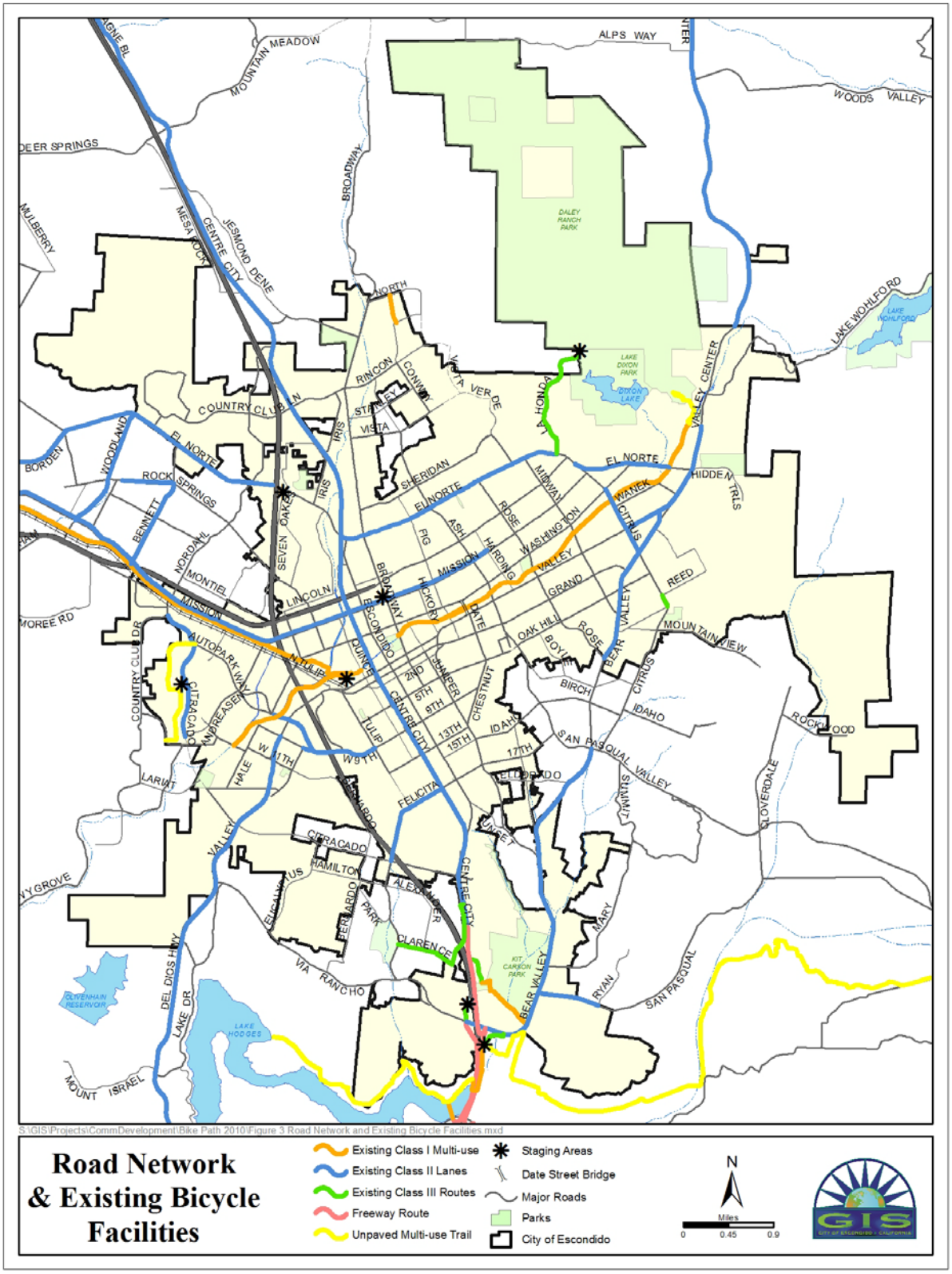


Typical Class 3 signs and Sharrows

2.3 Existing Bicycle Facilities

Since the adoption of the 1993 Bicycle Master Plan, approximately 37 miles of bicycle lanes and 9.1 miles of Class I pathways have been constructed throughout the Escondido planning area utilizing CIP funds and state and federal grant funds. Transnet funds and development impact fees were used to install bike lanes along Citracado Parkway, El Norte Parkway, the SR78 Bridge widening at Nordahl, and in conjunction with Transportation Development Act Funds (TDA) construction of the Escondido Creek Undercrossing at Auto Park Way and at Ash Street. Developer fees were used to install bike lanes and traffic signal loop detectors along Washington Avenue and El Norte Parkway, and the bicycle path along Escondido Creek north of Washington Avenue. 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, the Date Street Bridge, and participated in the Escondido Creek Path improvements for Phase II, Washington to Harding St., and Phase III, Harding St. to Broadway.

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	Project Completed Jan 2014 City contributed $389,380 total project cost $546,880.
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 Street/SR 78 (Final Design)	$100,000	Final design completed in 2011 by City Engineering staff.
2004	9th 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 9th 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
Total Grants		**$9,716,689**	

2.4 Trail Connections

The trail head/staging area on La Honda Drive serves the Daley Ranch open space preserve. The trail head and parking area on Sunset Drive and also at 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

Source: Google Images & Flickr.com

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 usually are 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 the Highway 78 corridor, making short trips to 15 stations, for a total travelling time of 53 minutes from end to end. Each 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. There also are six park-and ride lots located throughout Escondido.

2.7 Location of Shower Facilities and Public Restrooms

There a limited public showers available 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 Location 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 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 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, which can include citations and/or written warnings. 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.

Source: Google Images, Flixya.com

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 to 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 for education and promotional programs such as RideLink's annual Bike to Work Day..

Professional riders on a closed course

Source: Google Images and carfreedays.com

The following maps are a collection of GIS data gathered and created for use in analysis throughout the Bicycle Master Plan project.

Figure 2.3 General Plan Circulation Element

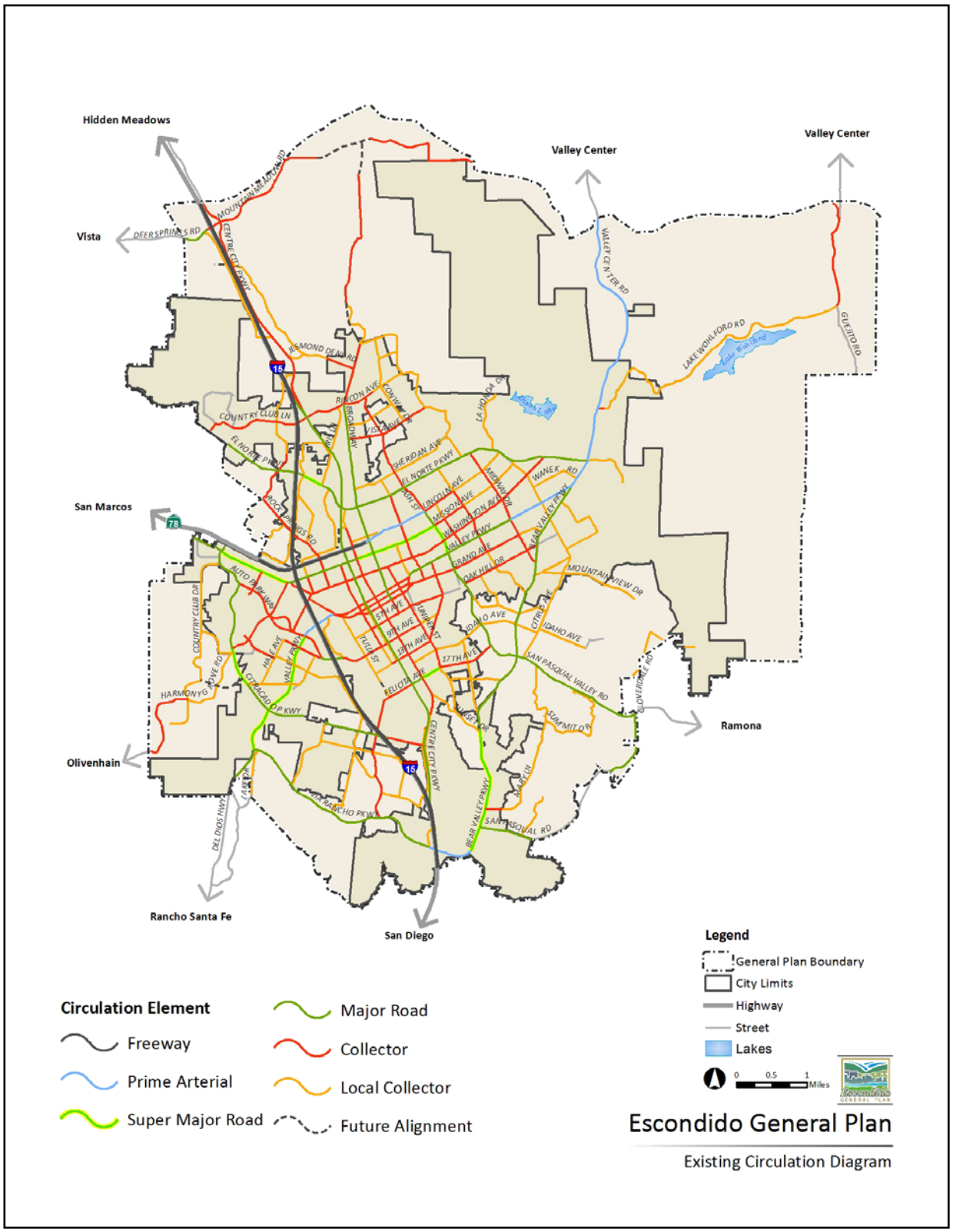


Figure 2.4 General Plan Land Use Map 2012

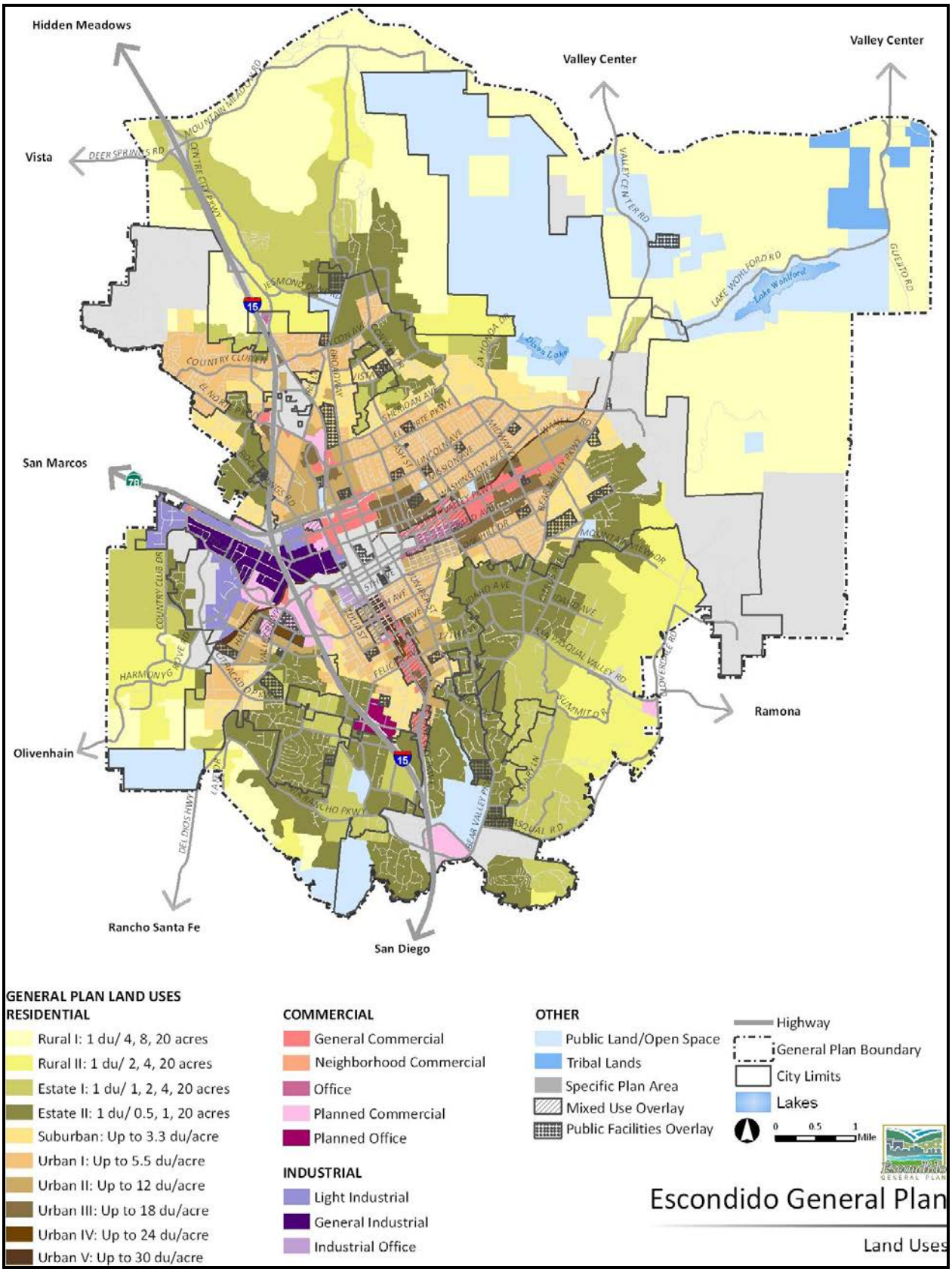


Figure 2.5 General Plan Transit Routes 2012

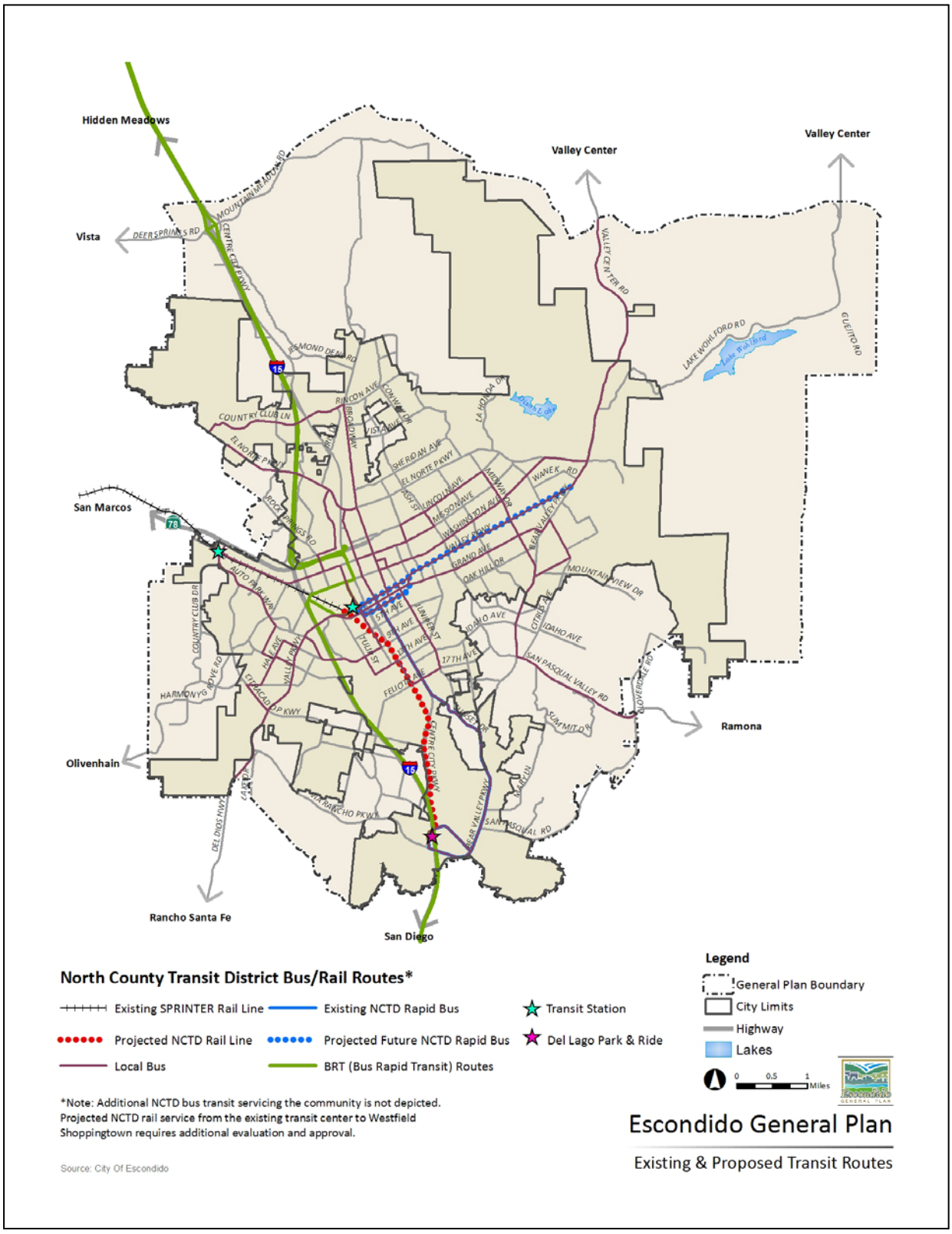


Figure 2.6 General Plan Existing Land Uses 2012

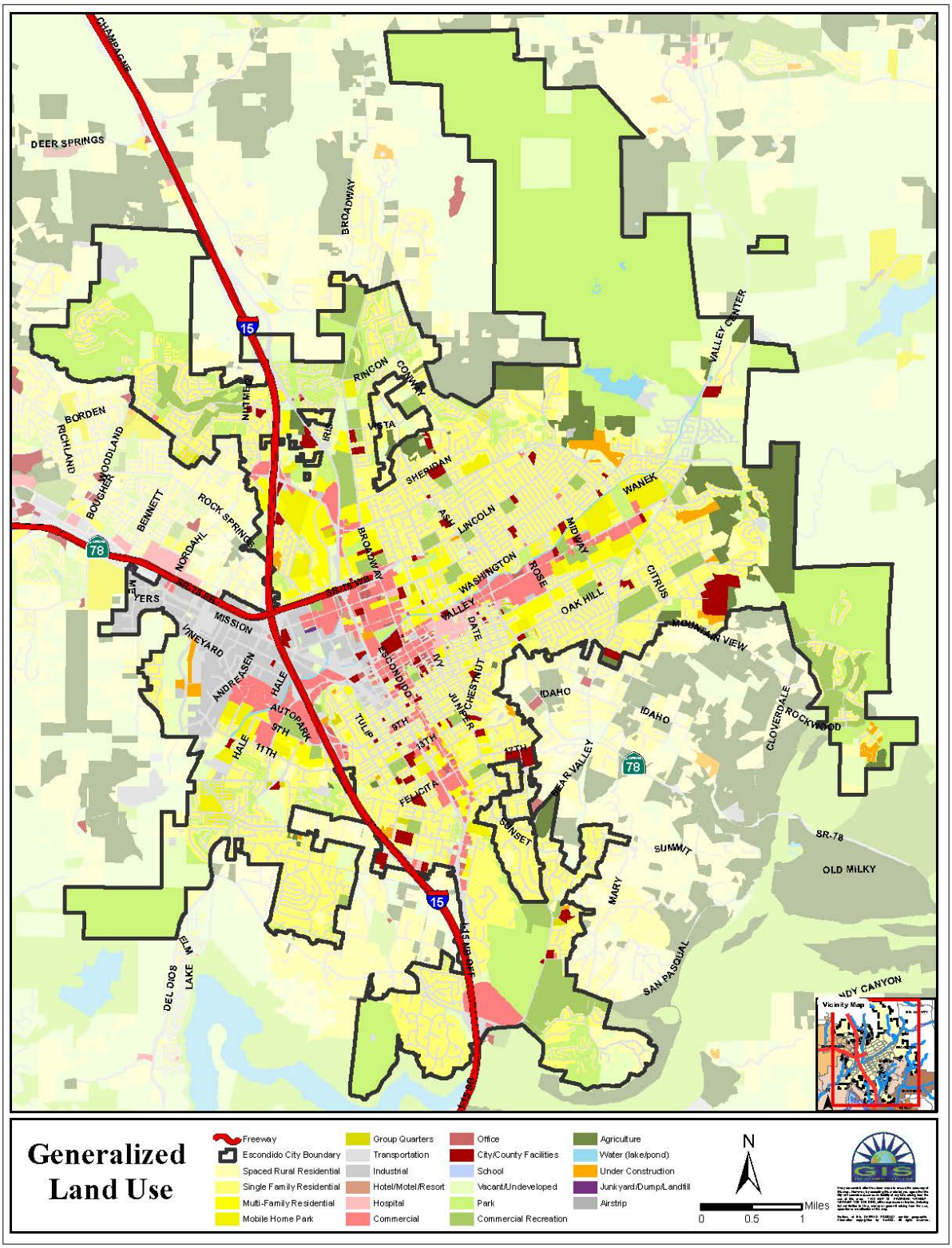
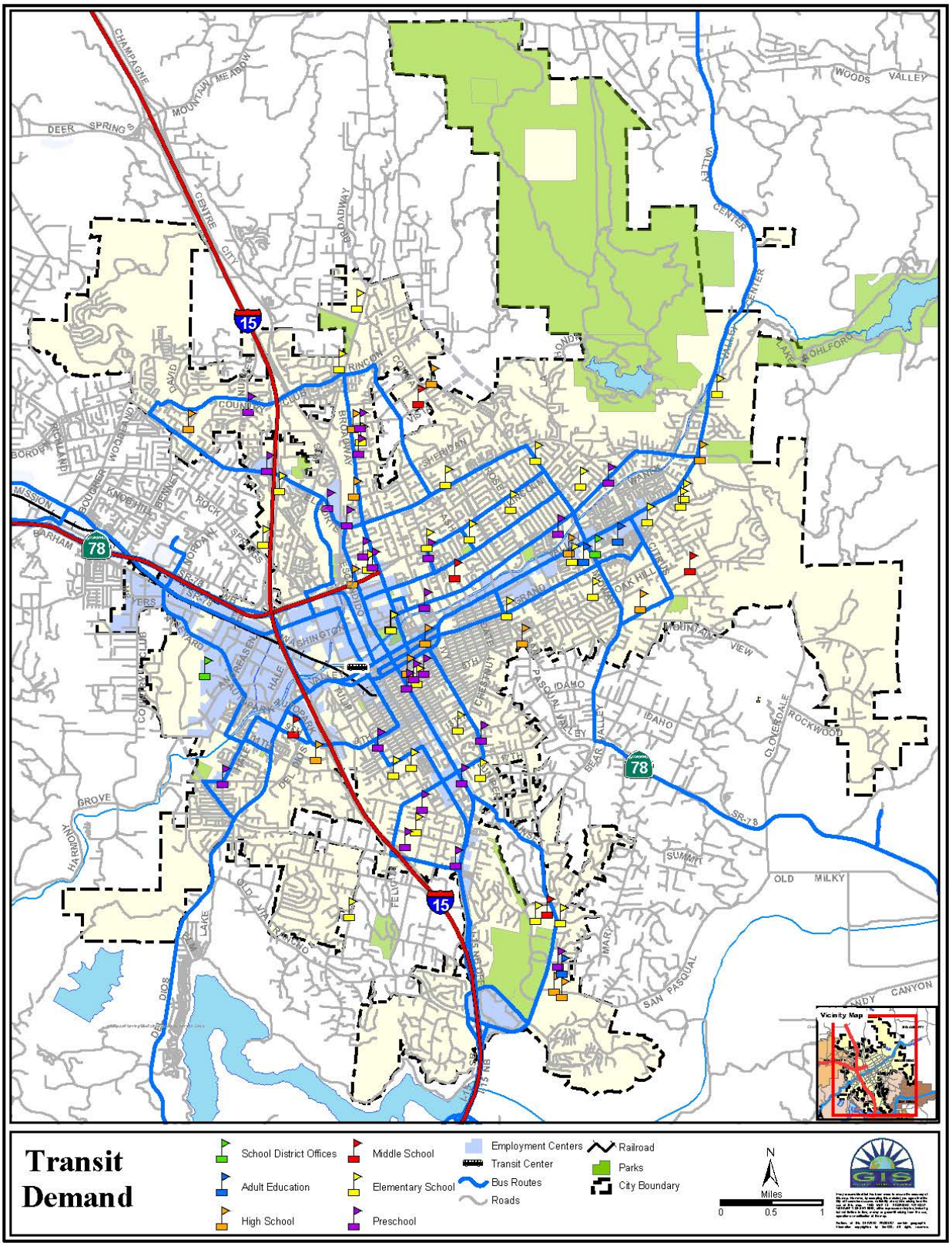


Figure 2.7 General Plan Transit Demand-Activity Centers 2012



BICYCLE NEEDS ASSESSMENT 3

3.1 Needs Assessment Summary

This chapter reviews various factors that affect the relationship between bicycle use and development of a complete bikeway system in the City of Escondido to include commute patterns, demographics and land use. The plan identifies major activity centers and public facilities where bicyclists may be destined, along with the needs of commuter and recreational bicyclists. A review of the needs bicycle user groups helps to guide the type and routing of the bikeway system. This chapter also summarizes the results of public meetings to develop this plan, providing insight into the needs of Escondido's bicycling community. One of the primary reasons for producing this Bicycle Master Plan is to maximize the number of bicycle commuters in order to help achieve transportation goals such as minimizing traffic congestion and air pollution. In order to set the framework for these benefits, local and national statistics are used as a basis for determining the benefits of enhancements to Escondido's bikeway network and implementation of educational, encouragement and maintenance programs. 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 also will review other needs such as 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 appropriate bicycle facilities or modify existing infrastructure to minimize potential conflicts.

3.2 Land Use and Demand

The methods for estimating future bicycle trip generation are less advanced and standardized than those used to predict automobile use, where historical trip generation studies and traffic counts for different types of land uses permits are more accurate estimate of future "demand" for travel. This is partly due to the limited data available on when, where and why people bicycle. Land use patterns can help predict demand and are important to bikeway planning because changes in land use (and particularly employment areas) will affect average commute distance, which in turn affects the attractiveness of bicycling as a commute mode. A comprehensive bikeway network should connect the neighborhoods where people live to the places they work, shop, recreate, or go to school.

3.3 Commute Patterns

A central focus of presenting commute information is to identify the current "mode split" of people that live and work in Escondido. Mode split refers to the choice of transportation a person selects to move to destinations (i.e., walking, bicycling, taking a bus, or driving). One major objective of any bicycle facility enhancement or encouragement program is to increase the "split" or percentage of people who choose to bike rather than drive or be driven. Every saved vehicle trip or vehicle mile represents quantifiable reductions in air pollution and can help in lessening traffic congestion. Due to the unstable nature of congestion, even small reductions in the number of vehicles on the road (especially during peak hours) can dramatically improve congestion.

Table 3.1

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)*

** 2010 Bike Commuting Data released by the US Census Bureau's American Community Survey indicates approximately 1% bicycling mode share for Escondido

3.4 Needs of Casual and Experienced Cyclists

Cyclist needs vary depending on the skill level of the cyclist and the type of trip the cyclist is taking. For the purposes of this Plan, cyclists are separated into two skill levels: casual and experienced, and design for bicycle facilities also will take into account the ABC detailed in Section 1 (*Design Considerations*). Casual cyclists include youth and adults who are intermittent riders. Some casual cyclists, such as youth under age 16, may be unfamiliar with operating a vehicle on roads. Experienced cyclists include long distance road cyclists, racers, and those who use their bicycle as a primary means of transportation. These cyclists generally feel comfortable riding on roads and with traffic. A summary of the needs of the different types of cyclists is provided below.

Table 3.2

Characteristics of Casual and Experienced Cyclists

Casual Riders	Experienced Riders
Prefer off-street bike paths or bike lanes along low-volume, low speed arterials	Can comfortably ride alongside higher volume, higher-speed arterials without bike lanes. Prefers on-street facilities to off-street paths.
May have difficulty gauging traffic and may be unfamiliar with rules of the road. May walk bike across intersections.	Negotiates streets like a motor vehicle, including "taking the lane" and using left-turn pockets.
May use less direct route to avoid arterials with heavy traffic volumes.	Prefers a more direct route
May ride on sidewalks and ride the wrong way on streets.	Avoids riding on sidewalks or on multi-use paths. Rides with the flow of traffic on streets.
Rides shorter distances: ten miles or less.	Cycles longer distances, often more than 25 miles, on a recreational ride.

The casual bicyclist will benefit from route markers, bike paths, bike lanes on low-speed streets, neighborhood routes, traffic calming, wider curb lanes, and educational programs. Casual bicyclists also may benefit from marked routes that lead to parks, schools, shopping areas, and other destinations. To encourage youth to ride, routes must be safe enough for their parents to allow them to ride. The experienced bicyclist will benefit from wider curb lanes, bicycle lanes on more direct arterials, and loop detectors at signals. The experienced bicyclist who is primarily interested in exercise will benefit from long loop routes that lead back to the point of origin and routes with significant elevation changes.

3.5 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 and design of the roadway contribute to this feeling of perceived danger. In addition, lack of confidence and knowledge of bicycle rules of the road also 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. Figure 3.1 displays the intersections with 3 or more collision throughout the City and Table 3.4 displays the roadways with the highest frequency of bicycle collisions. Based on the assessment, there were 242 bicyclists-involved collisions throughout the City 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 3.3 and 3.4 shows a five-year history of the number of collisions per year from 2006-2010.

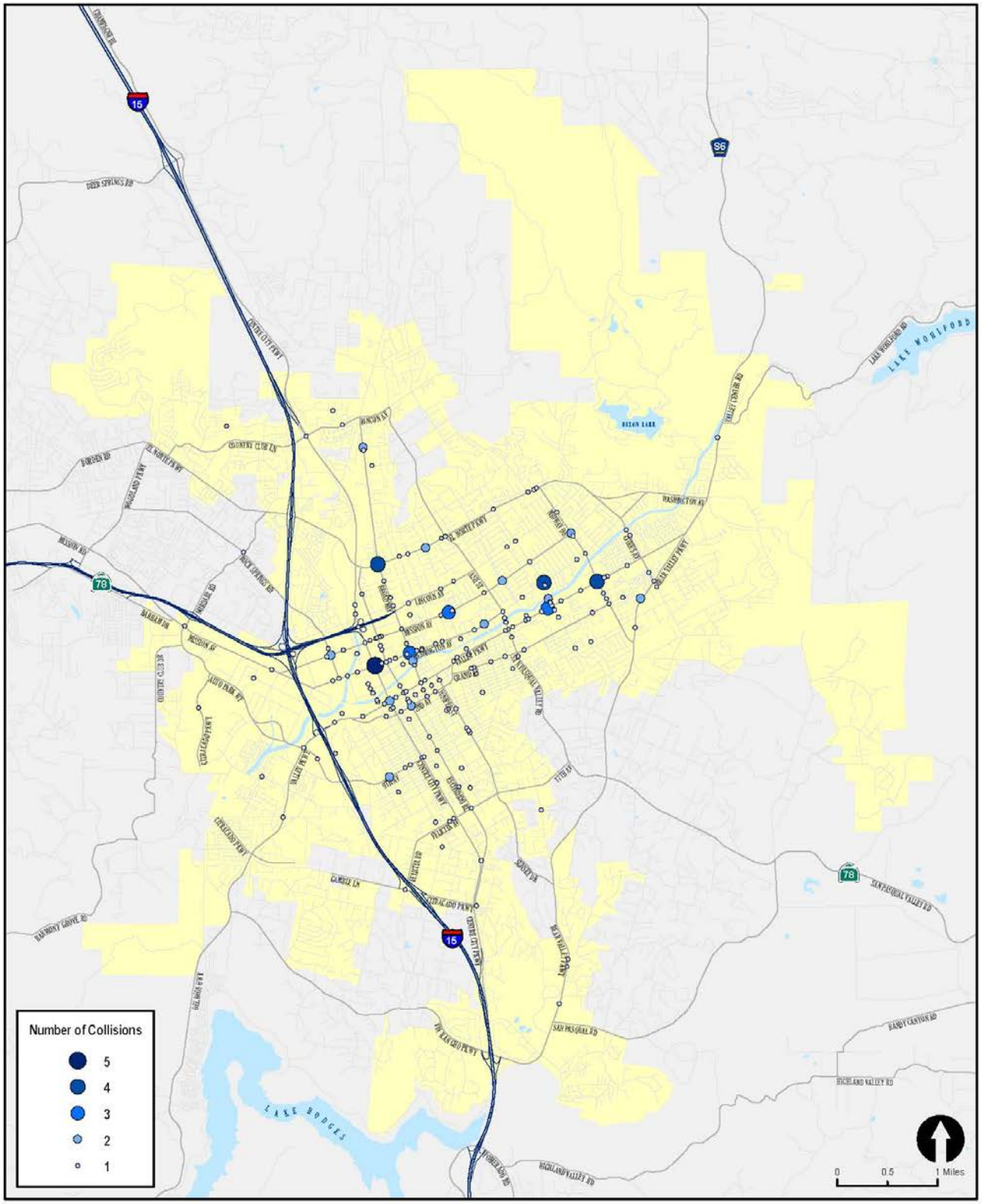
Table 3.3
Intersections with Highest Bicycle Collision Rates

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 3.4
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.

Increased safety is a major justification for making investments in bicycle facilities. Studies have shown that accommodating bicycles in street design improves safety for everyone. For example, it is possible to reduce bicycle fatality rates in half by simply adding bicycle lanes to existing streets and roads. When striped bike lanes are not available, many bikers will opt for riding on the sidewalk, but sidewalks are five times as dangerous as conventional streets and ten times more dangerous than streets with bike lanes. Additionally, only ten percent of bike fatalities are cyclists being hit from behind; the overwhelming majority of fatalities are angle collisions when bicyclists are crossing a street or driveway, within a crosswalk, or heading the wrong direction down a street against traffic. By striping bike lanes, the number of people riding in the wrong direction and on the sidewalk can be reduced, so in terms of safety, everyone benefits from bicycle lanes, not just bike riders. Installing bike lanes has also been found to increase the incidence of bicyclists stopping at red lights, which helps increase bicycle safety in intersections *(U.S. Department of Transportation - Peer Exchange Report- Best Practices in Bicycle Facilities Planning, 2008).*

3.6 Public Outreach

The City conducted two public workshops at the Escondido City Hall on 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 F. 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. They 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 along major roadways
- 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 conducted 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.

3.7 Demand for Bicycle Facilities

Many Escondido residents own bicycles and typically cycle for recreational rather than for commuter purposes. It is estimated 46% of Americans bicycle for pleasure which would mean roughly 67,850 persons in Escondido bicycle or would like to bicycle *(League of American Bicyclists based on the US Census Bureau'/s American Community Survey).* School children between the ages of 5 and 17 comprise a large percentage of bicycle riders, riding to school, parks, school events, and with friends. Adult cyclists frequently comprise the bulk of the riders on public roadways (for commuter and recreational purposes) and also on the more challenging off road trails and dirt paths.

There is an unrealized potential for increased cycling in the community in that more people would choose to bike if there were adequate bicycle facilities. The Bureau of Transportation Statistics (BTS) conducted studies during 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 *(2010 Census)* that reflect areas of dense development and intense commercial development, indicate that in these areas more people will choose bicycling for commuting to work and shopping. Using the latest Journey to Work data, it can be assumed that roughly 0.9 or 511 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 number of children who ride bike to school is added to this figure. According to Census Profile, the school-age population (5-17 years old) is approximately 20 percent of the population or 28,136 persons. Based on a comparison of similar jurisdictions and school surveys, it is estimated that approximately 1.5 percent of school-age children ride bikes to school or 424 in Escondido.

These additional 424 school age bicycle commuters added to the 511 adult commuters yields an estimated City total of 935 commuters, or less than 1% of Escondido's total population of 143,944. The estimated increase resulting from implementation of this plan is approximately 5 percent or 47 persons more than the current number of bicycle commuters in Escondido. 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 could be as high as 2% of commuters and school age children, or up to 1,870 persons. Note that using SANDAG Census 2010 Profile data likely underestimates bike commuter numbers because the Census only asks for the primary transportation mode to work, missing the once or twice a week bike commuter. Also, more commuters are likely to bicycle in Southern California than the national average. Case Studies in Portland, San Francisco and Seattle saw an average increase of up to 279 percent in bicycle riders resulting from the improvements on particular corridors and in new and improved facilities.

General Bicycle Statistics Nationwide (STATS & RESEARCH) – Bikes Belong www.bikesbelong.org)

Bicycling is for everyone

- Bicycling is the second most popular outdoor activity in the United States (Outdoor Foundation, 2010)
- 47% of Americans say they would like more bike facilities in their communities (National Highway Traffic Safety Administration, 2008)
- Most trips Americans make are short, 50% are less than 3 miles, 40% are less than 2 miles, and 28% are less than 1 mile (US Department of Transportation, 2009)

Bicycling boosts the economy

- The U.S. bicycle industry sold $5.6 billion in bicycles and equipment in 2009 (National Bicycle Dealers Association, 2010)
- More than three times as many new bicycles (14.9 million) are sold in the U.S. each year than cars (4.6 million). (National Bicycle Dealers Association, 2012; Bureau of Transportation Statistics, 2010).

Bicycling is less expensive than driving a car

- The average American household spends $7,179 per year on owning and driving their cars (Bureau of Transportation Statistics, 2010)
- On a round-trip commute of 10 miles, bicyclists would save around $10 daily. (Commute Solutions, 2011)

Bicycling reduces road congestion and air pollution

- Traffic congestion wastes nearly 3.9 billion gallons of gas per year in the U.S. (Texas Transportation Institute, 2010)
- For every one mile pedaled rather than driven, nearly one pound of CO2 (0.88 lbs) is saved. (U.S. Environmental Protection Agency, 2009)

Figure 3.2 Bicycle Commuter Mode Share

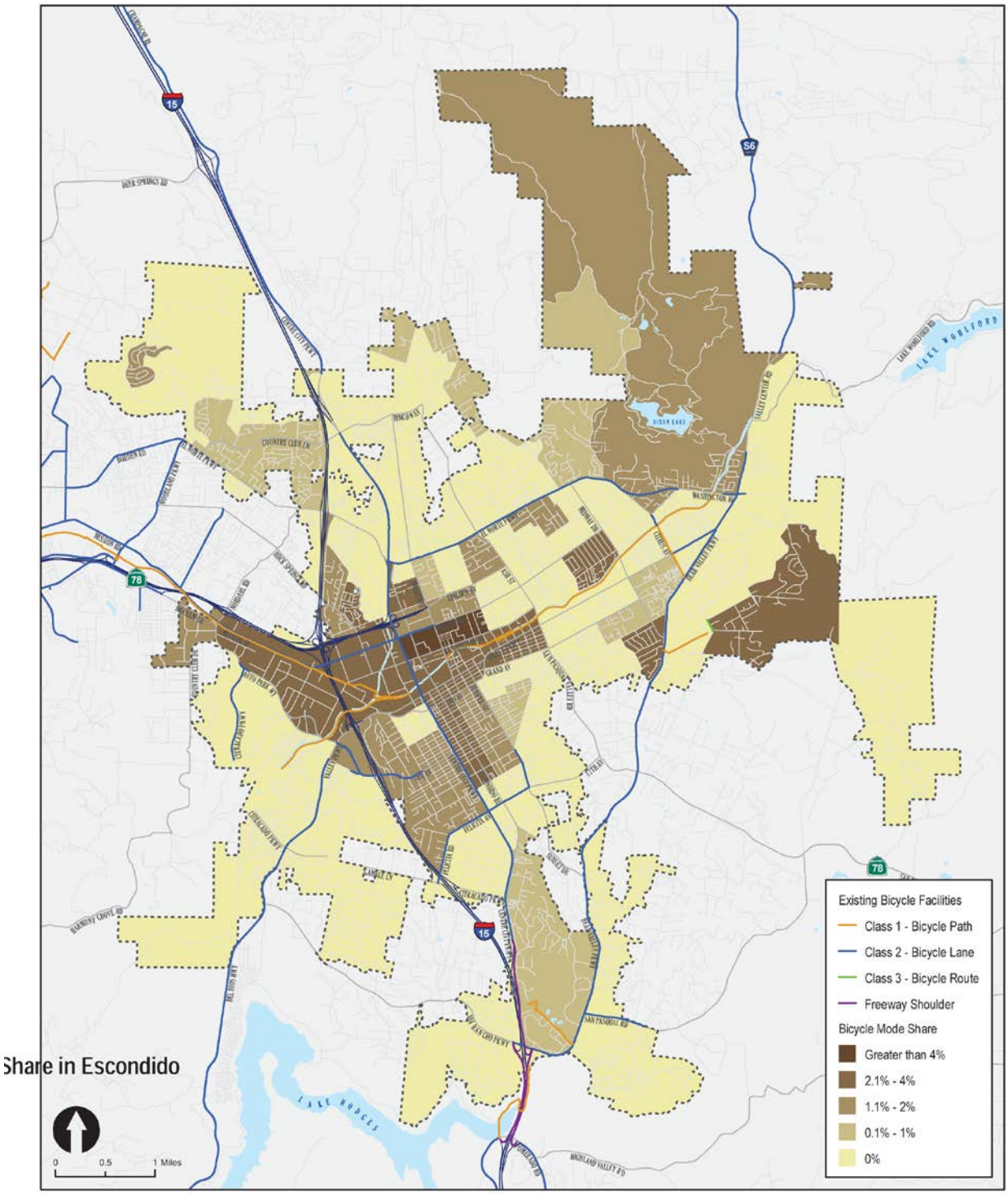


Figure 3.2 displays the existing percentage of bicycling commuters and includes existing bicycle facilities. The map indicates the higher concentration of bicycle commuters are located within the downtown area and generally areas of higher density development and proximity to existing bicycle facilities.

Source Linscott Law and Greenspan – Escondido General Plan Complete Streets Assessment
SANDAG (2011), Us Census (2000)

3.8 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 though 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, and within areas with the highest collision data, especially along Midway Drive, Rose Street, Washington Avenue, Citracado Parkway, Valley Parkway, Broadway, Via Rancho Parkway and Bear Valley Parkway.

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.

3.9 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.

The major retail employers are located primarily along the Valley Parkway/East Valley Parkway corridor, Centre City Parkway and Escondido Boulevard corridors and at the Westfield North County Mall. 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 Citracado Parkway. 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 the construction industry. These construction jobs are scattered throughout the county as the construction trade moves where building is occurring. 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 or may eventually choose to cycle to work.

Student Destinations

There are 47 public and private schools in Escondido offering a variety of educational opportunities. The public schools include 16 elementary schools, 5 middle schools, 3 high schools, a continuation school, an independent study 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 three of these 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 could travel to school by bike provided that appropriate bicycle facilities are available. School sites are identified on Figure 2.7 in Chapter 2**.**

Recreation Destinations

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

1. Exercise or training
2. Non-work destination such as 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 steeper 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, a 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 (which includes the Escondido Sports Center and Skate Park) is situated just to the north of the Westfield North County Mall along Bear Valley Parkway, and within walking distance to two public schools: San Pasqual High School and L.R. Green Middle. 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, located at the end of La Honda Drive and 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 that someday would 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 eight-foot- wide concrete Class I bike path with adjacent four-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)

3.10 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 businesses provide bike racks, but these also are limited. Bike lockers are available 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 allow 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, which were made available through SANDAG grant.

Custom bike racks installed throughout the downtown area, City Hall and Grape Day Park

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.

GOALS, OBJECTIVES AND POLICIES 4

4.1 Goals and Objectives

The City of Escondido's Bicycle Master Plan follows and expands on the existing bicycle-related goals, objectives and policies contained in the Escondido General Plan, and also reflect input gathered from the public workshops and survey. The following set of goals and objectives covers bicycle facility development, bicycle education and encouragement, system maintenance, and regional connections.

Goal 1: Expand and Enhance Escondido's Bikeway Network and Eliminate Barriers to Bicycling

Identify a system of complete streets that include an integrated system of bicycle paths, lanes and routes throughout the Escondido Planning Area, along with support facilities, which when implemented will serve local and regional commuting and recreating bicyclists.

Objectives and Actions

1. Continue to plan for and recommend funding to support a local and regionally linked on-street and off-street public bicycle network, and coordinate these efforts with SANDAG and other cities within the County of San Diego to ensure a regional connected system of bicycle facilities.

2. Develop the existing and proposed bikeway network as an appropriately designed, continuous network that serves all user groups and skill levels. Maximize links between trails and major activity centers, residential neighborhoods, schools, shopping centers and employment centers.

3. Accommodate cyclists on all major roadways as funding becomes available or when roadway improvements are made.

4. Actively pursue regional, state, and federal grant funds to implement bikeway projects.

5. Update the City's Bikeway Plan on a regular basis to reflect new policies and/or requirements for bicycle and pedestrian funding.

6. Identify and seek to eliminate hazards to safe, efficient bicycle movement citywide. Monitor bicycle-related accidents, and review the data and review the data on a regular basis to determine if facility improvements are needed to improve safety.

7. Prioritize and implement bikeway improvements based on considerations of safety, commuting needs, and route connectivity.

8. Routinely repair and maintain bikeway network facilities, including regular sweeping of bikeways and shared use pathways.

Goal 2: Plan for the Needs of Bicyclists

Ensure that bicyclist needs are incorporated into City planning, design and construction projects. Provide a network of bicycle facilities that promote, encourage, and accommodate non- motorized travel that will serve to reduce the dependence on motor vehicles while improving air quality, cycling safety, and the individual health of cyclists.

Objectives and Actions

1. Evaluate the needs of bicycle traffic in the planning, design, construction and operation of all roadway projects.

2. Coordinate roadway improvements to ensure that existing bicycle facilities are integrated and constructed with Capital Improvement Projects (CIP) and other development projects to maximize construction and cost efficiencies.

3. Coordinate roadway improvements to ensure that bicycle facilities are temporarily accommodated by identifying alternate routes during roadway construction projects.

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. 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.

6. Evaluate the ability to enhance accessibility, aesthetics, lighting and safety along the Escondido Creek Trail as part of requests to develop or upgrade properties and business along the bike path. Review all project along the Escondido Creek Trail to determine conformance with the goals and objectives detailed in the Escondido Creek Trail Master Plan.

7. Develop and implement a destination-based signing system for the bikeway network.

8. Coordinate with the public schools to conduct bicycle safety and education programs to encourage safe cycling as an alternative to motorized transportation.

9. Support adult and youth bicycling events and education and safety programs that promote bicycling.

10. Employ effective traffic control devices such as loop detectors, call buttons, and signage along Class I, Class II and Class III bicycle facilities, where appropriate, to increase bicycle safety and ease of cycling.

11. Improve safety for bicyclists and other non-motorized users by encouraging traffic calming, intersection improvements or other similar actions where appropriate.

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.

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 provide 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

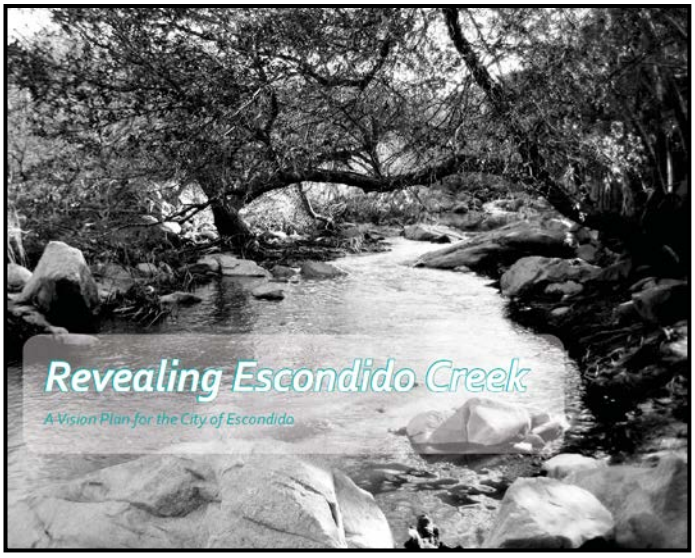
The development of the City of Escondido Bikeway Master Plan coordinates bicycle connections between neighboring jurisdictions to include the following:

- **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 endorsed "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.

Concept trail entry element and midblock crossing

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 Corridor Master Plan was prepared by Schmidt Design Group, Inc.

The Corridor Plan does not include provisions for dedicated bicycle paths through Grape Day Park. The inclusion of bicycle paths through Grape Day Park could be accomplished with further refinements/modifications to the Grape Day Park Plan and the Corridor Master Plan. This could include Reduced Speed Paths, which are similar to Class 1 bike paths, but do not conform to Caltrans design requirements and are not acknowledged as part of the bikeway system. The pathways essentially, are wider sidewalks that typically are found meandering in and around parks, shopping centers, schools and neighborhoods. They vary in width between four and eight feet and can accommodate bicycles and pedestrians alike. An example of the Reduced Speed Path is the wide sidewalk along the eastern side of Bear Valley Parkway near Orange Glen High School.

Reduced Speed Path along Bear Valley Parkway

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 completing gaps in the regional links (Escondido Creek Trail), major gaps in the existing system, and extending or developing bike paths, lanes or routes along major transportation corridors, especially along those roadway sections identified with a higher rate of vehicle conflicts/collisions. 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 6.1. Though useful for preliminary cost estimates, they do not reflect potential special circumstances such as the bridges that would be needed to span rail lines or major roadways, or undercrossing along the Escondido Creek Trail. 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)*

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 any necessary roadway widening. The cost variation primarily is 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 list of projects 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 contrasting 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 -$5,000
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 project list 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.

Figure 6.1 Existing and Proposed Bicycle Facilities

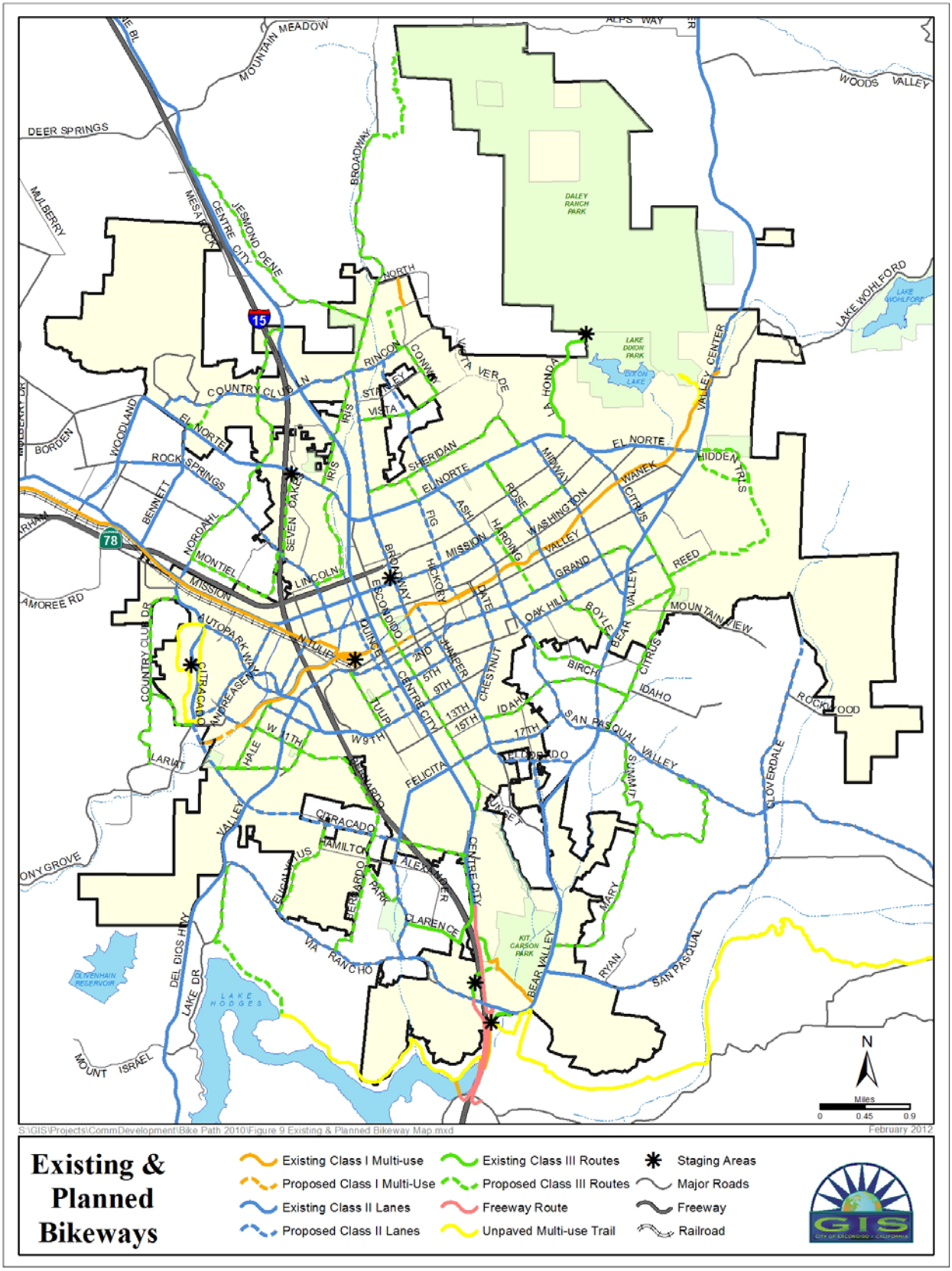


Figure 6.2 Northwest Quadrant Area

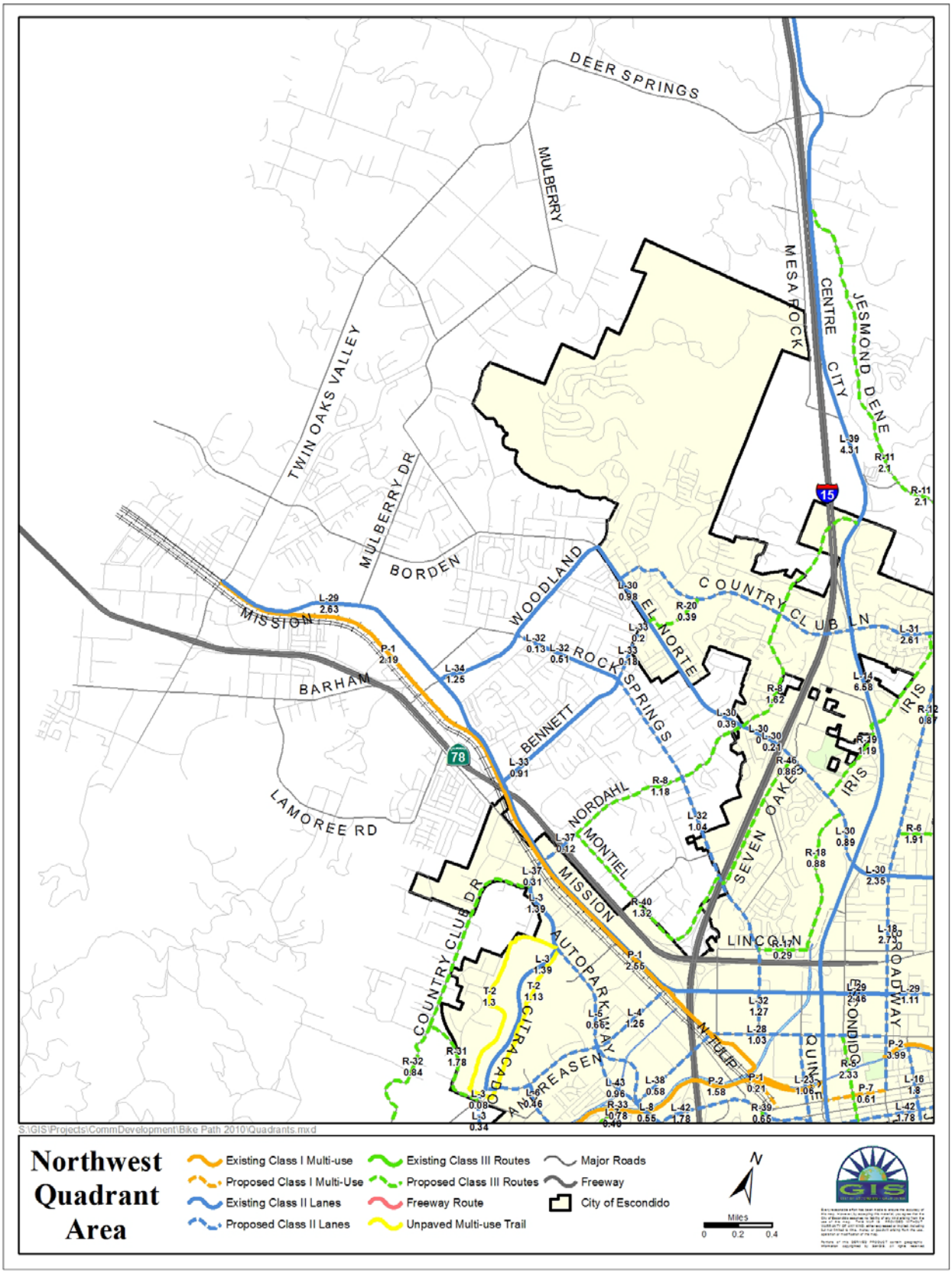


Figure 6.3 Northeast Quadrant Area

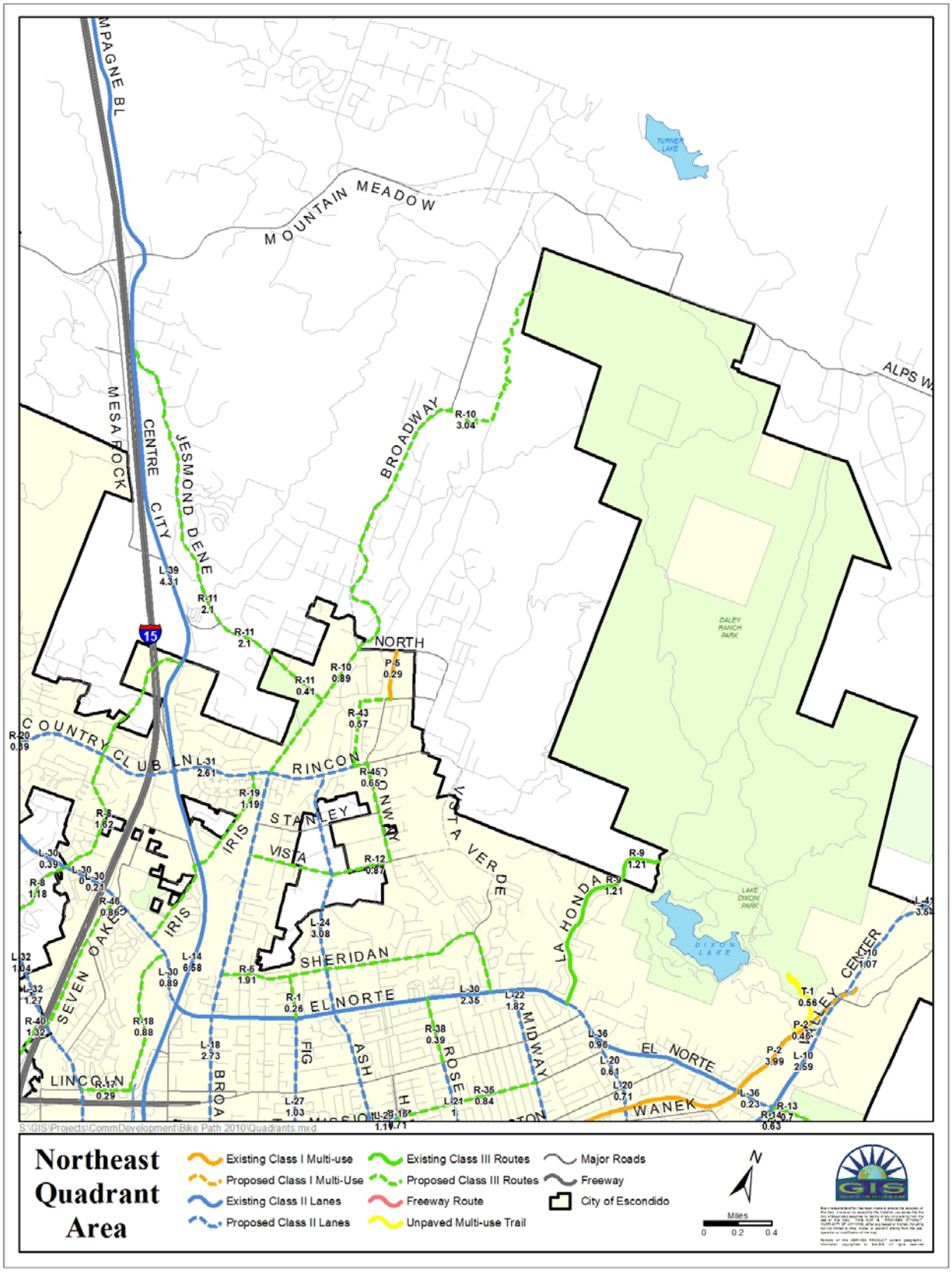


Figure 6.4 Southwest Quadrant Area

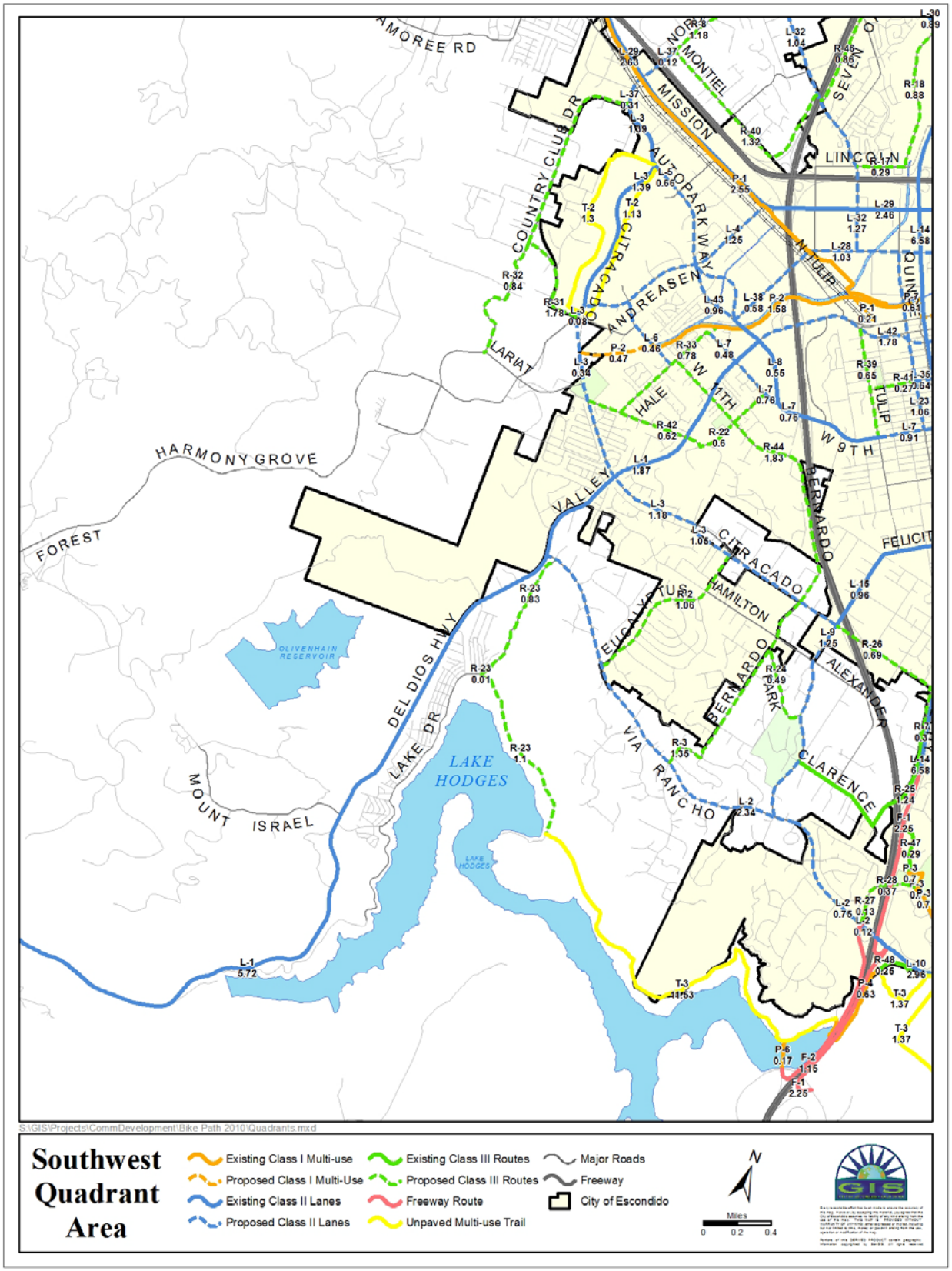


Figure 6.5 Southeast Quadrant Area

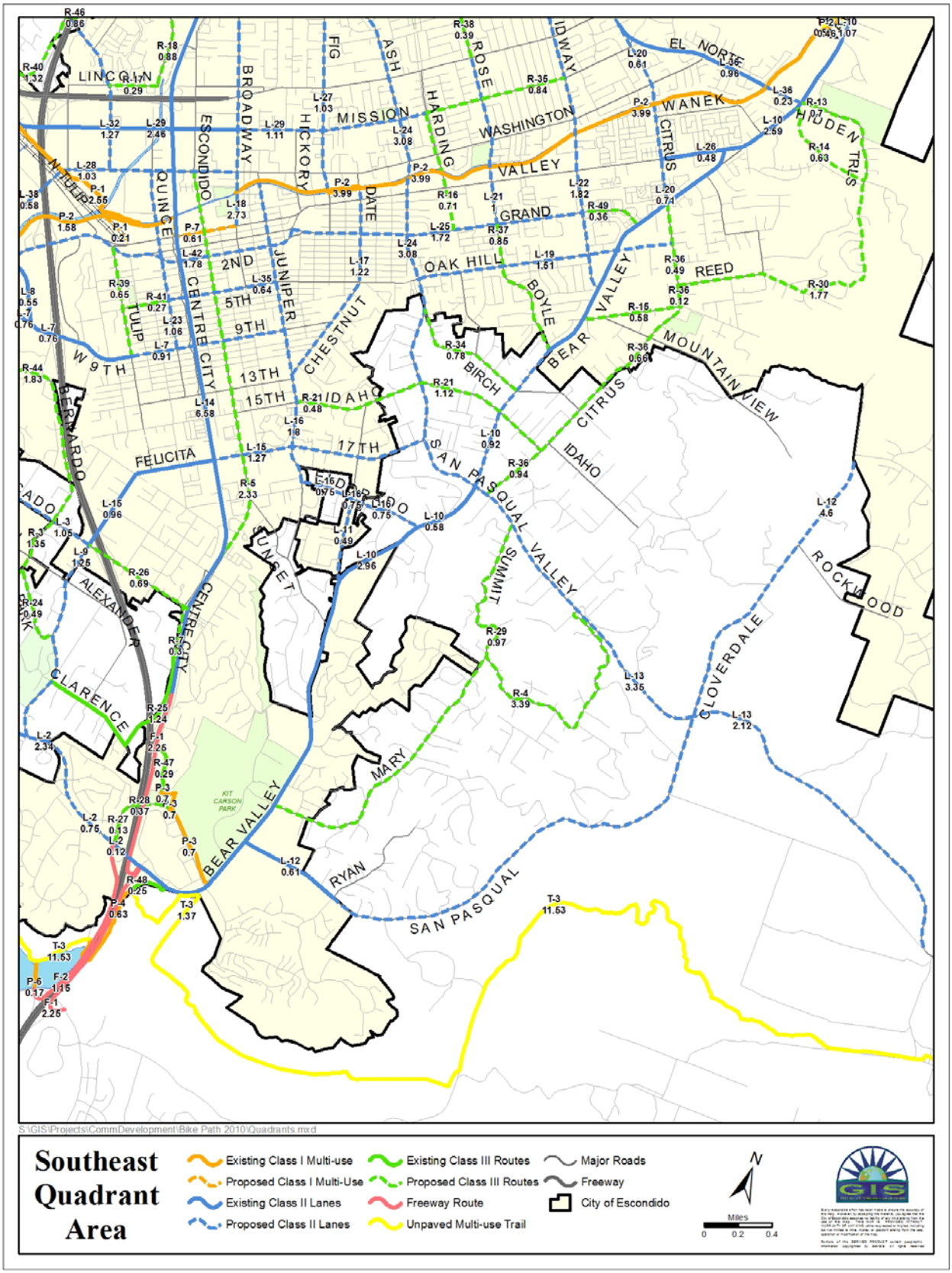


TABLE 6.2
BIKEWAY SYSTEM
Existing Bicycle Segment
Italics – Proposed Segment

Bike Paths
Class I Multi-Use

Path No.	Street/Path	Mileage	From	To
P-1	Sprinter Path	2.56	SR-78	Transit Station
P-2	Escondido Creek ***Escondido Creek*** Escondido Creek ***Escondido Creek***	3.989 ***0.462*** 1.58 ***0.47***	Bevin Rd. ***Bevin Rd.*** Transit Station ***Harmony Grove Rd.***	Broadway ***Bear Valley Pkwy.*** Harmony Grove Rd. ***Citracado Pkwy.***
P-3	Kit Carson Park	0.70	Bear Valley Pkwy.	El Ku
P-4	San Dieguito River Path	0.632 City of SD	Sunset Dr. Terminus	Along I-15
P-5	Conway Dr.	0.285	Cleveland Ave.	North Ave.
P-6	Lake Hodges Bridge	0.17 City of SD	San Dieguito River Park	Bernardo Dr.
P-7	***Missing Link***	***0.6***	***Broadway***	***Transit Station/Quince St.***

Total Existing	9.114 miles City of Escondido 0.8 miles City of San Diego
Total Proposed	1.532 miles City of Escondido
Total Bikeway System	10.646 miles City of Escondido 0.802 miles City of San Diego 11.448 Total Miles

Bike Lanes
Class II – Striped and Signed

Lane No.	Street/Path	Mileage	From	To
L-1	Del Dios Highway Del Dios Highway (S6)	1.86 7+County	Via Rancho Pkwy. Via Rancho Pkwy.	Auto Park Way Rancho Santa Fe

Bike Lanes
Class II – Striped and Signed

Lane No.	Street/Path	Mileage	From	To
L-2	Via Rancho Pkwy. Via Rancho Pkwy. Via Rancho Pkwy.	2.34 County 0.75 City 0.12 City	Del Dios Highway Montesano Rd. Del Lago Blvd.	Montesano Rd. Del Lago Blvd I- 15
L-3	Citracado/Auto Park Way Citracado Pkwy. Citracado Pkwy. Citracado Pkwy.	1.39 0.42 City/Cnty 1.18 1.05 City/Cnty	Country Club Ln. Andreasen Dr. City Limit/HARRF Gamble Lane –(east side)	Andreasen Dr. City Limits/HARRF City Limit/Gamble Ln Felicita Rd./I-15
L-4	Andreasen Ln.	1.25	Citracado Pkwy.	Mission Rd.
L-5	Auto Park Way	0.66	Andreasen Dr.	Citracado Pkwy.
L-6	11th Ave.	0.46	Andreasen Dr.	Hale Ave.
L-7	9th Ave. 9th Ave. 9th Ave.	0.48 0.58 0.91	Hale Ave. Del Dios Rd. Tulip St.	Del Dios Rd. Tulip St. Juniper St.
L-8	Auto Park Way	0.55	Hale Ave.	9th Ave.
L-9	Felicita Ave.	1.245 County	Citracado Pkwy.	Via Rancho Pkwy.
L-10	Via Rancho/Bear Valley Bear Valley Pkwy. Bear Valley Pkwy. Bear Valley Pkwy. Bear Valley/E. Valley Pkwy.	2.96 0.58 County 0.92 County 2.59 1.07	Interstate 15 Choya Canyon San Pasqual Valley Boyle Ave Valle Lindo	Choya Canyon San Pasqual Valley Rd. Boyle Ave. Valle Lindo City Limit
L-11	Encino Dr.	0.49	Bear Valley Pkwy	El Dorado Dr.
L-12 L-12	San Pasqual Valley Road San Pasqual Valley Rd / Cloverdale Rd.	0.46 4.6 County	Bear Valley Pkwy. Ryan Rd.	Ryan Rd. Old Ranch Rd.
L-13	San Pasqual Rd./SR 78	3.34 County	Oak Hill Rd.	Cloverdale Rd and east
L-14	Centre City Pkwy.	6.57	I-15 at S. City Limits	N. City Limits
L-15	Felicita Ave. Felicita Ave./17th St	0.96 1.27	I-15/Citracado Pkwy. Centre City Pkwy.	Centre City Pkwy. San Pasqual Valley Rd.

Bike Lanes
Class II – Striped and Signed

Lane No.	Street/Path	Mileage	From	To
L-16	Juniper St. El Dorado Dr.	1.80 0.75 County	Creek Path Juniper St.	El Dorado Dr. Bear Valley Pkwy
L-17	Chestnut/Date St.	1.22	Creek Path	Juniper St.
L-18	Broadway	2.73	Valley Pkwy.	Country Club Ln.
L-19	Oak Hill Dr	1.5	Ash St.	Citrus Ave.
L-20	Citrus Ave	0.6	El Norte Pkwy.	San Pasqual Valley Rd.
L-21	Rose St.	0.98	Grand Ave.	Lincoln Ave.
L-22	Midway Dr.	1.822	El Norte Pkwy.	Bear Valley Pkwy.
L-23	Quince St.	1.056	9th Ave	Washington Ave.
L-24	Ash St.	3.07	Rincon Ave.	Oak Hill Dr.
L-25	Grand Ave.	1.72	Valley Pkwy.	Midway Dr.
L-26	E. Valley Pkwy.	0.475	Citrus Ave.	Bear Valley Pkwy.
L-27	Fig St.	1.026	El Norte Pkwy	Escondido Creek
L-28	Washington Ave.	1.027	Metcalf St.	Broadway
L-29 L-29	Mission Ave/Rd. Mission Ave.	2.46 1.11	City Limits (west) Broadway	Broadway Harding St.
L-30	El Norte Pkwy. El Norte Pkwy. El Norte Pkwy. El Norte Pkwy. El Norte Pkwy. El Norte Pkwy.	0.48 0.87 2.35 0.21 0.98 City/Cnty 0.39 County	La Honda Dr. I-15 Centre City Pkwy. Nordahl/Nutmeg St. Woodland Pkwy. Rees Rd.	Woodland Pkwy. Centre City Pkwy. La Honda Dr. I-15 onramp Rees Rd. Nordahl/Nutmeg St.
L-31	Country Club/Rincon	2.61	El Norte Pkwy.	Conway Dr.
L-32	Rock Springs Rd. Rock Springs Rd.	1.93 SM/Cnty 1.03 City	Woodland/Bougher I-15	City Limits/I-15 Washington Ave.
L-33	Bennett Ave. Bennett Ave.	0.93 SM 0.376 City/SM	Mission Rock Springs Rd.	Rock Springs Rd. El Norte Pkwy.

Bike Lanes
Class II – Striped and Signed

Lane No.	Street/Path	Mileage	From	To
L-34	Woodland Pkwy.	1.25 SM	Mission Rd.	El Norte Pkwy.
L-35	**5th Ave**	**0.64**	**Quince St.**	**Juniper St.**
L-36	**El Norte Pkwy.** **El Norte Pkwy.**	0.962 **0.23**	Citrus Ave. **Escondido Creek**	Escondido Creek **Bear Valley Pkwy.**
L-37	Auto Park Way **Nordahl Rd.**	0.305 **0.19 SM**	Country Club Dr. **Nordahl Rd.**	SR 78 **Montiel Rd.**
L-38	**Hale Ave**	**0.58**	**Auto Park Way**	**Washington Ave.**
L-39	Centre City Pkwy.	4+ County	Ivy Dell	North along I-15
L-40	~~Deleted~~			
L-41	**Valley Center Rd**	**3.5+ County**	**City Boundary**	**North to Valley Center**
L-42	**Second Ave/Valley Pkwy.**	**1.78**	**Auto Pkwy.**	**Grand Ave.**
L-43	**Auto Park Loop**	**0.96**	**Auto Park Way N.**	**Auto Park Way S.**

Total Existing	28.127 miles City of Escondido 9.45 miles County 2.18 City of San Marcos
Total Proposed	**35.436 miles City of Escondido** **16.741 miles County and City of San Marcos**
Total Bikeway System	63.563 miles City of Escondido 28.371 miles County and City of San Marcos 91.934 Total Miles

Bike Routes
Class III – Share the Road

Route No.	Street/Path	Mileage	From	To
R-1	Fig St.	0.256	El Norte Pkwy.	Sheridan Ave.
R-2	Eucalyptus Ave.	1.064	Via Rancho Pkwy.	Gamble Ln.
R-3	Bernardo Ave.	1.35	Via Rancho Pkwy.	Citracado/Gamble Ln.
R-4	Mary Ln.	3.39 County	Bear Valley Pkwy.	San Pasqual Rd.
R-5	Escondido Blvd.	2.33	Centre City Pkwy. south end	Washington Ave.
R-6	Sheridan Ave./Vista Verde	1.908	Broadway	El Norte Pkwy.
R-7	S. Centre City Pkwy.	0.297	Cranston Dr.	Citracado Pkwy.
R-8	Nutmeg St. Nordahl Rd.	1.62 1.17 SM	El Norte Pkwy. SR 78	Center City Pkwy. El Norte Pkwy.
R-9	La Honda Dr.	1.21	El Norte Pkwy.	Daley Ranch
R-10 R-10	Broadway Broadway/Cougar Pass	0.89 City 3.04 County	Rincon Ave. North Ave.	North Ave. Daley Ranch
R-11 R-11	Jesmond Dene Rd. Jesmond Dene Rd.	0.41 City 2.1 County	Broadway Quail Rd	City Limits/Quail Rd. Centre City Pkwy.
R-12	Vista Ave.	0.87 City/Cnty	Conway St.	Broadway
R-13	Hidden Trails Loop	0.70	Bear Valley Pkwy.	Old Guejito Grade Rd.
R-14	Old Guejito Grade Rd.	0.63	Bear Valley Pkwy.	Hidden Trails
R-15	Glen Ridge Rd	0.58	Bear Valley Pkwy.	Citrus Ave.
R-16	Harding St.	0.714	Mission Rd.	Grand Ave.
R-17	Lincoln Ave.	0.286	Rock Springs Rd.	Morning View Dr.
R-18	Morning View Dr.	0.881	Lincoln Ave.	El Norte Pkwy.
R-19	Iris Ln.	1.19	El Norte Pkwy.	Country Club Ln.
R-20	Bennett/Firestone	0.387	El Norte Pkwy.	Country Club Ln.

Bike Routes
Class III – Share the Road

Route No.	Street/Path	Mileage	From	To
R-21 R-21	Idaho St. Idaho St.	0.05 City 1.1 County	Juniper St. Perdum Dr.	Perdum. Dr. Citrus Ave.
R-22	Del Dios Rd.	0.603	Avenida Del Diablo	9th Ave
R-23	Lake Rd.	1.89 County	Via Rancho Pkwy.	San Dieguito Trail at Lake Hodges
R-24	Park Dr.	0.491 County	Bernardo Ave.	Felicita PK/Felicita Ave.
R-25	S. Centre City Parkway	1.245 County	Centre City Pkwy.	Felicita Ave.
R-26	Citracado Pkwy.	0.659	Felicita Ave.	Centre City Pkwy.
R-27	Del Lago Blvd	0.12	Via Rancho Pkwy.	Avenida Magoria
R-28	Del Lago Blvd/Beethoven Westfield Mall Connection	0.366	Avenida Magoria	Bear Valley Pkwy.
R-29	Summit Dr.	0.97 County	San Pasqual Valley	Mary Ln.
R-30	Hidden Trails/Reed Rd.	1.767	Old Guejito Rd.	Citrus Ave.
R-31	Country Club/Kauana Loa	1.78 County	Auto Park Way	Citracado Pkwy.
R-32	Country Club Dr.	0.84 County	Kauana Loa	Harmony Grove Rd
R-33	Hale Ave.	0.783	9th Ave	Avenida Del Diablo
R-34	Birch Ave.	0.78 County	Bear Valley Pkwy.	San Pasqual Valley Rd.
R-35	Mission Ave.	0.84	Harding St.	Midway Dr.
R-36	Citrus Ave. Citrus Ave.	0.93 County	San Pasqual Valley Coltrane Pl.	Coltrane Pl. Bear Valley Pkwy.
R-37	Boyle Ave.	0.85	Bear Valley Pkwy.	Grand Ave.
R-38	Rose St.	0.39	Lincoln Ave.	El Norte Pkwy.
R-39	Tulip St.	0.64	9th Ave.	Grand Ave.
R-40	Montiel Rd.	1.319 County	Nordahl Rd.	Rock Springs Rd.

Bike Routes
Class III – Share the Road

Route No.	Street/Path	Mileage	From	To
R-41	5th St	0.274	Tulip St.	Quince St.
R-42	Avenida Del Diablo	0.61	Citracado Pkwy.	Del Dios Rd.
R-43	Cleveland Ave.	0.567	Conway Dr.	Rincon Ave.
R-44	11th Avenue/Bernardo Ave.	1.828	Hale Ave.	Citracado Pkwy.
R-45	Conway Dr.	0.651	Vista Ave.	Rincon Ave.
R-46	Seven Oaks Rd.	0.861	El Norte Pkwy.	Rock Springs Rd.
R-47	El Ku	0.28	Kit Carson Park	Escondido Blvd.
R-48	Sunset Dr.	0.254	Via Rancho Pkwy.	River Path Lake Hodges
R-49	Grand Ave.	0.35	Midway Dr.	Citrus Ave.

Total Existing	1.33 miles City of Escondido
Total Proposed	30.316 miles City of Escondido 19.875 miles County 1.17 miles in San Marcos
Total Bikeway System	52.691 Total Miles

Freeway Trails
Interstate 15

Route No.	Street/Path	Mileage	From	To
F-1	Northbound I-15	2.25 Caltrans R-O-W	Pomerado Rd.	Center City Pkwy.
F-2	Southbound I-15	1.14 Caltrans R-O-W	Via Rancho Pkwy.	Pomerado Rd.

Total Existing	3.39 miles
Total Proposed	0

Total Bikeway System	3.39 Total Miles

Bike Trails
Multi-Purpose Unpaved

Route No.	Street/Path	Mileage	From	To
T-1	Caballo Trail to Daley Ranch	0.56	Escondido Humane Society at E. Bear Valley Pkwy.	Daley Ranch
T-2	ERTC Trail Loop	2.43	Auto Park Way	Andreasen
T-3	San Dieguito River Park	1.37 11.53 City of San Diego/County	Lake Drive at Lake Hodges Parking Lot Interstate 15	Interstate 15 San Pasqual River Valley

Total Existing	13.96 miles
Total Proposed	0
Total Bikeway System	13.96 Total Miles

6.3 Funding Sources

Federal, State and local government agencies invest billions of dollars every year in the nation's transportation system. Only a fraction of that funding is used in development projects, policy development and planning to improve conditions for cyclists. Even though appropriate funds are limited, they are available, but desirable projects sometimes go unfunded because communities may be unaware of a fund's existence, or may apply for the wrong type of grants. Also, the competition between municipalities for the available bikeway funding is often fierce.

Whenever Federal funds are used for bicycle projects, a certain level of State and/or local matching funding is generally required. State funds are often available to local governments on similar terms. Almost every implemented bicycle program and facility in the United States has had more than one funding source and it often takes a good deal of coordination to pull the various sources together.

According to the Federal Highway Administration's (FHWA) publication, *An Analysis of Current Funding Mechanisms for Bicycle and Pedestrian Programs at the Federal, State and Local Levels*, where successful local bike facility programs exist, there is usually a full time bicycle coordinator with extensive understanding of funding sources. Cities such as Seattle, Washington, Portland, Oregon and Tucson are prime examples. Bicycle coordinators are often in a position to develop a competitive project and detailed proposal that can be used to improve conditions for cyclists within their jurisdictions. Much of the following information on Federal and State funding sources was derived from the previously mentioned FHWA publication.

6.3.1 Federal Sources

U.S. Department of Transportation Enhancement Funds SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users)

In 1991, Congress reauthorized the collection and distribution of the Federal gasoline tax and related transportation spending programs. The legislation, the Intermodal Surface Transportation Enhancement Act (ISTEA), was seen as particularly significant because the focus of 30 years of Federal transportation investment, the Interstate Highway System, was nearing completion. The legislation provided the opportunity to rethink transportation priorities and philosophies. This act was reauthorized in 1997 as the *Transportation Equity Act* (TEA-21), and again in 2005 as the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEALU). It is planned SAFETEA-LU funding is currently managed through State and regional agencies, in this case the San Diego Association of Governments (SANDAG). Most, but not all, of the funding programs are oriented toward transportation versus recreation, with the emphasis on reducing auto trips and providing intermodal connections. Funding criteria include completion and adoption of a bicycle master plan, quantification of the costs and benefits of the system (including saved vehicle trips, reduced air pollution), proof of public involvement and support, *National Environmental Protection Act* (NEPA) compliance and the commitment of local resources. In most cases, SAFETEA-LU provides matching grants of 80 to 90 percent. The amount of money available through SAFETEA-LU is substantial (over $155 billion from 1992-97), but there is always strong competition to obtain those funds.

Federal funding through the SAFETEA-LU program provides the bulk of outside funding. SAFETEALU is comprised of two major programs, Surface Transportation Program (STP) and Congestion Management and Air Quality Improvement (CMAQ), along with other programs such as the National Recreational Trails Fund, Section 402 (Safety) funds, Scenic Byways funds and Federal Lands Highways funds, though municipalities are unlikely to be eligible for funding from all of these sources. Among the new concepts in the original legislation were intermodalism, transportation efficiency, funding flexibility and planning, all of

which had direct benefits for cycling. The legislation also created a wide range of funding opportunities for bicycle related activities, including the following that may represent opportunities for the City of Escondido:

Surface Transportation Program (STP)

Section 1007 (a)(I)(b)(3) allows states to spend their allocation of Surface Transportation Program (STP) funds on a range of activities similar to those of the National Highway System. Bicycle facilities are specifically listed as eligible items. STP funds can also be used for "*non construction bicycle projects related to safe bicycle use."* Section 1007 (b)(2)(C)(c) created a new category of transportation enhancement activities (TEA) on which States were required to spend at least 10 percent of their Surface Transportation Program funds. TEAs are very broadly defined as:

"...with respect to any project or the area to be served by the project, provision of facilities for pedestrians and cyclists, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures or facilities including historic railroad facilities and canals, preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails), control and removal of outdoor advertising, archaeological planning and research and mitigation of water pollution due to highway runoff."

Surface Transportation Program funds are allocated to the California Department of Transportation (Caltrans) and 75 percent of STP funds are programmed by regional agencies such as the San Diego Association of Governments (SANDAG) under current state law. The Federal government does not allocate funds to specific projects. Therefore, for a bicycle project to be funded, it must appear on the list of potential projects under consideration at the State, regional, or City level, whichever is appropriate.

Local Planning

Section 1024 (a) requires each metropolitan area (with a population greater than 200,000) to develop an annual or biannual Transportation Improvement Program (TIP) that *"shall provide for the development of transportation facilities (including pedestrian walkways and bicycle transportation facilities) which will function as an intermodal transportation system."* These TIPs must be based on available funding for projects in the program and they must be coordinated with transportation control measures to be implemented in accordance with Clean Air Act provisions. Final project selection rests with the California Transportation Commission (CTC), with technical input from Caltrans.

State Planning

Two sections of the Act explicitly require the State to develop a TIP to *"consider strategies for incorporating bicycle transportation facilities and pedestrian walkways in projects, throughout the State,"* (Section 1025 (c)(3)), and to *"develop a long range plan for bicycle transportation facilities and pedestrian walkways for appropriate areas of the State, which shall be incorporated into the long range transportation plan,"* (Section 1025 (e)). These provisions are important on a municipal level because they are crucial for getting incidental bicycle projects funded. The intent behind these sections is to ensure that if bicycle facilities are identified in a TIP or long range plan as being necessary in a corridor and construction or reconstruction work in those corridors is planned, then the relevant bicycle improvements called for in the planning must be included and implemented.

Opportunities for incorporating bicycle projects are not limited to large transportation projects and not even to actual construction projects. Independent bicycle and pedestrian projects, such as trails away from highway corridors and non-construction projects, such as mapping, also need to be incorporated into State and City planning documents if they are to be funded. Section 1033 states that the Federal share under SAFETEA-LU of bicycle transportation facilities is to be 80 percent. The remaining 20 percent of the funds must be matched by the State or local government agency implementing the project. The section also states that, to be funded, a bicycle transportation facility must be principally for transportation rather than recreation purposes. This has been defined by the FHWA to mean:

"Where Federal aid highway funds are used, these projects should serve a transportation function. A circular recreation path, for example, would not be eligible. However, any type of facility which does serve a valid transportation need while also fulfilling recreation purposes would be eligible." The section goes on to describe a "bicycle transportation facility" as: *"...new or improved lanes, paths or shoulders for the use of cyclists, traffic control devices, shelters and parking facilities for cyclists."*

Congestion Mitigation and Air Quality Program (CMAQ)

Section 1008 is referred to as the Congestion Mitigation and Air Quality Program (CMAQ). This part of the legislation is intended to fund programs and projects likely to contribute to the attainment of national ambient air quality standards under the 1990 Clean Air Act Amendments. Five areas of eligibility have been defined: Transportation activities in an approved State Implementation Plan (SIP) developed under the Clean Air Act Transportation Control Measures listed in Section 108 (b)(1)(A) of the Clean Air Act, which include:

(ix) Programs to limit portions of roadway surfaces or certain sections of the metropolitan area to the use of non motorized vehicles or pedestrian use, both as to time and place;

(x) Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of cyclists in both public and private areas; and

(xv) Programs for new construction and major reconstruction of paths, tracks, or areas solely for the use by pedestrians or other non motorized means of transportation, when economically feasible and in the public interest.

"Construction of bicycle and pedestrian facilities, non construction projects related to safe bicycle use and State bicycle/pedestrian coordinator positions as established in the TEA- 21, for promoting and facilitating the increased use of non motorized modes of transportation. This includes public education, promotional and safety programs for using such facilities." To be funded under this program, projects and programs must come from a transportation plan (or State (STIP) or Regional (RTIP) Transportation Improvement Program) that conforms to the SIP and must be consistent with the conformity provisions of Section 176 of the Clean Air Act.

Section 402 (Safety) Funds

Section 402 funds address State and community highway safety grant programs. Priority status of safety programs for cyclists expedites the approval process for these safety efforts.

Symms National Recreational Trails Act

The *Symms National Recreational Trails Act* created a trust fund for the construction and maintenance of trails. At least 30 percent of the funds must be spent on trails for non-motorized users and at least 30 percent for trails for motorized users. The remainder is to be allocated to projects as determined by the State Recreational Trails Advisory Board of the California Department of Parks and Recreation, which the State must have to be eligible for the funds.

Federal Transit Act

Section 25 of the 1964 Urban Mass Transportation Act states that: *"For the purposes of this Act a project to provide access for bicycles to mass transportation facilities, to provide shelters and parking facilities for bicycles in and around mass transportation facilities, or to install racks or other equipment for transporting bicycles on mass transportation vehicles shall be deemed to be a construction project eligible for assistance under sections 3, 9 and 18 of this Act."* The Federal share for such projects is 90 percent and the remaining 10 percent must come from sources other than Federal funds or fare box revenues. Typical funded projects have included bike lockers at transit stations and bike parking near major bus stops. To date, no projects to provide bikeways for quicker, safer or easier access to transit stations have been requested or funded.

Department of the Interior - Land and Water Conservation Fund (LWCF)

The U.S. Recreation and Heritage Conservation Service and the State Department of Park and Recreation administer this funding source. Any project for which LWCF funds are desired must meet two specific criteria. The first is that projects acquired or developed under the program must be primarily for recreational use and not transportation purposes and the second is that the lead agency must guarantee to maintain the facility in perpetuity for public recreation. The application will be considered using criteria such as priority status within the *State Comprehensive Outdoor Recreation Plan* (SCORP). The State Department of Park and Recreation will select which projects to submit to the National Park Service (NPS) for approval. Final approval is based on the amount of funds available that year, which is determined by a population based formula. Trails are the most commonly approved project.

National Recreational Trail Fund

This funding source is intended to pay for a variety of recreational trails programs to benefit cyclists, pedestrians and other non-motorized users. Projects must be consistent with the *State Comprehensive Outdoor Recreation Plan* required by the Land and Water Conservation Act.

American Recovery and Reinvestment Act 2009

The $789 billion economic stimulus package provides $27.5 billion to modernize roads and bridges and includes a three percent set aside of each state's share of the $27.5 billion for the Transportation Enhancements Program. At least half of the funds must be obligated by states within 120 days, or the U.S. Secretary of Transportation can recall up to 50 percent of the unobligated funds. Also included is $8.4 billion to increase public transportation and improve transit facilities, $8 billion for investment in high speed rail and $1.5 billion for a discretionary surface transportation grant program to be awarded competitively by the Secretary of Transportation under a new name. The Federal Highway Administration (FHWA) and Federal Transit Administration have issued guidance to assist state and local agencies in preparing for implementation of the stimulus bill. The guidance includes Q&As and actions that can be taken to expedite economic recovery projects.

Other Bicycle Pedestrian Infrastructure Funding Options

Additionally, States will be receiving $53.6 billion in state fiscal stabilization funding. States must use 18.2 percent of their funding – or $9.7 billion – for public safety and government services. An eligible activity under this section is to provide funding to K-12 schools and institutions of higher education to make repairs, modernize and make renovations to meet green building standards. The *Leadership in Energy and Environmental Design (LEED) Green Building Rating System*, developed by the U.S. Green Building Council (USGBC), addresses green standards for schools that include bicycle and pedestrian facilities and access to schools. Another $3.1 billion is provided for the Energy Efficiency and Block Grant Program. This provides formula funding to cities, counties and states to undertake a range of energy efficiency activities. One eligible use of funding is for bicycle and pedestrian infrastructure.

6.3.2 State Sources

Streets and Highways Code – Bicycle Transportation Account (BTA)

The Bicycle Transportation Account (BTA) funds non-motorized facilities and access to cities and counties that have adopted bikeway master plans. Section 2106 (b) of the Streets and Highways Code transfers funds annually to the BTA from the revenue derived from the excise tax on motor vehicle fuel. The Caltrans Office of Bicycle Facilities administers the BTA. It is locally administered through SANDAG to counties and cities. Approximately $8.2 million is available annually to projects in San Diego County. For a project to be funded from the BTA, the project shall:

i) Be approximately parallel to a State, county, or city roadways, where the separation of bicycle traffic from motor vehicle traffic will increase the traffic capacity of the roadway; and ii) Serve the functional needs of commuting cyclists; and iii) Include but not be limited to:

- New bikeways serving major transportation corridors;
- New bikeways removing travel barriers to potential bicycle commuters;
- Secure bicycle parking at employment centers, park and ride lots and transit terminals;

- Bicycle carrying facilities on public transit vehicles;
- Installation of traffic control devices to improve the safety and efficiency of bicycle travel;
- Elimination of hazardous conditions on existing bikeways serving a utility purpose;
- Planning; and
- Safety and education.

Maintenance is specifically excluded from funding and allocation takes into consideration the relative cost effectiveness of the proposed project.

State Highway Account

Section 157.4 of the *Streets and Highways Code* requires Caltrans to set aside $360,000 for the construction of non-motorized facilities that will be used in conjunction with the State highway system. The Office of Bicycle Facilities also administers the State Highway Account fund. Funding is divided into different project categories. Minor B projects (less than $42,000) are funded by a lump sum allocation by the CTC and are used at the discretion of each Caltrans District office. Minor A projects (estimated to cost between $42,000 and $300,000) must be approved by the CTC. Major projects (more than $300,000) must be included in the State Transportation Improvement Program and approved by the CTC. Funded projects have included fencing and bicycle warning signs related to rail corridors.

Transportation Development Act Article III (Senate Bill 821)

TDA funds are based on a ¼ percent state sales tax, with revenues made available primarily for transit operating and capital purposes. By law, the San Diego County Auditor's office estimates the apportionment for the upcoming fiscal year. SANDAG prepares forecasts of TDA funds using the apportionment as the base level. The forecasts are based on a forecast of sales tax revenues estimated for the San Diego County using SANDAG's Demographic and Economic Forecasting Model (DEFM), an econometric forecasting model which takes into consideration numerous variables, including population growth, inflation, and real income growth. Certain TDA funds are included in the 'local' revenue sources and in the operating costs.

Traffic Congestion Relief Program (TCRP)

In FY 2001, the Governor of California initiated a new funding program (TCRP) in an effort to relieve congestion statewide. The TCRP was created as a result of a budget surplus. However, with the continuing budget deficit, TCRP allocations haven been sporadic. TCRP funds are based on the priority list of TCRP allocations.

6.3.3 Other State Bicycle Project Funding Sources

Governor's Energy Office (Oil Overcharge Funds)

The Federal government forced oil companies to repay the excess profits many of them made when they violated price regulations enacted in response to the energy crisis of the early 1970's. Few states have taken advantage of this fund, but some have received grants for bike coordinators and bicycle facilities. The types of projects eligible for funding vary by state, as does the level of allocation available.

Safe Routes to School Program (SR2S)

The Safe Routes to School Program funds non-motorized facilities in conjunction with improving access to schools through the Caltrans Local Assistance Division.

6.3.4 Local Sources

TransNet Sales Tax Funds

San Diego County voters passed a local tax ordinance authorizing the creation of the TransNet Sales Tax, imposing a 1/2 cent "transaction and use tax" solely to fund transportation improvements. About one million dollars are allocated annually for improved bicycle routes throughout the region. The ordinance describes bicycle facilities and requirements for facilities as: *"All purposes necessary and convenient to the design, right of way acquisition and construction of facilities intended for the use of bicycles. Bicycle*

facilities shall also mean facilities and programs that help to encourage the use of bicycles, such as secure bicycle parking facilities, bicycle promotion programs and bicycle safety education programs." "All new highway projects funded with revenues as provided in this measure, which are also identified as bikeway facilities in the Regional Transportation Plan (RTP), shall be required to include provision for bicycle use."

In November 2004, 67 percent of voters approved a 40-year extension of TransNet, which will generate an additional $14 billion for public transit, highway, and local street and road improvements. SANDAG leverages these funds with state and federal resources to improve the region's transportation infrastructure and tackle growing traffic congestion head-on.

Proposition A
This is a funding source administered by SANDAG with an annual availability of approximately one million dollars per year.

Assembly Bill 2766/434
This bill funds air pollution reduction projects related to alternate modes of transportation. The Air Pollution Control Board (APCB) administers this fund and approximately three million dollars are available annually.

RideLink
This program is operated by SANDAG and covers a variety of transportation management activities including projects such as bicycle lockers and security devices. These will be provided, installed and maintained for public agencies at no cost to the requesting agency. RideLink also offers a bicycle locker loan program to private sector entities.

Developer Impact Fees
As a condition for development approval, municipalities can require developers to provide certain infrastructure improvements, which can include bikeway projects. These projects have commonly provided Class 2 facilities for portions of on-street, previously planned routes. They can also be used to provide bicycle parking or shower and locker facilities. The type of facility that should be required to be built by developers should reflect the greatest need for the particular project and its local area. Legal challenges to these types of fees have resulted in the requirement to illustrate a clear nexus between the particular project and the mandated improvement and cost.

New Construction
Future road widening and construction projects are one means of providing on-street bicycle facilities. To ensure that roadway construction projects provide bike lanes where needed, it is important that the review process includes input pertaining to consistency with the proposed system. Future development in the City of Escondido would contribute only if the projects are conditioned.

Restoration
Cable TV and telephone companies sometimes need new cable routes within public rights of way. Recently, this has most commonly occurred during expansion of fiber optic networks. Since these projects require a significant amount of advance planning and disruption of curb lanes, it may be possible to request reimbursement for affected bicycle facilities to mitigate construction impacts. In cases where cable routes cross undeveloped areas, it may be possible to provide for new bikeway facilities following completion of the cable trenching, such as sharing the use of maintenance roads.

Other Sources
Local sales taxes, fees and permits may be implemented as new funding sources for bicycle projects. However, any of these potential sources would require a local election. Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly multi-use paths. For example, a local college design class may use such a multi-use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right of

way for the route. A local construction company may donate or discount services beyond what the volunteers can do. A challenge grant program with local businesses may be a good source of local funding, in which the businesses can "adopt" a route or segment of one to help construct and maintain it.

6.3.5 Private Source

Private funding sources can be acquired by applying through the advocacy groups such as the League of American Bicyclists and the Bikes Belong Coalition. Most of the private funding comes from foundations wanting to enhance and improve bicycle facilities and advocacy. Grant applications will typically be through the advocacy groups as they leverage funding from federal, state and private sources.

6.3.6 Most Likely Sources

According to City of Escondido sources, the most likely local sources of bikeway funding are the following:

1) TDA/CIP (Transportation Development Act, Capital Improvement Projects)
2) Transnet
3) BTA (Bicycle Transportation Account)
4) State and Federal Safe Routes to School
5) Developer Impact Fees
6) City General Fund

MISSING LINK 7

Background

The 1993 Bicycle Master Plan includes a 7.5 mile Class I bicycle path along Escondido Creek, an east-west channelized drainage facility through the City. Since 1993, the City actively pursued the construction of a paved pathway utilizing grant funds and developer participation to fulfill the City's goal to construct a continuous pathway stretching from one end of the City to the other. However, the goal to achieve a continuous pathway through the City is constrained by a ½ mile (approximately 2,840 linear feet) portion of the creek where it extends underground beneath the existing Civic Center Plaza shopping center, Escondido Boulevard and Centre City Parkway. The creek trail ends at the eastern side of Grape Day Park/Broadway and resumes again at Quince Street near the Transit Center.

Figure 7.1 Missing Link

This constrained portion of the bicycle path along the creek is known as "The Missing Link." The purpose of this section of the document is to evaluate potential alignments that would allow bicyclists and pedestrians to maintain a more direct and defined route to connect to the bike path, and to increase bicycling commuting in the downtown area and to the Transit Station. This study will explore opportunities and constraints of possible routes that would ultimately link

the path at the Transit Station to the path at Broadway. The study encompasses Broadway on the east, Escondido Transit Center on the west, Washington Avenue on the north, and East Valley Parkway on the south. The impact of the Missing Link severs the Escondido Transit Center from the Grape Day Park area, including City Hall, and the east side of the city. In terms of alternative transportation, this Missing Link greatly limits the creek trail's ability to serve effectively as a safe and convenient non-motorized transportation option for the community. Restoring the connection of the west and east sides of the trail would allow the trail to perform to its maximum potential (*Revealing Escondido Creek 2010*).

Escondido Creek Bike Path

The Escondido Creek Bike Path is intended to provide a bicycling and walking path that connects one end of the City to the other, providing a convenient corridor away from busy roadways that connect to a variety of services. The pathway is identified in the 2030 SANDAG Regional Transportation Plan as it serves as a Regional Bikeway Corridor providing a direct link to the City's Transit Center, the North County Transit District light-rail facility "Sprinter" and the downtown core of Escondido.

To date, the Escondido Creek Bike Path (12'-wide paved path) has been constructed from Harmony Grove Road on the southwestern edge of the City easterly to the Escondido Transit Center, and then from the City Hall complex at Broadway/Woodward Avenue easterly to Washington Avenue/Valley Center Road towards the northeastern edge of town. The pathway also is used as a maintenance road for City Utility and Public Works personnel and supports existing and planned infrastructure (i.e. potable and reclaimed water lines). To avoid areas where bicyclists would cross busy roadways, the City constructed a grade-separated undercrossing at Auto Parkway, and recently completed another grade-separated crossing at Ash Street/SR 78.

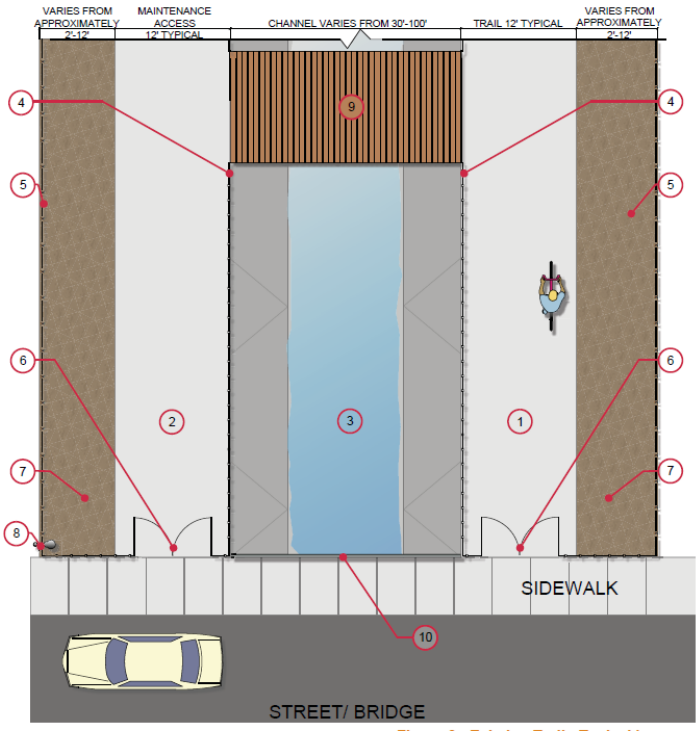
Escondido Creek Trail Entrance at the Transit Center along Quince St.

Trail Design

The creek trail was installed in the right-of-way along the creek in the late 1990s. Existing improvements include a paved asphalt trail which is located, for the most part, on the south side of the channel, a maintenance access road which is typically located on the opposite side of the channel, fencing at the top of the channel and in some areas along the outer perimeter of the trail, gates at the entrance to the trail at each intersection, and an open area adjacent to the trail that varies in width from approximately two feet to 12 feet. The trail is closed after dark and is not lit, with the exception of a small area at Juniper Street. See Figure 2: at right for a typical configuration.

LEGEND

1. EXISTING ASPHALT TRAIL
2. MAINTENANCE ACCESS
3. CREEK CHANNEL
4. FENCE AT TOP OF CHANNEL
5. FENCE/WALL AT PERIMETER
6. GATES WITH SIGNAGE; WIDE ENOUGH FOR SMALL VEHICLE
7. LANDSCAPE AREA (SOMETIMES CONTAINS DRAINAGE CHANNELS, TREES, SHRUBS, ETC.)
8. LIGHTING (AT JUNIPER STREET ONLY)
9. PEDESTRIAN BRIDGE (AT TRANSIT CENTER, GRAPE DAY PARK, DATE STREET, AND RESIDENTIAL ARE NEAR BEVEN STREET)
10. GUARD RAIL



Current Bike Facilities Master Plan

The current Bicycle Master Plan, which was adopted in 1993, identifies the missing section of the bike path and suggests two alternate routes to circumvent both Grape Day Park and the shopping mall between Escondido Boulevard and Centre City Parkway.

Alignment 1 – The northern route suggests using future Class II bike paths along Quince Street, Washington Avenue and Broadway to connect the Transit Station to the Escondido Creek Bike Path at Broadway.

Alignment 2 – The southern route suggests using future Class II bike paths along Quince Street, Second Avenue and Broadway.

The Bike Facilities Master Plan also suggests potential future mid-block crossings at Broadway, Escondido Boulevard, and Centre City Parkway, as well as access into and through Grape Day Park and the commercial center between Centre City Parkway and Escondido Boulevard. The plan notes issues with accessibility to the shopping center and consequent design and liability issues. Quince Street, Washington Avenue Broadway and Second Avenue are classified as Collector Roads on the City's Circulation Element and are identified on the current plan as Class II bike lanes. Broadway is classified as a Major Road. To date, these streets have not been striped or signed for bike lanes within the study area.

Second Avenue – (Collector Road, 84'/64'). Second Avenue currently is developed as a one-way Collector Road (east-west) with three lanes and on-street parking on both sides of the street. The street is proposed to accommodate up to four lanes with no on-street parking and a striped bike lane. In order to accommodate a bike lane under current conditions, on-street parking would need to be removed from one side of the street.

Quince Street – (Collector Road, 84'/64'). Quince Street currently is developed as a two-way Collector Road (north-south) with two lanes in each direction and a striped center turn lane. On-street parking is limited. The street currently could accommodate bike lanes in each direction with appropriate striping, signage and the removal of any on-street parking. Modification of the lane widths and center turn lane may be required.

Washington Avenue – (Collector Road, 84'/64') Washington Avenue is developed as a two-way Collector Road (east-west) with two lanes in each direction and a continuous center turn lane from Broadway to Quince Street. On-street parking is restricted. The street currently is wide enough to accommodate striped bike lanes, but the existing road conditions, lane widths and certain intersection improvements may preclude the installation of bike lanes without modifications and improvement, including modifying the width of the travel lanes and center turn lane.

Broadway – Major Road (102'/82'/14'-24'). Broadway is developed as a two-way Major Road (north-south) between Washington Avenue and Valley Parkway on-street parking on both sides of the street between Washington Avenue and Valley Parkway. The roadway narrows between Valley Parkway and Grand Avenue, but widens again between Grand Avenue and Second Avenue. Bicyclists currently use this street as a bike route to access the downtown area and Grape Day Park. Bike lanes are designated for Broadway north of the creek within the downtown area, but have not been installed to date. On-street parking on both sides of the street currently precludes the striping of bike lanes. The major roadway designation ultimately calls for on-street parking to be removed.

Safety Issues:

A review of bicycle-related accidents in Escondido for the period 2007 through 2011 indicates that most of the accidents occur along two major north-south corridors and one east-west corridor within the study area: Broadway, Centre City Parkway and Valley Parkway. These roadways are alternative roadways used by bicyclists to connect from the Transit Station to Broadway. Additional roadways within the study area include Grand Avenue, Quince Street, Escondido Boulevard, Woodward Avenue, and Second Avenue. During the 2007 through 2011 timeframe, there were a total of 261 accidents citywide of which 38, or 14.5% of all accidents, were within the study area.

The bicycle collision data revealed the majority of bicycle related accidents are due to 1.) biking against traffic; 2.) vehicle and bicyclist conflicts at intersections; and 3.) not cycling safely. Cyclists typically are involved in a collision with a vehicle as a result of either biking against traffic, or riding on the sidewalk where a motorist does not expect or see the cyclist as the vehicle enters the roadway from a commercial driveway. In the study area, bicyclists frequently travel against traffic on the sidewalk or within the roadway on the northern side of East Valley Parkway, which is a one-way street.

Observed Bike Routes from the Transit Station to Broadway (eastbound)

Bicyclists that use the Escondido Bike Path traveling east must exit at Quince Street when they reach the Transit Station. Cyclists generally use two alternative routes to access the bike path at Broadway, which include the following:

- The most direct and quickest route for bicyclists is to travel south along Quince Street to the intersection of Quince/Valley Parkway, or wait for a break in traffic and travel along the roadway or sidewalk against traffic along Quince Street. Cyclists travel against traffic on Valley Parkway (which is a one-way street) utilizing the sidewalk along the northern side of the street. Bicyclists then cross Centre City Parkway at the signalized intersection and continue east along Valley Parkway against traffic utilizing the wider street shoulder or sidewalk until they reach Escondido Boulevard or cut through the shopping center parking lot and cross midblock at Escondido Boulevard. At this point, cyclists either cut through the Center of the Art complex and Grape Day Park, or utilize Woodward Avenue. Bicyclists that continue east along Valley Parkway to Broadway then transition north along Broadway to the bike path at the channel.

- At Quince Street, which is unsignalized at the bike path, bicyclists wait for a break in traffic to cross the street, and then travel north to Washington Avenue, then east along Washington Avenue to Broadway, then travel south along Broadway to the bike path entrance at Woodward Avenue, which is unsignalized. Bicyclists must wait for a break in traffic to cross Broadway. Most bicyclists don't use this route since Washington Avenue does not contain striped bike lanes, the condition of the outside lanes and the width of the outside lanes does not provide a sufficient buffer area between vehicles and bicyclists. Washington Avenue also is not the most direct and quickest route to Grape Day Park and the Escondido Creek Trail.

Observed Bike Routes from Broadway to the Transit Station (westbound)

Bicyclists that use the Escondido Bike Path traveling west must exit the path at Broadway. Cyclists generally use two alternative routes to reach the Transit Station, which include the following:

- The most direct and quickest route for bicyclists is to travel south along Broadway until they reach Valley Parkway, then travel west along Valley Parkway, crossing Escondido Boulevard, Centre City Parkway and Quince Street at signalized intersections, then access the bike path at the Transit Station/Quince Street. The more experience riders generally ride along the side of the northern traffic lane while the less experienced riders generally tend to ride on the sidewalk. Some cyclists also cut through Grape Day Park and City Hall/CCAE complex either to reach Valley Parkway or Escondido Boulevard.

- The other alternative route that some bicyclists use is to wait for a break in traffic at Broadway to cross the street and then travel west along Woodward Avenue to Escondido Boulevard, which is signalized at the intersection. Some bicyclists choose to travel south along Escondido Boulevard to Valley Parkway, and then west along Valley Parkway to the Quince Street/Transit Center. Others choose to cut through the adjacent shopping center using the front parking lot area or along the eastern and southern/rear internal driveways. The eastern and southern driveways do not appear to experience a lot of customer traffic and appears mainly is used infrequently by delivery trucks.

Alignment Analysis:

Utilizing aerial and engineering/planning maps, surveying each potential route and preparing preliminary improvement plans for the potential routes, several alternative alignments were identified. The study area was divided into several sections and potential routes were evaluated. A preferred route was identified and other potential alternates also were identified for each section, which include the following:

I. Preferred Route
II. Escondido Creek Bike Path at Broadway to N. Escondido Boulevard
III. N. Escondido Blvd. to N. Centre City Parkway
IV. Bordering Centre City Parkway and Centre City Parkway Crossing

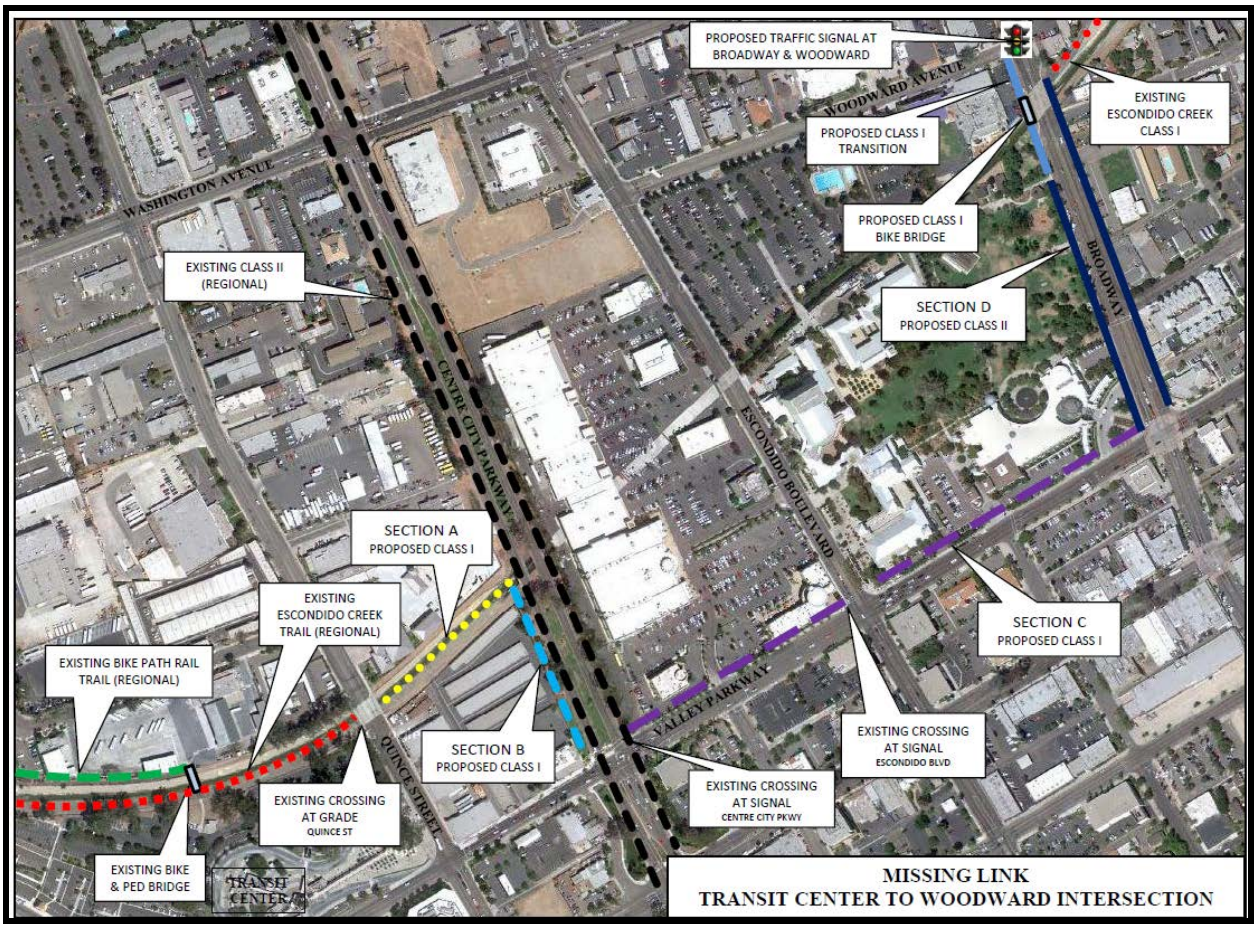
The following section describes each alternative and provides a preliminary cost estimate of each section. This detail is provided to offer the decision-makers an opportunity to evaluate the opportunities and constraints of implementation and the potential cost to complete the improvements. The cost estimates are not based on actual bids or detailed engineering, but are provided as a rough estimate for determining the appropriate alignment opportunities.

Preferred Route:

The Escondido Creek Bike Path terminates along the eastern side of Broadway near the intersection of Woodward Avenue. A traffic signal is proposed at the intersection to allow pedestrians and bicyclists to cross, which is identified on the current Bicycle Master Plan. A Class II bike path would be installed along the western side of Broadway to the Escondido Creek Channel where a pedestrian/bicycle bridge would be installed across the creek (approx. 41 feet in length). The Class I bike path would continue into Grape Day Park and transition to Broadway where Class II bike lanes would be striped on both side of the street to Valley

Parkway. Existing angled parking along the western side of the street (adjacent to Grape Day Park) would be restriped to allow for parallel parking. Existing parallel parking along the eastern side of the street would be removed to allow for the striped bike lane. The existing sidewalk along the north side of Valley Parkway (from Broadway to Centre City Parkway) would be modified to include a combination Class I bike path and sidewalk to allow for two-way travel along the roadway. The width of the path/sidewalk would vary along this section of the pathway to accommodate existing and planned travel lanes, turn lanes, bus stops and shelters, dedicated bus travel lanes, and infrastructure. Bicyclists would cross Escondido Boulevard and Centre City Parkway at existing signalized intersection, eliminating the need to install midblock crossings along Escondido Boulevard and Centre City Parkway. A Class I bike path would be installed along the western side of Centre City Parkway from Valley Parkway to the Escondido Creek Channel, and then along the southern side of the creek to Quince Street where it would tie into the Transit Station and the existing Class I bike paths. The Engineering and Traffic Divisions, as well as the Transportation Commission support this proposed route since it is the most cost effective alternative, would complete the entire missing link section, most implementable, follows existing routes used by many bicyclists, and could be accommodated within the existing right-of-way.

Figure 7.2 Preferred Route



Cost Estimate **$1,092,540** – Initial cost estimates for each section of the proposed project includes the following:

Engineering – Design – Inspection – Contingency - Misc.	$243,480
Section A (520') construction	$89,940
Section B (540') construction	$81,180
Section C (1,960') construction	$260,880
Section D (1,160') construction	$347,550
	$1,092,540

OTHER ALTERNATIVE SECTIONS CONSIDERED

Section I: Woodward Avenue from Escondido Creek Bike Path at Broadway to N. Escondido Boulevard

Woodward Avenue – Unclassified Commercial Street
Estimated Cost - $240,716 (including traffic signal at Broadway intersection)

The most direct route to Escondido Boulevard is to stripe a Class II bike path along Woodward Avenue (Broadway to Escondido Boulevard). A traffic signal at Woodward Avenue and Broadway could be installed to provide for a more convenient and controlled crossing at Broadway rather than waiting for a break in traffic or using the mid-block crossing at Broadway further east at Pennsylvania Avenue. The intersection of Woodard Avenue and Escondido Boulevard already has been signalized. In order to provide a striped five-foot-wide bike lane along both sides of the street, either the existing parallel on-street parking would need to be removed, or the continuous center-turn lane would need to be eliminated and the lanes restriped. Removing the continuous center-turn lane would be recommended over removing on-street parking since the volume of traffic during peak times does not necessitate the need for a separate center turn lane along this street segment. This segment would provide connection to Escondido Boulevard and to the commercial center located on the western side of the street. There currently is no public access through the commercial center that could accommodate a bike path. A public easement would need to be obtained.

Section II: Class I Bike Path Through Commercial Center N. Escondido Blvd. to N. Centre City Parkway

Estimated Construction Cost - $6,000 with ramps to CCP $635,162
Cost of Easement - Unknown

Once cyclists have crossed N. Escondido Boulevard at the existing traffic signal at Woodward Avenue, cyclists could proceed south along the western side of Escondido Boulevard within a proposed striped bicycle lane along the frontage of the Paramount condominium project for a distance of approximately 240-feet. Escondido Boulevard does not allow on-street parking and the street is wide enough to accommodate a striped bicycle lane within the roadway. At the southeast corner of the Paramount condominiums, bicyclists then would turn west and could utilize the existing northern driveway of the Civic Center Plaza retail development to access Centre City Parkway. The paved driveway varies in width from 28 feet to 64 feet along its length. A striped bicycle path could be accommodated within an existing 15-foot wide public utility easement that runs along the northern boundary of the commercial center within the driveway. Signs and bicycle path striping would identify the pathway. In order to use the shopping center driveway for a designated public bicycle path, the City would need to obtain a

public access easement from the property owner. The shopping center currently is situated approximately eight to ten feet higher than the adjacent Centre City Parkway roadway/parkway. A ramp would need to be installed to transition from the shopping center to Centre City Parkway.

Advantages: This alternative would enable cyclists to use a Class I bike path through the retail center rather than riding on bicycle lanes on adjacent Circulation Element streets. Retaining a bike path would continue to encourage cyclists that would prefer not to ride on a roadway that carries traffic volumes of 19,240 average daily trips, and also would provide the most direct, quickest and safest access to Centre City Parkway.

Constraints/Issues: In order to access the proposed bike path through the shopping center, bicyclists traveling westerly from Woodward would need to ride within a proposed striped bike lane a short distance along the western side of Escondido Boulevard. However, there isn't sufficient room within the right-of-way to accommodate for bicyclists traveling north. Also, a public easement might not be able to be obtained through the center.

Section III Bordering CCP and Midblock Crossing

Estimate Cost - $410,916

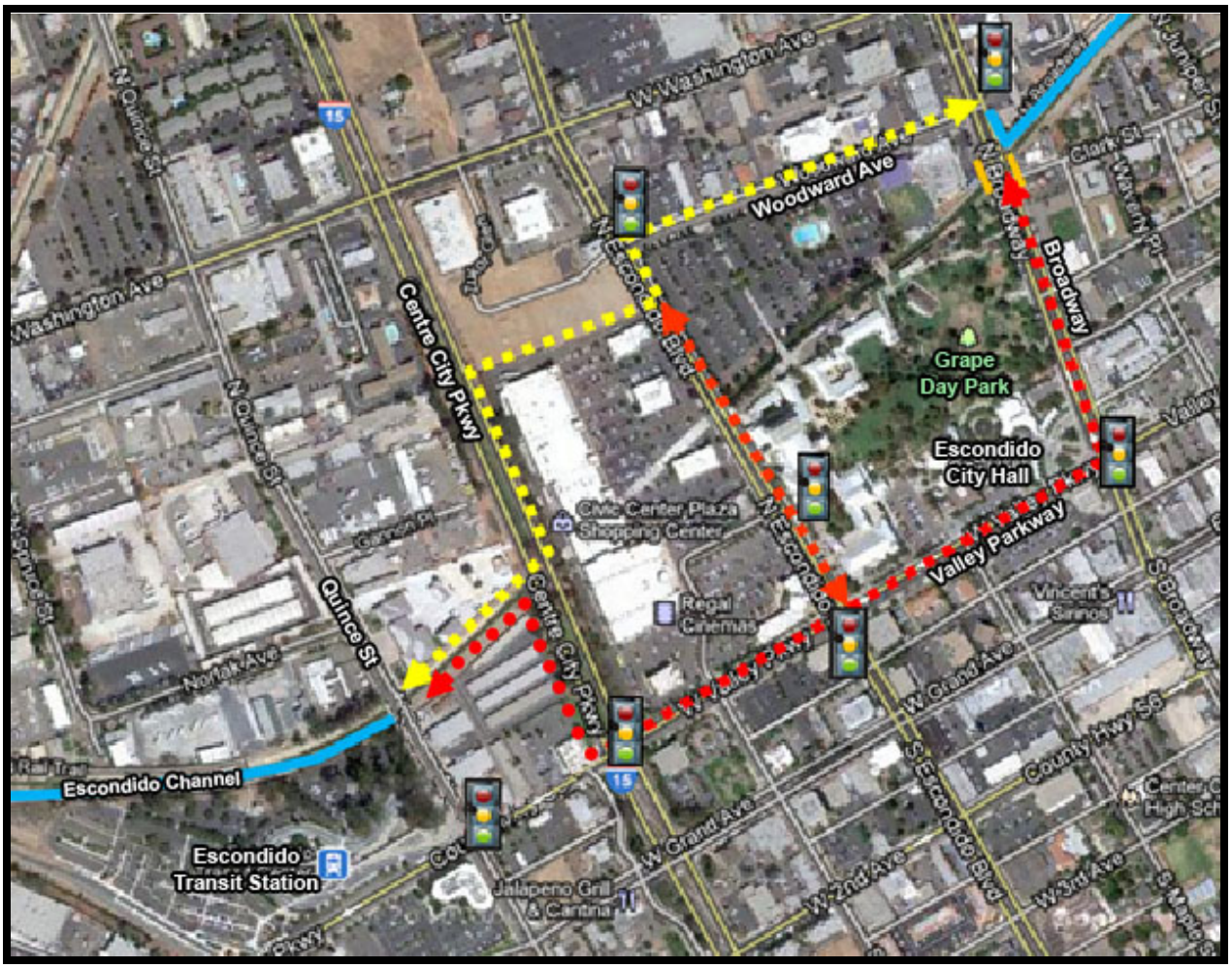
A midblock crossing of Centre City Parkway initially was proposed, but is not recommended by the Engineering Division due to the speed of traffic along the street (65 mph) and potential conflicts with signal timing. The crossing would tie into proposed Class I bike paths along both sides of the roadway to provide two-way access to the Escondido Creek Channel.

Grape Day Park

The City of Escondido Grape Day Park is located adjacent to City Hall and the California Center for the Arts Escondido (CCAE) complex. The park currently contains sidewalks along the Broadway frontage and eight-foot-wide internal sidewalks to connect to the City Hall and CCAE facilities. Bicycle parking and restroom facilities are provided within the park, but riding bicycles within the park currently is prohibited. The location of existing buildings and other infrastructure on or adjacent to the creek limit the ability to continue the bike path along the creek between Broadway and Escondido Boulevard.

The installation of potential bike paths through the park were considered as part of this study, which included creating separate bike paths through the park and/or widening the existing pedestrian paths to accommodate bikes. The goal would be to provide access through the park between the existing bike path at Broadway/Woodward Avenue to connect either to Valley Parkway or Escondido Boulevard. Potential routes were examined and are feasible based on the current built condition. However, due to potential unknown variables associated with existing and future planned development/uses of the CCAE and City Hall site, including the development of a new hotel, the ability to include bicycles through the park, the CCAE and City Hall facilities should be analyzed as part of any future master development planning for the park or other planned improvements to City Hall and the CCAE. The alternatives routes discuss in this study would provide access to the park and along the park, but not through the park.

Figure 7.3 Alternative Routes and Preferred Route



Existing Creek Trails:

Preferred Route:

Alternate Route:

Appendix A:

TERMINOLOGY OF BICYCLE PLANNING

Terms or acronyms used in this document or are typical of bicycle and transportation planning are defined below:

AASHTO - American Association of State Highway and Transportation Officials

Accessway – a formalized path, walkway, or other physical connection that allows pedestrians to efficiently reach destinations.

ADA - The Americans with Disabilities Act (civil rights legislation passed in 1990, effective July 1992). Federal law prohibiting discrimination against people with disabilities. Requires public entities and public accommodations to provide accessible accommodations for people with disabilities

ADAAG - Americans with Disabilities Act Accessibility Guidelines. Provides scoping and technical specifications for new construction and alterations undertaken by entities covered by the ADA.

ADT - Average Daily Traffic - The measurement of the average number of vehicles passing a certain point each day on a highway, road, street, or path.

APBP – Association of Pedestrian and Bicycle Professionals, a non-profit organization dedicated to promoting walking and biking nationwide.

Arterial (Road) - divided or undivided, relatively continuous routes that primarily serve through traffic, high traffic volumes and long average trip lengths. Traffic movement is of primary importance, with abutting land access of secondary importance.

Bicycle - A vehicle having two tandem wheels, either of which is more than 0.4 m. (16 in.) in diameter, or having three wheels in contact with the ground, any of which is more than 0.4 m. (16 in.) in diameter, propelled solely by human power, upon which any person or persons may ride.

Bicycle Facilities - A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling including bicycle paths, bike lanes, parking and storage facilities, lockers and showers, maps of bikeways, and marked routes and shared roadways not specifically designated for bicycle use.

BHSI - Bicycle Helmet Safety Institute *(*www.helmets.org*)* – a national non-profit organization dedicated to disseminating information on the merits of wearing helmets and promoting safe bicycling.

Bicycle Lane (Class II) - A portion of a roadway (typically 1.2-1.5 m.), which has been designated by signing and pavement markings for the preferential or exclusive use by bicyclists.

Bicycle Path (Class I) – A separated paved or hard surface (typically 2.4 m.) that serves the exclusive use of bicycles and pedestrians.

Bicycle Route (Class III) - A system of roadways that is linked by signs that designates the roadway as a route for bicyclists, generally providing a preferred route.

Bikeway - Any road, path, or bikeway which, in some manner, is specifically designated as open to bicycle travel, regardless of whether such facility is designated for the exclusive use of bicycles or is to be shared with other transportation modes.

BTS – Bureau of Transportation Statistics

Capacity - The maximum number of vehicles that have a reasonable expectation of passing over a given section of roadway during a given time period.

CIP - Capital Improvement Program – A 5-year program adopted by the Council for appropriating money for capital improvements such as roads, sewer, and water.

Clearance, Vertical - The height necessary for the safe passage of bicyclists as measured in a vertical plane.

Collector (Road) - A road designated to carry traffic between local streets and arterials, or from local street to local street.

Complete Streets – Roadways that safely accommodate for all roadway uses, including pedestrians, bicyclists, transit, motorists and individuals of all ages and capabilities, to the extent appropriate to the function and context of the roadway.

Edge Line - A painted or applied line to designate the edge of the road (typically 150-200 mm, 6-8 inches wide).

Enhancement Funds - Under TEA 21, set aside funds for twelve categories of projects including bicycling and pedestrian facilities and trails.

Grade-Separated Crossing – A facility such as an overpass, underpass, skywalk or tunnel that allows pedestrians and motor vehicles to cross each other at different levels.

Greenway – a singular or a series of vegetative, linear corridors, natural or man-made, which may contain active or passive recreational uses or which may prohibit human activity altogether in order to preserve sensitive areas. These are usually associated with riparian systems, but may also include transportation corridors.

ISTEA - Intermodal Surface Transportation Efficiency Act of 1991. Federal legislation guiding the expenditure of federal highway funds for bicycle, pedestrian, and other improvements. It provided new funding opportunities for sidewalks, multi-use paths, recreational trails, and bicycle facilities. ISTEA is now superseded by the Transportation Equity Act for the 21st Century.

Lateral - The width required for safe passage of a bicyclist as measured in a horizontal plane.

Local Road – A road that serves individual residences or businesses, and /or distributes traffic within a given urban or rural area.

Mixed-Use Trail – A trail or pathway that permits a different uses that are complementary to each other and provide opportunities for joint, non-motorized use.

NHTSA – National Highway Traffic Safety Administration (www.nhtsa.org)

Lateral Clearance - The distance between the edge of a roadway or bikeway and a fixed object. Also, the separation distance a roadway user needs to feel safe operating near a fixed object.

NHS - National Highway System – Federal safety program for funding safety improvements for interstate corridors.

RTIP - Regional Transportation Improvement Plan – The regional plan adopted yearly by SANDAG. It is used for identifying and funding future roadway improvements throughout San Diego County.

SANDAG – San Diego Association of Governments – The designated regional planning organization mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. SANDAG serves the cities and county of San Diego.

Shared Roadway - Any roadway upon which a bicycle lane is not designated and which may be legally used by bicycles regardless of whether such facility is specifically designated as a bikeway.

Shoulder (Paved) - Portion of highway or roadway that is contiguous to the traffic lanes to allow access for emergency vehicles, bicyclists, and where designated, pedestrians.

Staging Area - A designated area at a beginning of a trail or bikeway that is established for the use and comfort of trail users. Generally, it will include parking areas and other amenities such as, restrooms, sign kiosks, waste receptacles, picnic tables, benches and water fountains.

STP – Surface Transportation Program – Federal program for allocating grant funds for roadway improvements.

TEA 21 – Transportation Equity Act for the 21st Century – An umbrella federal program for providing funds to a variety of transportation related improvements programs. It provided funding opportunities for pedestrian, bicycling, and public transit facilities, and emphasizes inter-modalism, multi-modalism, and community participation in transportation planning initiated by ISTEA.

Traffic Calming – A set of techniques that reduce the speed and aggressiveness of traffic.

Traffic Markings – All lines, words, or symbols, except signs, officially placed within the roadway to regulate, warn or guide traffic.

Traffic Sign – A device mounted on a fixed or mountable support to convey a message or symbol to regulate, warn or guide traffic.

Volume – The number of vehicles, pedestrians, or bicyclists passing a given point during a specified period.

Appendix B:

Caltrans BTA Compliance

Bicycle Transportation Account Code Section 891.2 Compliance

The Bicycle Transportation Account (BTA) funds projects that improve safety and convenience for bicycle commuters. To be eligible for BTA funds, the bikeway master plan must address items (a) through (k) of Section 891.2 of the *California Streets and Highways Code*. For reviewer convenience, code text and associated document sections are listed below.

(a) The established number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.

See Section 3.7: Demand for Bicycle Facilities (page 38), Figure 2.4: General Plan Land Uses (page 28), Figure 2.6: General Plan Existing Land Uses (page 30) and Figure 2.7: General Plan Transit Demand and Activity Centers (page 31).

Escondido has a current population of 143,944 residents in the City. Using the latest Journey to Work data, it can be assumed that roughly 0.9 or 511 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 number of children who ride bike to school is added to this figure. According to Census Profile, the school-age population (5-17 years old) is approximately 20 percent of the population or 28,136 persons. Based on a comparison of similar jurisdictions and school surveys, it is estimated that approximately 1.5 percent of school-age children ride bikes to school or 424 in Escondido.

These additional 424 school age bicycle commuters added to the 511 adult commuters yields an estimated City total of 935 commuters, or less than 1% of Escondido's total population of 143,944. The estimated increase resulting from implementation of this plan is approximately 5 percent or 47 persons more than the current number of bicycle commuters in Escondido. 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 could be as high as 2% of commuters and school age children, or up to 1,870 persons.

(b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings and major employment centers.

See Chapter 2: Existing Conditions and Section 2.1: Setting, Existing and Proposed Land Use (page 16). Also see Figure 2.4: General Plan Land Uses (page 28), Figure 2.6: General Plan Existing Land Uses (page 30) and Figure 2.7: General Plan Transit Demand and Activity Centers (page 31).

(c) A map and description of existing and proposed bikeways.

See Figure 2.2: Road Network and Existing Bicycle Facilities (page 20), Table 2.1: Bicycle Expenditures (page 21), Executive Summary-Background (page 4), Tables ES1 and ES 2 (page 7), Figures 6.1 – 6-5: Proposed Bicycle Facilities (page 58); and Table 6.2: Bikeway System (page 63).

(d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings and major employment centers.

See Chapter 2, Sections: 2.5, 2.7, 2.8 (pages 24-25), Figure 2.7: Activity Centers (page 31) and Chapter 3, Sections: 3.9-3.10 (pages 41-45).

(e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit, rail vehicles or ferry vessels.

See Figure 2.5: General Plan Transit Routes (page 29) Figure 2.7: General Plan Transit Demand and Activity Centers (page 31), and Sections 2-5 and 2.6: Bicycle Parking and Transit Connections (page 24-25).

(f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom and shower facilities near bicycle parking facilities.

See Figure 2.7: General Plan Transit Demand and Activity Centers (page 31) and Sections 2.7 – 2.8: Location of Shower Facilities and Public Restrooms (page 25).

(g) A description of bicycle safety and education programs conducted in the area included in the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.

See Section 2.9: Education and Enforcement (page 25-26). The Escondido Police Department in coordination with the Escondido School District has conducted bike rodeos for children and other various education programs through grants. The City also has prepared educational materials for school-age children through grant programs.

(h) A description of the extent of citizen and community involvement in development of the plan including, but not be limited to, letters of support.

The City conducted two public workshops at the Escondido City Hall on January 20, 2007 and March 12, 2012 to solicit input and identify key concerns of bicyclists. A questionnaire also was posted on the City's web site and hard copies distributed to solicit more comments through the second workshop. There were 69 responses received from the on-line survey and 15 hard copies completed. Additional public outreach methods were conducted in 2009 and 2010 as part of the Escondido Creek Vision Program. See Section 3.6: Public Outreach (page 37).

(i) A description of how the bicycle transportation plan has been coordinated and is consistent with the local or regional transportation, air quality or energy conservation plans, including, but not be limited to, programs that provide incentives for bicycle commuting.

The selection of previously planned and new bikeways proposed in this plan reflects review of regional transportation plans by providing linkages to regional bikeways wherever possible. Most of the regional network has been completed within the City, including the Inland Rail Trail (Class I), portions of the Escondido Creek Trail (Class 1) and Center City Parkway Class II lanes. The Escondido Creek Trail still has some missing sections, including the "missing link" within the central downtown core. The City of Escondido has yet to implement some of the planned bikeway facilities identified in the previous Bicycle Facilities Master Plan 1993 and in the *General Plan 2012.* Segments recommended in this update are intended to fill gaps in the existing system and look at alternatives to planned and suggested facilities. The remainder is intended to provide school age children with safer routes to schools. This plan also works to make bicycle travel within the City of Escondido more convenient and safe so that people are encouraged to reduce their motor vehicle travel in lieu of bicycles by providing more direct and consistent routes. See Chapter 4: Goals, Objectives and Policies (pages 46-50).

(j) A description of the projects proposed in the plan and a listing of their priorities of implementation.

See Executive Summary ES 5: Key Findings and Recommendations (page 5), Section 1.12: Recommendations and Priorities (page 14) and Chapter 6: Bikeway Plan (page 56).

(k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.

The City of Escondido regularly sweeps bike routes, bike lanes and bike paths as part of the ongoing street maintenance and storm water programs. Repainting faded bike lanes is part of the overall street and pavement management program when specific streets are restriped. City staff also regularly reviews street and bikeway sign conditions and replaces them on an as-needed basis. There are no specific costs associated with these tasks since they are part of the City's regular maintenance budget. A list of past project and expenditures is included in Chapter 2 and Table 2.1 (page 21). For future financial needs, refer to the project summary identified in Tables ES1 and ES 2, and Bicycle Facilities Map and list of projects in Chapter 6.

Appendix C:

Caltrans Highway Design Manual - Chapter 1000 - Bikeway Planning and Design

The following pages from the Caltrans *Highway Design Manual* are included as a reference for physical design requirements for bikeways in the State of California. This is the metric measurement version that is available via the Caltrans web site at:

www.dot.ca.gov/hq/oppd/hdm/pdf/chp1000.pdf

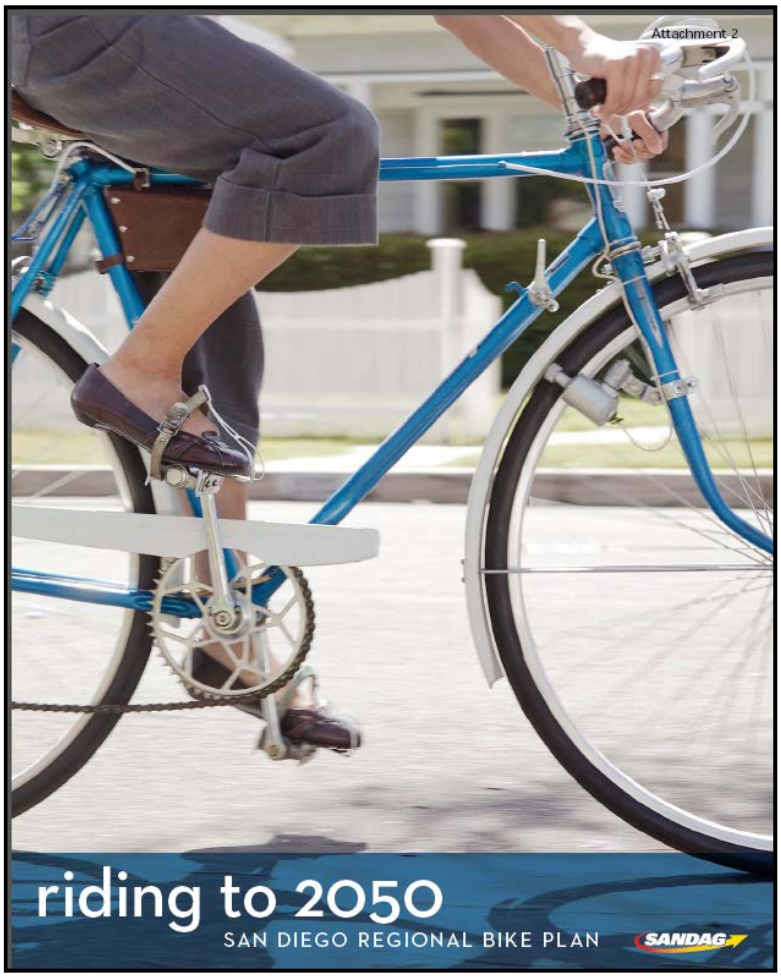
Manual included with printed copies otherwise see link to CALTRANS website at www.dot.go.gov for most current version as design manual may be modified over time

Appendix D:

Bicycle Design Guidelines (SANDAG)

Chapter 7 of the San Diego Regional Bicycle Plan "Riding to 2050" presents bicycle facility design guidelines and a best practices manual to serve as a guide for planners, engineers, and designers. The guidelines are available via the SANDAG website at:

http://www.sandag.org/uploads/projectid/projectid_353_10862.pdf



Manual included with printed copies otherwise see link to SANDAG website at www.SANDAG.ORG

Appendix E:

California Bicycle Laws and Safety

The following are important excerpts from the California Vehicle Code (VC) relating to the operation and equipping of bicycles.

VC 231 - Bicycle Defined

Defines bicycle as a device upon which any person may ride, propelled exclusively by human power through a belt, chain, or gears and having one or more wheels. Specifically provides that persons riding bicycles are subject to Vehicle Code provisions specified in Sections 21200 and 21200.5 (see below).

VC 21200 – Laws Applicable to Bicycle Use

a) Every person riding a bicycle upon a highway has all the rights and is subject to all the provisions applicable to the driver of a vehicle by this division, including, but not limited to, provisions concerning driving under the influence of alcoholic beverages or drugs, and by Division 10 (commencing with Section 20000), Section 27400, Division 16.7 (commencing with Section 39000), Division 17 (commencing with Section 40000.1), and Division 18 (commencing with Section 42000), except those provisions which by their very nature can have no application. b) (1) Any peace officer, as defined in Chapter 4.5 (commencing with Section 830) of Title 3 of Part 2 of the Penal Code, operating a bicycle during the course of his or her duties is exempt from the requirements of subdivision (a), except as those requirements relate to driving under the influence of alcoholic beverages or drugs, if the bicycle is being operated under any of the following circumstances:

A) In response to an emergency call.
B) While engaged in rescue operations.
C) In the immediate pursuit of an actual or suspected violator of the law.
2) This subdivision does not relieve a peace officer from the duty to operate a bicycle with due regard for the safety of all persons using the highway.

VC 21200.5 – Riding a Bicycle Under the Influence of Alcohol or Drugs

Notwithstanding Section 21200, it is unlawful for any person to ride a bicycle upon a highway while under the influence of an alcoholic beverage or any drug, or under the combined influence of an alcoholic beverage and any drug. Any person arrested for a violation of this section may request to have a chemical test made of the person's blood, breath, or urine for the purpose of determining the alcoholic or drug content of that person's blood pursuant to Section 23612, and, if so requested, the arresting officer shall have the test performed. A conviction of a violation of this section shall be punished by a fine of not more than two hundred fifty dollars ($250). Violations of this section are subject to Section 13202.5.

VC 21201 - Equipment Requirements

a) No person shall operate a bicycle on a roadway unless it is equipped with a brake which will enable the operator to make one braked wheel skid on dry, level, clean pavement.
b) No person shall operate on the highway a bicycle equipped with handlebars so raised that the operator must elevate his hands above the level of his shoulders in order to grasp the normal steering grip area.
c) No person shall operate upon a highway a bicycle that is of a size that prevents the operator from safely stopping the bicycle, supporting it in an upright position with at least one foot on the ground, and restarting it in a safe manner.
d) A bicycle operated during darkness upon a highway, a sidewalk where bicycle operation is not prohibited by the local jurisdiction, or a bikeway, as defined in Section 890.4 of the Streets and Highways Code, shall be equipped with all of the following:

1) A lamp emitting a white light that, while the bicycle is in motion, illuminates the highway, sidewalk, or bikeway in front of the bicyclist and is visible from a distance of 300 feet in front and from the sides of the bicycle.
2) A red reflector on the rear that shall be visible from a distance of 500 feet to the rear when directly in front of lawful upper beams of headlamps on a motor vehicle.
3) A white or yellow reflector on each pedal, shoe, or ankle visible from the front and rear of the bicycle from a distance of 200 feet.
4) A white or yellow reflector on each side forward of the center of the bicycle, and a white or red reflector on each side to the rear of the center of the bicycle, except that bicycles that are equipped with reflectorized tires on the front and the rear need not be equipped with these side reflectors. The reflectors and reflectorized tires shall be of a type meeting requirements established by the department.
e) A lamp or lamp combination, emitting a white light, attached to the operator and visible from a distance of 300 feet in front and from the sides of the bicycle, may be used in lieu of the lamp required by paragraph (1) of subdivision (d).

VC 21201.3 - Flashing Lights

a) A bicycle or motorized bicycle used by a peace officer, as defined in Section 830.1 of, subdivision (a), (b), (c), (d), (e), (f), (g), or (i) of Section 830.2 of, subdivision (b) or (d) of Section 830.31 of, subdivision (a) or (b) of Section 830.32 of, Section 830.33 of, subdivision (a) of Section 830.36 of, subdivision (a) of Section 830.4 of, or Section 830.6 of, the Penal Code, in the performance of the peace officer's duties, may display a steady or flashing blue warning light that is visible from the front, sides, or rear of the bicycle or motorized bicycle.
b) No person shall display a steady or flashing blue warning light on a bicycle or motorized bicycle except as authorized under subdivision (a).

VC 21201.5 - Reflectors

a) No person shall sell, or offer for sale, a reflex reflector or reflectorized tire of a type required on a bicycle unless it meets requirements established by the department. If there exists a federal Consumer Product Safety Commission regulation applicable to bicycle reflectors, the provisions of that regulation shall prevail over provisions of this code or requirements established by the department pursuant to this code relative to bicycle reflectors.
b) No person shall sell, or offer for sale, a new bicycle that is not equipped with a red reflector on the rear, a white or yellow reflector on each pedal visible from the front and rear of the bicycle, a white or yellow reflector on each side forward of the center of the bicycle, and a white or red reflector on each side to the rear of the center of the bicycle, except that bicycles which are equipped with reflectorized tires on the front and rear need not be equipped with these side reflectors.
c) Area reflectorizing material meeting the requirements of Section 25500 may be used on a bicycle.

VC 21202 - Duty of Bicycle Operator: Operation On Roadway

a) Any person operating a bicycle upon a roadway at a speed less than the normal speed of traffic moving in the same direction at that time shall ride as close as practicable to the right-hand curb or edge of the roadway except under any of the following situations:
1) When overtaking and passing another bicycle or vehicle proceeding in the same direction.
2) When preparing for a left turn at an intersection or into a private road or driveway.
3) When reasonably necessary to avoid conditions (including, but not limited to, fixed or moving objects, vehicles, bicycles, pedestrians, animals, surface hazards, or substandard width lanes) that make it unsafe to continue along the right-hand curb or edge, subject to the provisions of Section 21656. For purposes of this section, a "substandard width lane" is a lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the lane.
4) When approaching a place where a right turn is authorized.
b) Any person operating a bicycle upon a roadway of a highway, which highway carries traffic in one direction only and has two or more marked traffic lanes, may ride as near the left-hand curb or edge of that roadway as practicable.

VC 21203 - Hitching Rides

No person riding upon any motorcycle, motorized bicycle, bicycle, coaster, roller skates, sled, or toy vehicle shall attach the same or themselves to any streetcar or vehicle on the roadway.

VC 21204 - Riding On Bicycle

a) No person operating a bicycle upon a highway shall ride other than upon or astride a permanent and regular seat attached thereto.
b) No operator shall allow a person riding as a passenger, and no person shall ride as a passenger, on a bicycle upon a highway other than upon or astride a separate seat attached thereto. If the passenger is four years of age or younger, or weighs 40 pounds or less, the seat shall have adequate provision for retaining the passenger in place and for protecting the passenger from the moving parts of the bicycle.

VC 21205 - Carrying Articles

No person operating a bicycle shall carry any package, bundle, or article which prevents the operator from keeping at least one hand upon the handlebars.

VC 21206 - Local Regulation

This chapter does not prevent local authorities, by ordinance, from regulating the registration of bicycles and the parking and operation of bicycles on pedestrian or bicycle facilities, provided such regulation is not in conflict with the provisions of this code.

VC 21207 - Bicycle Lanes

a) This chapter does not prohibit local authorities from establishing, by ordinance or resolution, bicycle lanes separated from any vehicular lanes upon highways, other than state highways as defined in Section 24 of the Streets and Highways Code and county highways established pursuant to Article 5 (commencing with Section 1720) of Chapter 9 of Division 2 of the Streets and Highways Code.
b) Bicycle lanes established pursuant to this section shall be constructed in compliance with Section 891 of the Streets and Highways Code.

VC 21207.5 - Motorized Bicycles: Prohibited Operation

Notwithstanding Sections 21207 and 23127 of this code, or any other provision of law, no motorized bicycle may be operated on a bicycle path or trail, bikeway, bicycle lane established pursuant to Section 21207, equestrian trail, or hiking or recreational trail, unless it is within or adjacent to a roadway or unless the local authority or the governing body of a public agency having jurisdiction over such path or trail permits, by ordinance, such operation

VC 21208 - Permitted Movements from Bicycle Lanes

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

VC 21210 - Parking

No person shall leave a bicycle lying on its side on any sidewalk, or shall park a bicycle on a sidewalk in any other position, so that there is not an adequate path for pedestrian traffic. Local authorities may, by ordinance or resolution, prohibit bicycle parking in designated areas of the public highway, provided that appropriate signs are erected.

VC 21211 – Obstruction of Bikeways

a) No person may stop, stand, sit, or loiter upon any class I bikeway, as defined in subdivision (a) of Section 890.4 of the Streets and Highways Code, or any other public or private bicycle path or trail, if the stopping, standing, sitting, or loitering impedes or blocks the normal and reasonable movement of any bicyclist.

b) No person may place or park any bicycle, vehicle, or any other object upon any bikeway or bicycle path or trail, as specified in subdivision (a), which impedes or blocks the normal and reasonable movement of any bicyclist unless the placement or parking is necessary for safe operation or is otherwise in compliance with the law.

c) This section does not apply to drivers or owners of utility or public utility vehicles, as provided in Section 22512.

d) This section does not apply to owners or drivers of vehicles who make brief stops while engaged in the delivery of newspapers to customers along the person's route.

e) This section does not apply to the driver or owner of a rubbish or garbage truck while actually engaged in the collection of rubbish or garbage within a business or residence district if the front turn signal lamps at each side of the vehicle are being flashed simultaneously and the rear turn signal lamps at each side of the vehicle are being flashed simultaneously.

f) This section does not apply to the driver or owner of a tow vehicle while actually engaged in the towing of a vehicle if the front turn signal lamps at each side of the vehicle are being flashed simultaneously and the rear turn signal lamps at each side of the vehicle are being flashed simultaneously.

VC 21212 – Youth Helmets

a) A person under 18 years of age shall not operate a bicycle, a non-motorized scooter, or a skateboard, nor shall they wear in-line or roller skates, nor ride upon a bicycle, a non-motorized scooter, or a skateboard as a passenger, upon a street, bikeway, as defined in Section 890.4 of the Streets and Highways Code, or any other public bicycle path or trail unless that person is wearing a properly fitted and fastened bicycle helmet that meets the standards of either the American Society for Testing and Materials (ASTM) or the United States Consumer Product Safety Commission (CPSC), or standards subsequently established by those entities. This requirement also applies to a person who rides upon a bicycle while in a restraining seat that is attached to the bicycle or in a trailer towed by the bicycle.

b) Any helmet sold or offered for sale for use by operators and passengers of bicycles, non-motorized scooters, skateboards, or in-line or roller skates shall be conspicuously labeled in accordance with the standard described in subdivision (a) which shall constitute the manufacturer's certification that the helmet conforms to the applicable safety standards.

c) No person shall sell, or offer for sale, for use by an operator or passenger of a bicycle, non-motorized scooter, skateboard, or in-line or roller skates any safety helmet which is not of a type meeting requirements established by this section.

d) Any charge under this subdivision shall be dismissed when the person charged alleges in court, under oath, that the charge against the person is the first charge against that person under this subdivision, unless it is otherwise established in court that the charge is not the first charge against the person.

e) Except as provided in subdivision (d), a violation of this section is an infraction punishable by a fine of not more than twenty-five dollars ($25). The parent or legal guardian having control or custody of an unemancipated minor whose conduct violates this section shall be jointly and severally liable with the minor for the amount of the fine imposed pursuant to this subdivision.

f) Notwithstanding Section 1463 of the Penal Code or any other provision of law, the fines collected for a violation of this section shall be allocated as follows:

1) Seventy-two and one-half percent of the amount collected shall be deposited in a special account of the county health department, to be used for bicycle, non-motorized scooter, skateboard, and in-line and roller skate safety education and for assisting low-income families in obtaining approved bicycle helmets for children under the age of 18 years, either on a loan or purchase basis. The county may contract for the implementation of this program, which, to the extent practicable, shall be operated in conjunction with the child passenger restraint program pursuant to Section 27360.

2) Two and one-half percent of the amount collected shall be deposited in the county treasury to be used by the county to administer the program described in paragraph (1).

3) If the violation occurred within a city, 25 percent of the amount collected shall be transferred to and deposited in the treasury of that city. If the violation occurred in an unincorporated area, this 25 percent shall be deposited and used pursuant to paragraph (1).

VC 21650.1 - Bicycles on Roadways

A bicycle operated on a roadway or highway shoulder shall be operated in the same direction as vehicles are required to drive upon the roadway.

VC 21717 – Driving into the Bicycle Lane

Whenever it is necessary for the driver of a motor vehicle to cross a bicycle lane that is adjacent to his lane of travel to make a turn, the driver shall drive the motor vehicle into the bicycle lane prior to making the turn and shall make the turn pursuant to Section 22100.

VC 22100 – Bicycling on Freeways

Except as provided in Section 22100.5 or 22101, the driver of any vehicle intending to turn upon a highway shall do so as follows:

a) Right Turns. Both the approach for a right-hand turn and a right-hand turn shall be made as close as practicable to the right-hand curb or edge of the roadway except:

1) Upon a highway having three marked lanes for traffic moving in one direction that terminates at an intersecting highway accommodating traffic in both directions, the driver of a vehicle in the middle lane may turn right into any lane lawfully available to traffic moving in that direction upon the roadway being entered.

2) If a right-hand turn is made from a one-way highway at an intersection, a driver shall approach the turn as provided in this subdivision and shall complete the turn in any lane lawfully available to traffic moving in that direction upon the roadway being entered.

3) Upon a highway having an additional lane or lanes marked for a right turn by appropriate signs or markings, the driver of a vehicle may turn right from any lane designated and marked for that turning movement.

b) Left Turns. The approach for a left turn shall be made as close as practicable to the left-hand edge of the extreme left-hand lane or portion of the roadway lawfully available to traffic moving in the direction of travel of the vehicle and, when turning at an intersection, the left turn shall not be made before entering the intersection. After entering the intersection, the left turn shall be made so as to leave the intersection in a lane lawfully available to traffic moving in that direction upon the roadway being entered, except that upon a highway having three marked lanes for traffic moving in one direction that terminates at an intersecting highway accommodating traffic in both directions, the driver of a vehicle in the middle lane may turn left into any lane lawfully available to traffic moving in that direction upon the roadway being entered.

VC 22111 - Hand Signals

All required signals given by hand and arm shall be given in the following manner:

1. Left turn-hand and arm extended horizontally beyond the side of the bicycle.
2. Right turn- left hand and arm extended upward beyond the side of the bicycle or right hand and arm extended horizontally to the right side of the bicycle.
3. Stop or sudden decrease of speed signal- left hand and arm extended downward beyond the side of the bicycle.

VC 23330 – Toll Crossing

Except where a special permit has been obtained from the Department of Transportation under the provisions of Article 6 (commencing with Section 35780) of Chapter 5 of Division 15, none of the following shall be permitted on any vehicular crossing:

b) Bicycles, motorized bicycles, or motorized scooters, unless the department by signs indicates that bicycles, motorized bicycles, or motorized scooters, or any combination thereof, are permitted upon all or any portion of the vehicular crossing.

VC 27400 – Wearing of Headsets or Earplugs

A person operating a motor vehicle or bicycle may not wear a headset covering, or earplugs in, both ears. This prohibition does not apply to any of the following:

a) A person operating authorized emergency vehicles, as defined in Section 165.

b) A person engaged in the operation of either special construction equipment or equipment for use in the maintenance of any highway.

c) A person engaged in the operation of refuse collection equipment who is wearing a safety headset or safety earplugs.

d) A person wearing personal hearing protectors in the form of earplugs or molds that are specifically designed to attenuate injurious noise levels. The plugs or molds shall be designed in a manner so as to not inhibit the wearer's ability to hear a siren or horn from an emergency vehicle or a horn from another motor vehicle.

(e) A person using a prosthetic device that aids the hard of hearing.

VC 39002 - License Requirement

a) A city or county may adopt a bicycle licensing ordinance or resolution providing that no resident shall operate any bicycle on any street, road, highway, or other public property within the city of county, unless such bicycle is licensed in accordance with this division.

b) Any bicycle not licensed under this division may be additionally regulated or licensed pursuant to local ordinance or may be licensed upon request of the owner.

c) It is illegal for any person to tamper with, destroy, mutilate or alter any license indicia (marking) or registration form or to remove, alter, or mutilate the serial number, or the identifying marks of a licensing agency's identifying symbol on any bicycle frame licensed under the provision of this division.

VC 23111 – 23112 - Throwing Substances On Highways Or Adjoining Areas.

No person in any vehicle shall throw or discharge from or upon any road, highway or adjoining area, public or private, any lighted or non-lighted cigarette, cigar, match or any flaming or glowing substance. No person shall throw or deposit upon a highway any bottle, can, glass, wire, nails, paper or any substance likely to injure or cause damage to traffic using the highway.

Note: Some of the sections of the laws listed above have been reworded slightly and/or abbreviated. For exact language, refer to the referenced sections in the California Vehicle Code. In addition to these state laws, many communities have local ordinances. Check with local police departments regarding bicycle registration, licensing, and regulations (sidewalk riding, etc.).

Appendix F:

Sample Bicycle Survey

CITY OF ESCONDIDO
BICYCLE MASTER PLAN UPDATE
SURVEY 2012

The City of Escondido is updating the Bicycle Master Plan, which was originally adopted in 1991. Your participation will help update the plan's goals and objectives, and to prioritize the development of facilities.

1. Are you a City of Escondido resident or within the Escondido Mailing Area?

☐ **Yes** ☐ **No**

2. Why do you bike? (*check all that apply*)

☐ For exercise / health reasons
☐ For enjoyment
☐ For environmental and / or social reasons
☐ For shopping / errands
☐ To get to work
☐ To get to school
☐ To get to transit
☐ Cheaper than using a car
☐ I don't own a car
☐ I don't bike

3. Are the majority of your bicycle trips recreational or utilitarian (i.e. work, school, stores, etc.)?

☐ Recreational
☐ Utilitarian

4. How many days per week do you ride?

☐ **0** ☐ **1-2** ☐ **2-3** ☐ **3-4** ☐ **4-5** ☐ **6-7**

5. What is the average distance of your rides (one way)?

☐ Under 2 miles
☐ 3-5 miles
☐ 6-10 miles
☐ 11-24 miles
☐ 25 miles and above

6. What prevents you from biking more often? (*check all that apply*)

- ☐ No bike paths, bike lanes or routes
- ☐ Insufficient bike parking or storage
- ☐ Bikeways / roads are in poor condition
- ☐ Biking not safe method of transportation
- ☐ Speed / volume of traffic along roadways
- ☐ Destinations are too far away
- ☐ Biking too difficult, topography, etc.
- ☐ Biking not convenient method of transportation
- ☐ I travel with small children
- ☐ I don't have enough time
- ☐ Insufficient lighting
- ☐ Weather
- ☐ No support facilities (i.e., showers, locker room)
- ☐ Other _____

7. When riding a bike, which of the following are issues that you encounter?

	Never a problem	Sometimes a problem	Always a problem
There are no bike lanes			
Gaps in bike lanes, facilities do not connect to my destination			
Vehicles parking in bike lanes			
Vehicles driving in bike lanes			
Vehicles not sharing roadways / driver issues			
Speed/volume of traffic			
Poor road surface conditions			
Difficulty crossing intersections			
Debris in bike lanes/shoulders			
Inadequate lighting			

8. Which Escondido streets and intersections do you find most difficult for bicyclists and why?

1. _____
2. _____
3. _____
4. _____
5. _____

9. Regardless of whether you own a bike or not, please indicate the importance of the following features in making bicycling more safe and convenient (or at all):

	Not Important	Moderately Important	Extremely Important
Wide travel lanes on roads			
Wide shoulders on roads			
Bike lanes on roads (Class 2 lanes)			
Signed bike routes on roads (Class 3 routes)			
Paved paths along roads physically separated from vehicle traffic (Class 1 paths)			

"Share the Road" warning signs "Sharrows"			
Traffic signals for bikers			
Shared-use sidewalks			
Street signs for bicyclists			
Enhanced crosswalk designs for bikers and pedestrians			
Marked bike lanes through intersections			
Add traffic calming features along selected roadways / intersections			
Increased maintenance of bike lanes, routes, etc.			
More enforcement programs			
Education for bicyclists on how to deal with motor traffic			
Education for motorists on how to deal with bicyclists in traffic			
Secure bike parking at destination			
Indoor bike storage, showers/locker rooms at work			