

Figure 6.1 Existing and Proposed Bicycle Facilities

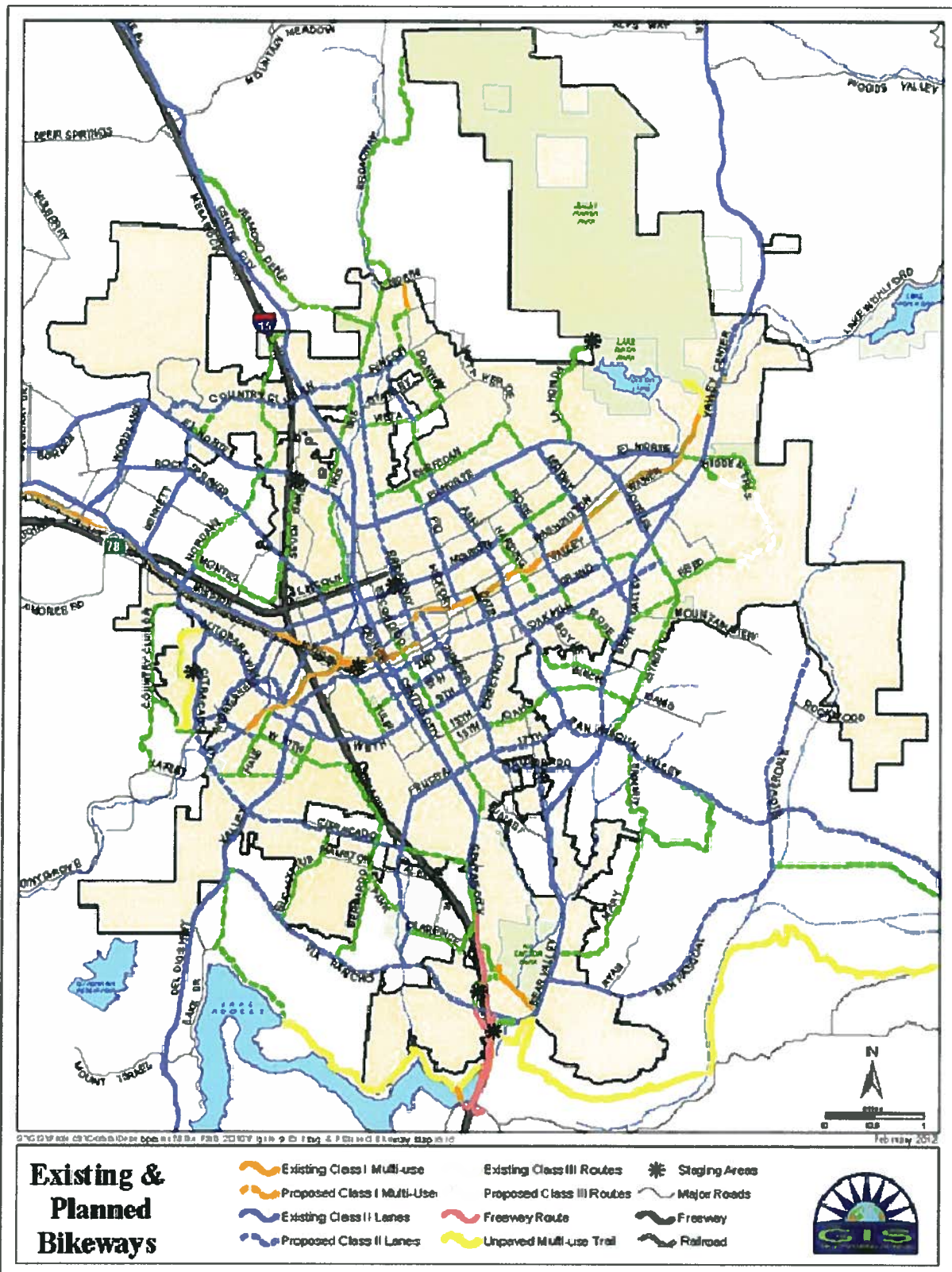


Figure 6.2 Northwest Quadrant Area

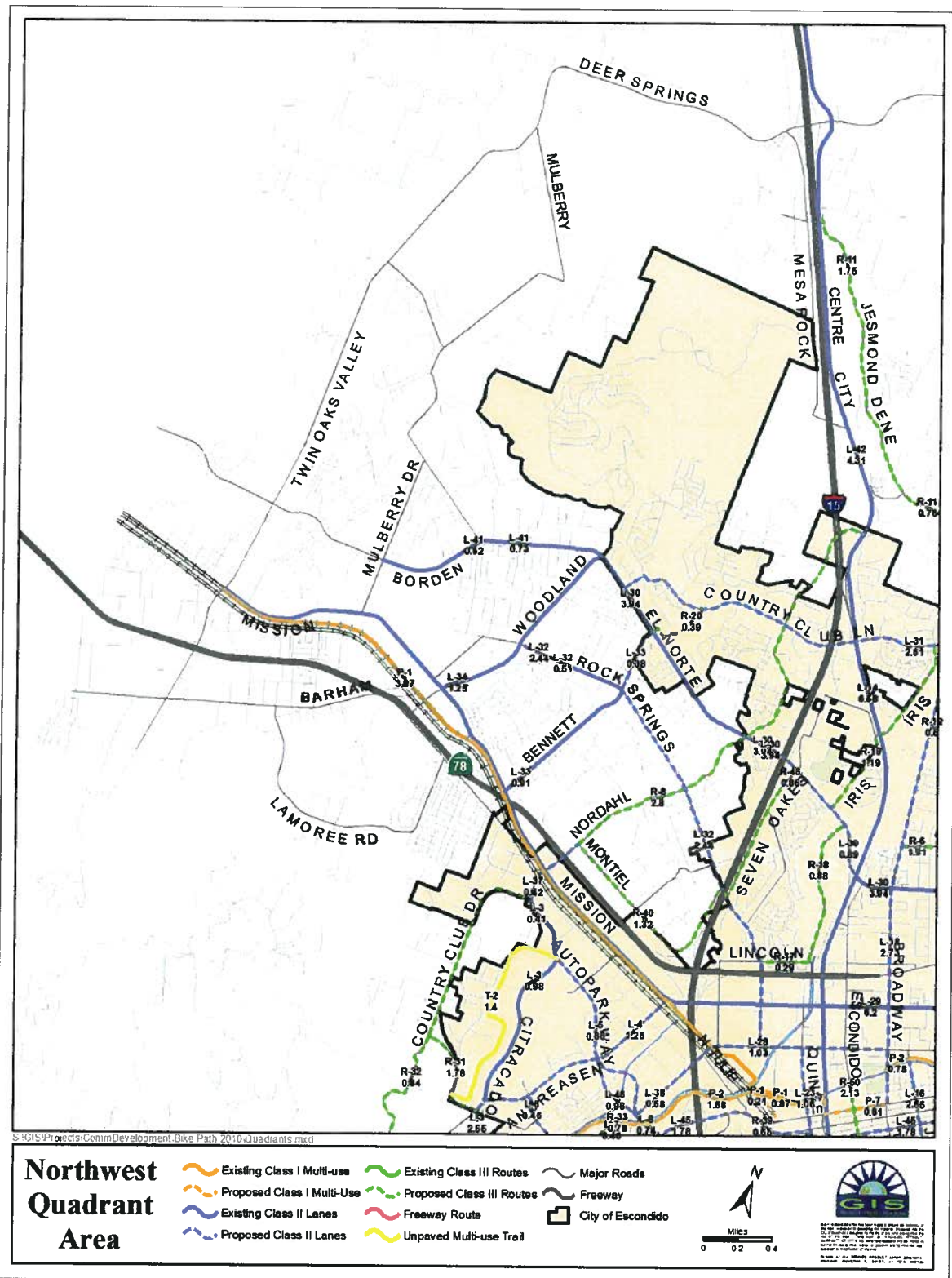




Figure 6.3 Northeast Quadrant Area

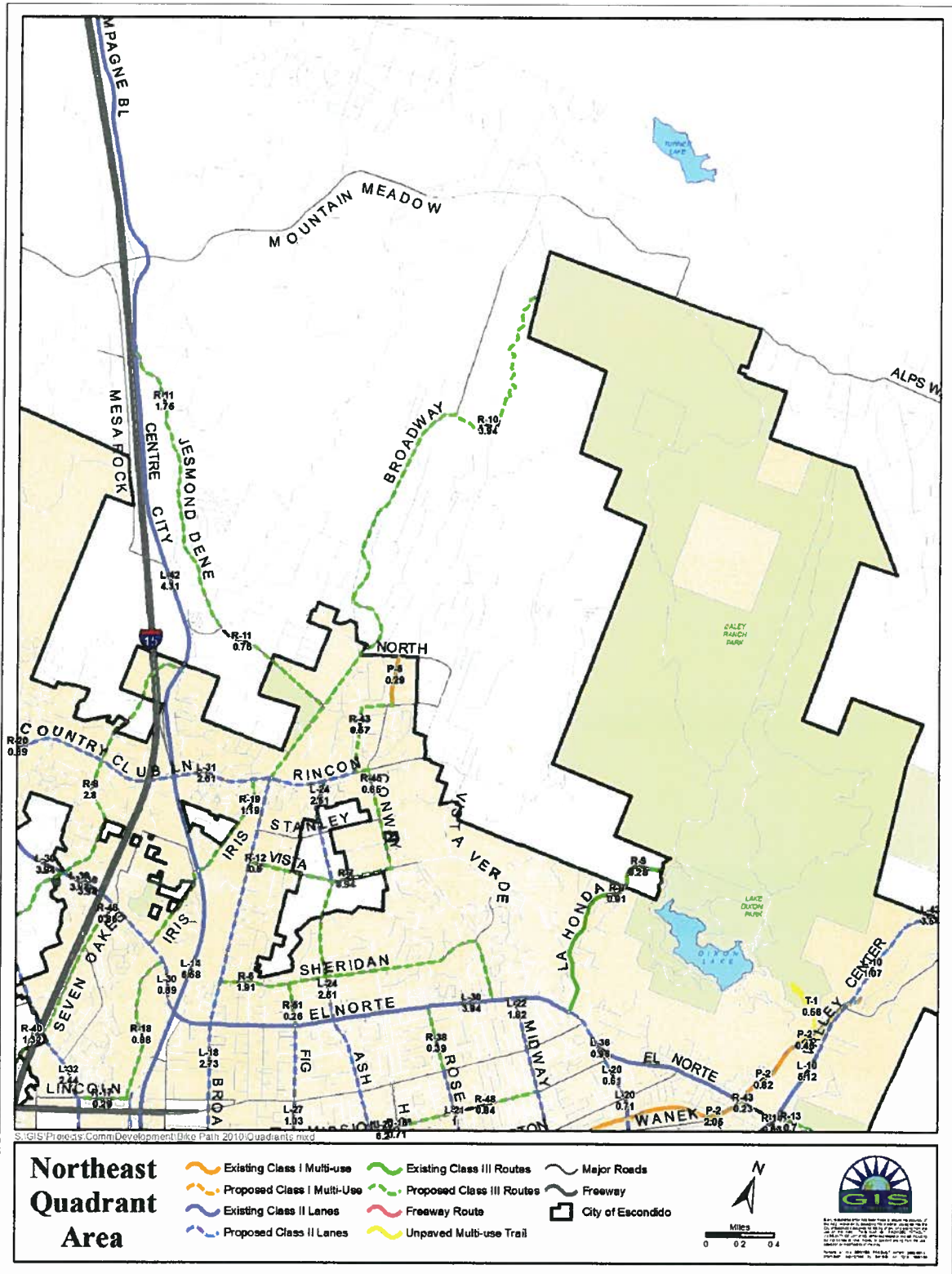




Figure 6.4 Southwest Quadrant Area

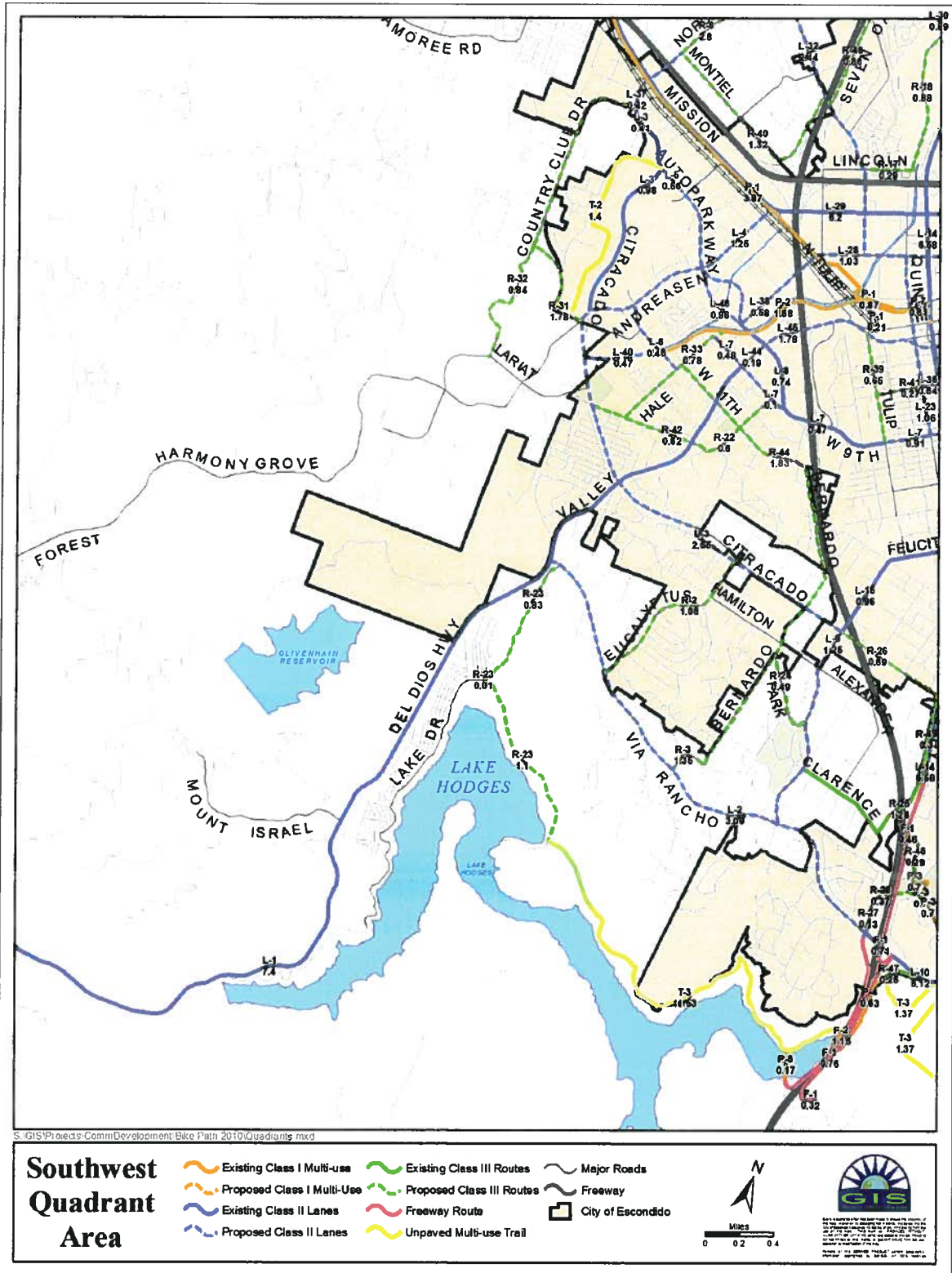
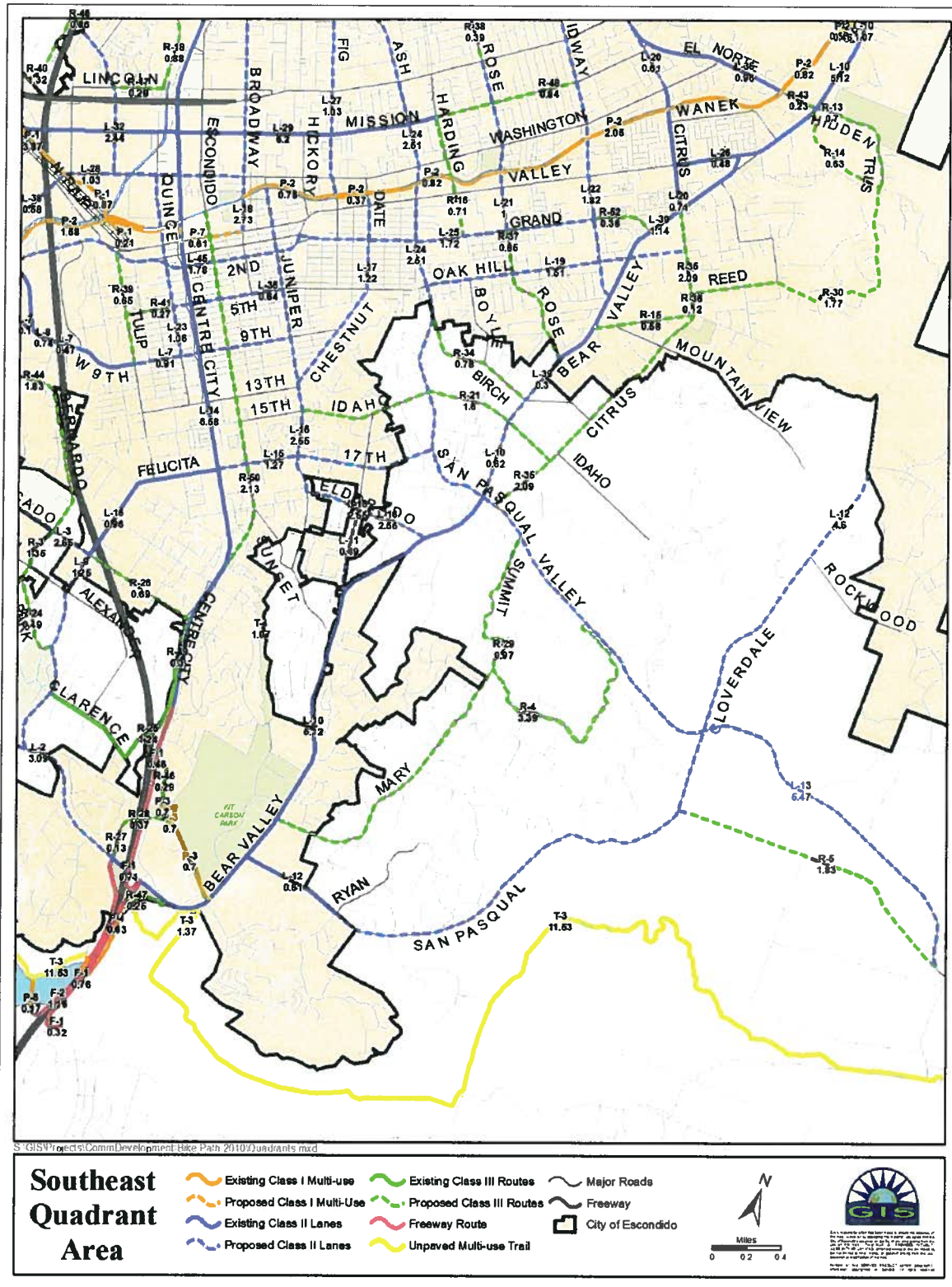




Figure 6.5 Southeast Quadrant Area





6.3 Bikeway 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 (SAFETEA-LU)*. 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. SAFETEA-LU 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)(1)(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

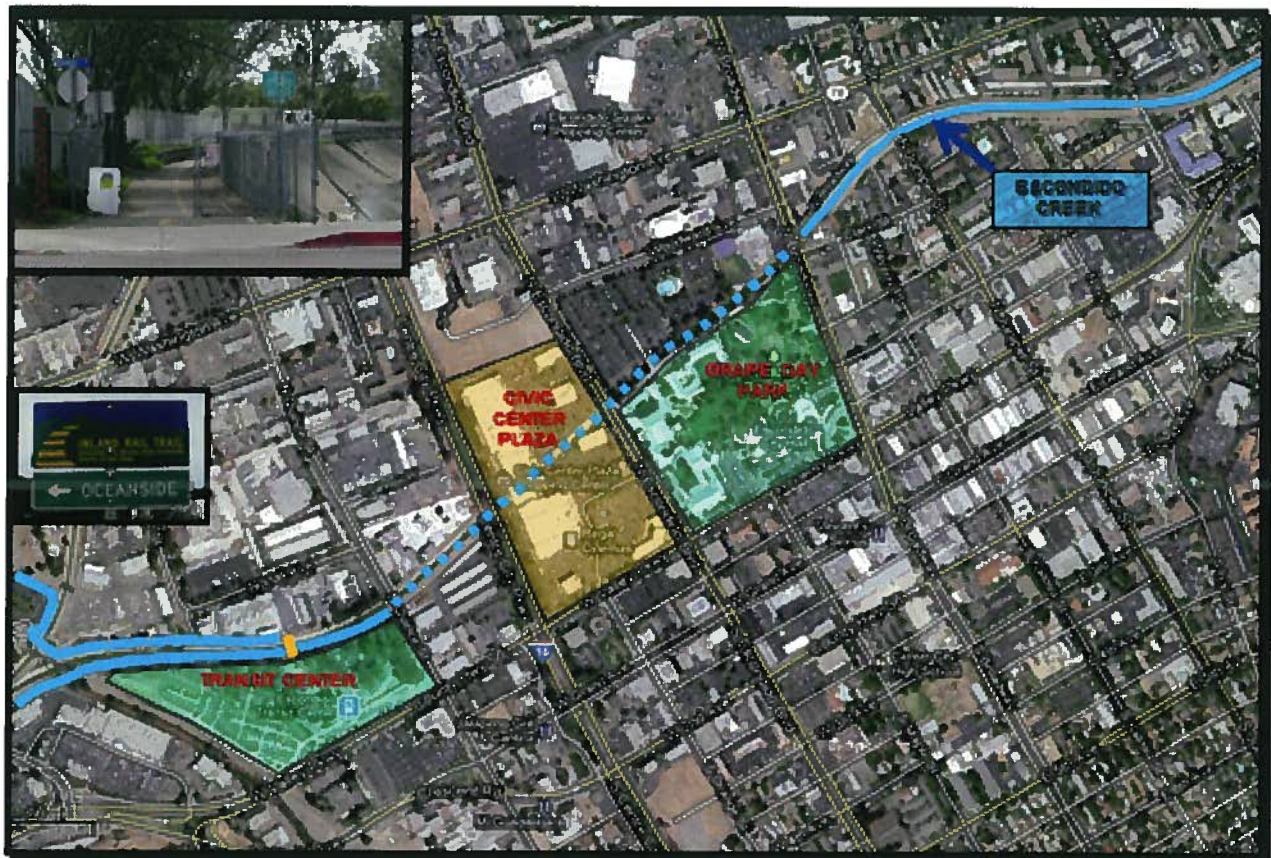
MISSING LINK

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.



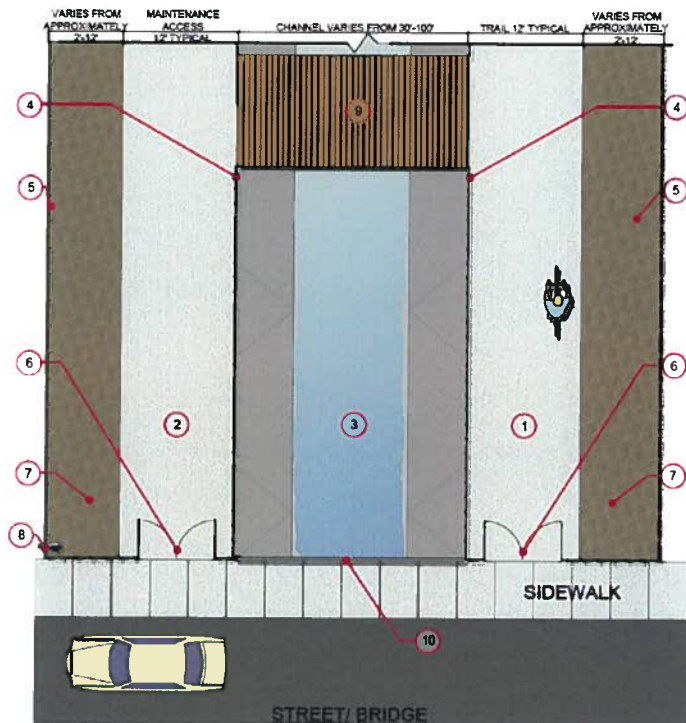
Escondido Creek Trail Entrance at the Transit Center along Quince St.

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

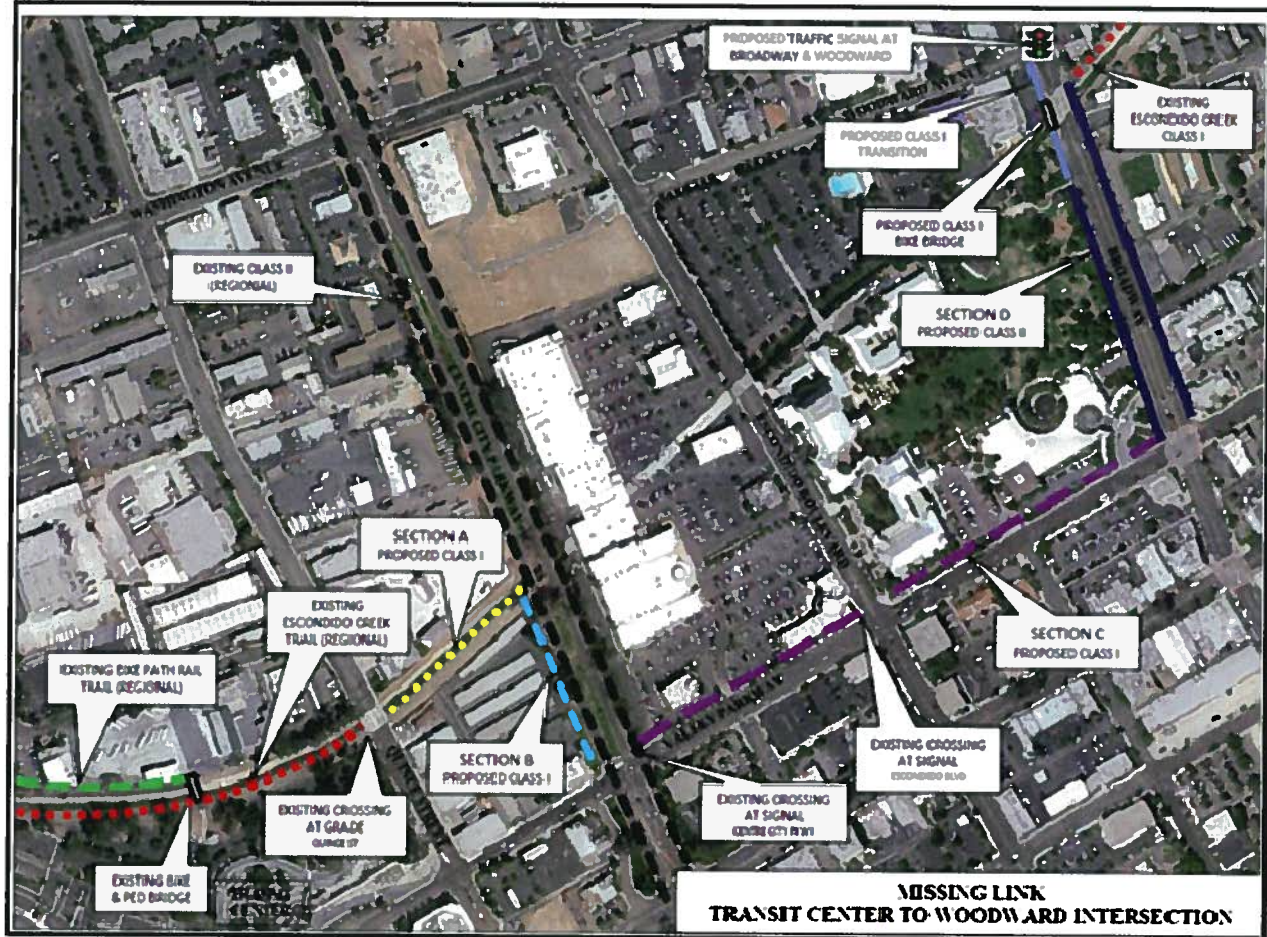
The following section describes each alternative and provides a preliminary cost estimate of each section. This detail is provided to offer the decision-makers an opportunity to evaluate the opportunities and constraints of implementation and the potential cost to complete the improvements. The cost 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	<u>\$347,550</u>
	\$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 Woodward 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

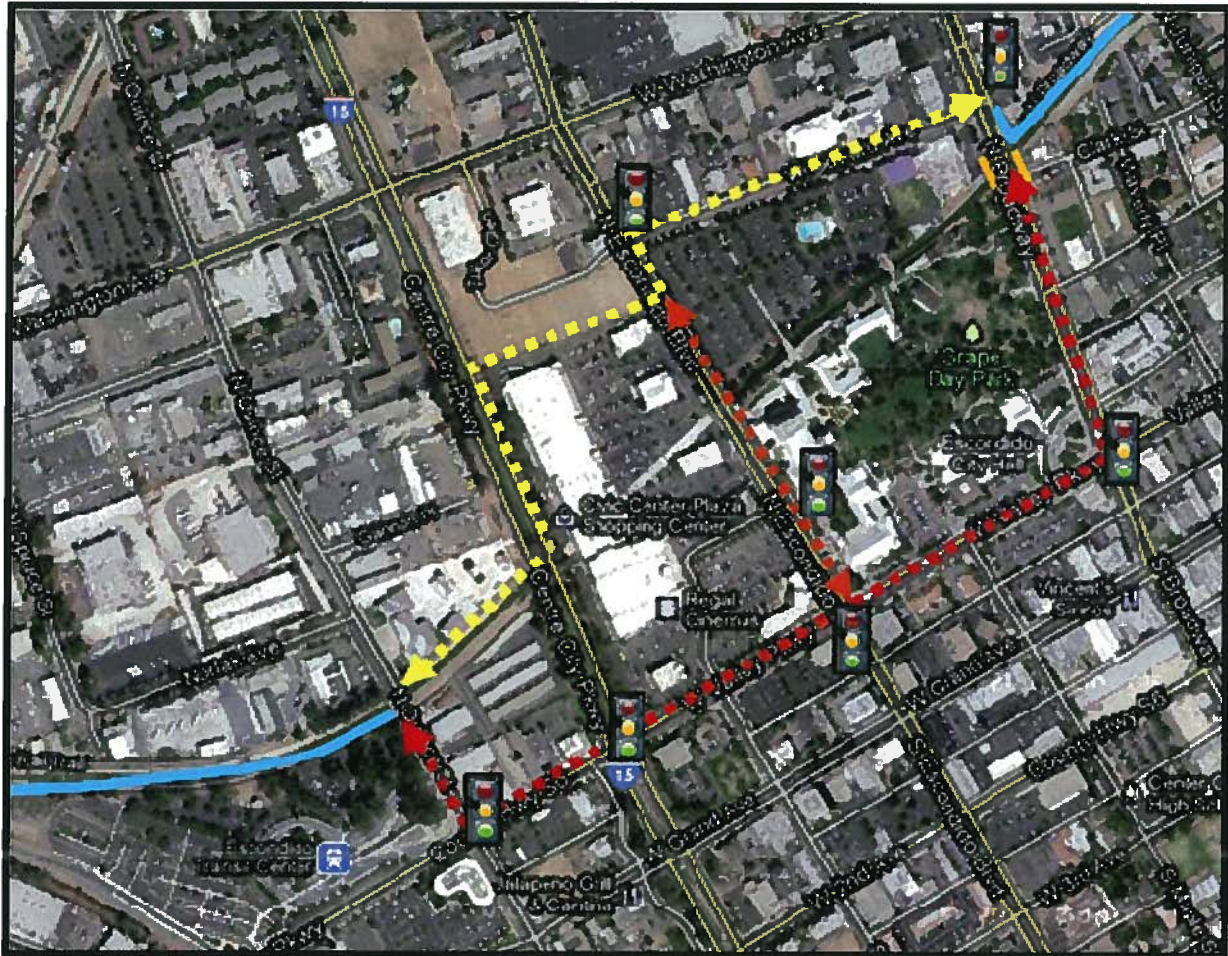
The City of Escondido Grape Day Park is located adjacent to City Hall and the California Center for the Arts Escondido (CCA) complex. The park currently contains sidewalks along the Broadway frontage and eight-foot-wide internal sidewalks to connect to the City Hall and CCA facilities. Bicycle parking 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 CCA and City Hall site, including the development of a new hotel, the ability to include bicycles through the park, the CCA 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 3.4 and Figures 2.6: General Plan Existing Land Uses, and Figure 2.7 Transit Demand and Activity Centers, page 31.

- (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 Figure 2.6: Existing Land Use, page 30 and Figure 2.4: Planned Land Use, page 28.

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

See Figure 2.1: Existing Bicycle Facilities, page 21,

- (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 Figure 2.7: Activity Centers, page 31.

- (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 2.7: Transit Routes, page 31.



- (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: Activity Centers, page 31.

- (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.**

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.**

Community involvement consisted of two public workshops at the Escondido in 2007 and 2012. Additional public outreach methods were conducted in 2009 and 2010 as part of the Escondido Creek Vision Program. A questionnaire/survey was posted on the City's web site to solicit more comments through the second workshop. The first workshop was intended to solicit comments on existing conditions and concerns residents had regarding the City's bikeway system. The second workshop was a presentation on the recommendations for bicycle facilities, goals and policies and a review of the draft plan. See Chapter for 3 for specific details regarding public input.

- (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 new bikeways proposed in this plan reflects review of regional transportation plans by providing linkages to regional bikeways wherever possible. The City of Escondido has yet to implement some of the planned bikeway facilities 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 elementary and middle 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 6).

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

See Chapter 6: Proposed Bicycle Facilities Plan.



(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. 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 English measurement version. A metric version is also available via the Caltrans web site.

TO BE ATTACHED WITH FINAL VERSION



Appendix D:

Guidelines for Selecting Safe Routes to School

TO BE ATTACHED WITH FINAL VERSION



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.

TO BE ATTACHED WITH FINAL VERSION