City of Victorville

Non-Motorized Transportation Plan
Compass Blueprint Demonstration Project

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Table of Contents

Chapter 1 Introduction **5**
1.1 SCAG Compass Blueprint Program *7*
1.2 Non-Motorized Transportation Plan *9*

Chapter 2 Planning Context **13**
2.1 City Planning *15*
2.2 Non-Motorized Transportation Plans of Neighboring Cities *21*
2.3 Consistency with Regional Plans *23*
2.4 Consistency with State Legislation *25*

Chapter 3 Community Outreach **29**
3.1 Outreach Strategy *31*
3.2 St. Mary Medical Center and Desert Valley Hospital Meeting *33*
3.3 Hanson Bike Group Meeting *35*
3.4 Public Hearings *37*

Chapter 4 Goals, Policies and Implementation **39**
4.1 Bikeway Route Development *41*
4.2 Bikeway Support Facilities *43*
4.3 Pedestrian Facilities *45*
4.4 Education *47*
4.5 Encouragement *49*
4.6 Environmental *51*
4.7 Funding *53*

Chapter 5 Existing Conditions **55**
5.1 City Overview *57*
5.2 Land Use *59*
5.3 Non-motorized facilities *63*
5.4 Safety and Education Programs *69*
5.5 Collisions Involving Bicyclists *71*
5.6 Collisions Involving Pedestrians *73*

Chapter 6 Recommendations **77**
6.1 Off-Road Trails *79*
6.2 Feasibility of Off-Road Trails *85*
6.3 On-Road Bikeways *89*
6.4 Non-Motorized Transportation Plan Map *93*
6.5 Bicycle Parking *97*
6.6 Bicycle Amenities *99*
6.7 Links to Other Transportation Modes *101*
6.8 Education and Promotion *105*

Chapter 7 Cost Analysis and Funding **109**
7.1 Cost Analysis *111*
7.2 Funding *127*

Chapter 8 Design Guidelines **139**
8.1 Bicycle Network Recommendations *141*
8.2 Pedestrian Design Guidelines *157*
8.3 Equestrian Design Guidelines *179*
8.4 General Trail Design Guidelines *181*

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Chapter 1 Introduction

City of Victorville Non-Motorized Transportation Plan | Compass Blueprint Demonstration Project

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1.1 SCAG Compass Blueprint Program

The SCAG Compass Blueprint program is a response to the growth pressures and many challenges facing our region. In 2000, SCAG initiated a visioning process to build a broad, regional framework that would assist local governments in developing solutions to transportation, housing, air quality, open space, and climate challenges. The visioning process resulted in the Compass Blueprint Growth Vision which is driven by the following key principles:

- Mobility - Getting where we want to go
- Livability - Creating positive communities
- Prosperity - Long-term health for the region
- Sustainability - Preserving natural surroundings

Guided by these principles, the Compass Blueprint strategy encourages:

- Focusing growth in existing and emerging centers and along major transportation corridors,
- Creating significant areas of mixed-use development and walkable communities,
- Targeting growth around existing and planned transit stations, and
- Preserving existing open space and stable residential areas.

To assist local jurisdictions in evaluating their planning options and realize sustainable development opportunities in line with the Compass Blueprint Growth Vision, SCAG has developed the Compass Blueprint Demonstration Program. The Compass Blueprint Demonstration Program allows local governments to apply for planning service assistance, for qualifying projects, free of charge.

The City of Victorville applied for these services and was selected for the development of a citywide Non-Motorized Transportation Plan. The Plan is intended to provide non-motorized connectivity for residents and visitors to public facilities and other places of interests within the city and throughout the Victor Valley.

The City of Victorville began work on developing a pedestrian trail/path and bikeway system in an effort to expand on the on-going Mojave Riverwalk Trail project, the City's first stand alone multiuse trail project. The City applied to the SCAG Compass Blueprint Program in an effort to obtain consultant assistance for the development of a comprehensive Non-Motorized Transportation Plan. The City was awarded the assistance through the Compass Blueprint program based on the project's consistency with the regionally shared goals of improving livability, mobility, prosperity and sustainability.

1.2 Non-Motorized Transportation Plan

Over the last several years, the City of Victorville has experienced significant growth with an increased demand and need for non-motorized transportation facilities and recreational opportunities. The potential for creating a city-wide system of trails, bikeways and pedestrian facilities requires a non-motorized transportation plan to facilitate the coordination of the many facets of its development. This plan will serve to guide future development of trails and bikeways to serve the recreation and non-motorized travel needs of existing and future city residents.

The purpose of the Plan is to provide a safe network of facilities for pedestrians, hikers, bicyclists, wheel-chairs, and health enthusiasts that will link public facilities such as City parks, open spaces, golf courses, the Victor Valley Transportation Center, Old Town Victorville, Victor Valley Community College, the Mojave Narrows Regional Park, and other destinations. Connections to retail establishments such as businesses in Old Town Victorville, the Victor Valley Mall and other neighborhood and regional shopping centers will also be developed. The Plan will also provide connectivity to the San Bernardino County Non-Motorized Transportation Plan system and the non-motorized transportation plans of surrounding cities.

The City of Victorville recognizes the value of providing opportunities for local residents and visitors to bicycle for work and recreation, as well as to use off-road trails for hiking, equestrians and jogging. Such opportunities help to reduce auto trips, improve the environment, promote healthy lifestyles and create livable communities. As this Plan is implemented, it will transform the City of Victorville into a community where more people can walk or bicycle to get to work, to school or to the store. It will also bring more recreational opportunities to its residents. In the long run, implementation will create a full network of bikeways and trails serving nearly every neighborhood.

The plan will utilize the Mojave River, river washes, public utility easements, existing specific plan paseo systems, future paseos and the existing street system to develop non-motorized facilities. However, this plan is conceptual in nature and the proposed alignments are not intended to show precise locations. Precise locations

will be developed on a case-by-case basis after review by the appropriate City Departments, the Planning Commission, and the City Council. Public review and comment will be encouraged.

The plan will addresses the following key elements

- Improving bicycling and walking Safety
- Developing a recommended bikeway/pedestrian network
- Providing end of trip facilities such as bicycle parking and lockers
- Improving the bicycle-transit link
- Promoting bicycling and walking through education and encouragement
- Promoting bicycling and walking for public health and fitness

This Non-Motorized Transportation Plan will serve as the guiding document for the City to follow in improving its bicycle and pedestrian infrastructure and programs. It complements the Circulation Element of the General Plan which discusses the necessity for developing non-motorized facilities. This Plan prioritizes projects and enables the City to apply for outside funding in a systematic manner.

In order to be eligible for Bicycle Transportation Account funds, this Non-Motorized Transportation Plan must contain the following as specified by the California Streets and Highways Code 891.2:

a) Estimated number of existing bike commuters and estimated increase
b) Map and description of existing and proposed land use
c) Map and description of existing and proposed bicycle routes
d) Map and description of existing and proposed bicycle parking
e) Map and description of existing and proposed links to other transportation modes
f) Map and description of existing and proposed facilities for changing and storing clothes and equipment
g) Description of safety education programs, efforts by law enforcement, and effect on accident rates
h) Description of public input
i) Description of coordination with other local and regional transportation, air quality, and energy conservation plans
j) Description of projects and their priorities
k) Description of past expenditures and future financial needs

These are all covered throughout this Plan. The Caltrans Table of Contents on the following page identifies the pages where each of these can be found.

CALTRANS Streets and Highways Code 891.2

Approved	Streets and Highways Code 891.2 Bicycle Transportation Account Requirement	Page(s)
	Existing and future bicycle commuters	63
	Description of existing and proposed land use patterns	57-59
	Land use planning map	61
	Maps of existing and proposed bikeways	67, 95
	Description of existing bikeways	63
	Description of proposed bikeways	79-83, 89-93, 112-118
	Maps of existing and proposed bicycle parking facilities	67, 103
	Description of existing and proposed bicycle parking facilities	64, 97
	Maps of existing and proposed multi-modal connections	67, 103
	Description of existing and proposed multi-modal connections	65, 101
	Maps of existing and proposed changing and storage facilities	67, 103
	Description of existing and proposed changing and storage facilities	64, 99
	Bicycle safety education and enforcement programs	69, 71, 105-107
	Citizen participation	31-37
	Consistency with transportation, air quality and energy plans	21-27
	Project descriptions and priority listings	119-125
	Past expenditures and future financial needs	111-112

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Chapter 2 Planning Context

City of Victorville Non-Motorized Transportation Plan | Compass Blueprint Demonstration Project

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2.1 City Planning

2030 General Plan Circulation Element

The 2030 General Plan Circulation Element identifies the need for the City of Victorville to facilitate the use of alternative modes of travel to aid in successfully implementing a Circulation Plan that will move traffic in and through the City efficiently, with minimal congestion. This, in combination with other land use and transportation strategies identified in the General Plan, will help reduce total vehicle miles traveled, thereby reducing total vehicular exhaust emissions. These benefits are directly correlated with goals, policies and objectives relating to air quality.

Bicycle and Pedestrian Facilities

The Circulation Element references the 2001 San Bernardino County Non-Motorized Transportation Plan and its intent to coordinate the development of regional and intra-jurisdictional bicycle connections and pedestrian facilities, and ultimately a countywide non-motorized network. A majority of the non-motorized facilities identified in the County's plan include both shared-use and exclusive bicycle use facilities, both of which can be found within the City of Victorville.

Although the location of existing or proposed bikeway facilities within the City are not identified in the Circulation Element, definitions of the three types of facilities offered are provided as follows:

Class I bikeways, such as 'bike paths', provide a completely separated right of way designated for exclusive use of bicycles and pedestrians with minimum cross flows by motorists. These are shared use paths that may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users.

Class II bikeways, such as 'bike lanes', provide a restricted right of way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with permitted vehicle parking and cross flows by pedestrians and motorists. This is a portion of roadway that has been designated by striping, signing, pavement delineation, and pavement markings for preferential or exclusive use of bicyclists.

Class III bikeways, such as on-street or off-street 'bike routes,' provide a right of way designated by signs or permanent markings and shared with pedestrians or motorists. Under the Caltrans Design Standards, Class III bikeways are designated by signage as a preferred route for bicycle use.

Goals and Policies

The following outlines the General Plan Circulation Element's goals, objectives and policies that relate to facilitating the use of multi-modal transportation:

Goal 2
Efficient Multi-modal Transportation Network – Meet diverse transportation needs of existing and future residents and businesses in the Planning area through convenient, safe, multi-modal means.

Objective 2.1
Complete the Non-Motorized components of the Circulation Plan by 2020.

Policy 2.1.1
Each year, as part of the CIP effort, consider allocation of funds toward completion of some portion of the Non-Motorized components of the Circulation Plan.

City of Victorville Municipal Code

The City of Victorville Municipal Code does not include provisions for bicycle parking and/or storage facilities and provides minimal direction for the incorporation of non-motorized facilities in new development. The following provisions for the incorporation of non-motorized facilities are located in Title 17 SUBDIVISIONS and Title 18 ZONING of the Municipal Code, respectively:

17.48.30 Pedestrian and bicycle paths.

Pedestrian and/or bicycle paths at least ten feet in width shall be provided across blocks when required for public convenience or access to school playgrounds, parks, shopping centers or to other community facilities. All paths shall be improved and delineated in a manner approved by the city planning commission. Where the average grade of the pedestrian path right-of-way within a block prior to improvement exceeds twelve and one-half percent, groups of steps of concrete or other approved material shall be placed at appropriate locations in the path. Bicycle paths shall conform to the Standard Specifications for Public Improvements.

18.49.70 Development objectives.

The design of a Planned Unit Development shall result in a design that is superior to, and shall contain features not normally found in, standard tract development. Some examples of those are as follows:

- Design Standards. Increased use of open space for landscaping, paseos and bike paths, cluster housing to provide open space and offset house placement.

Specific Plans

The following are specific plans located within the City of Victorville which include existing and/or proposed non-motorized transportation components that shall be included in the Non-Motorized Transportation Plan

Brentwood Specific Plan

The Brentwood Specific Plan was developed with a paseo system that runs north and south through the center of the development, providing connection throughout the neighborhood and direct access to the central park. These paseos have been developed to accommodate pedestrians, joggers and bicycles and shall be incorporated as existing facilities in the non-motorized transportation plan.

Mesa Verde Specific Plan

The Mesa Verde Specific Plan was constructed with a paseo system that meanders east and west through the center of the specific plan, connecting residential neighborhoods together and providing access to the school and public park. The paseo system was constructed within linear open space areas and consists of paved paths that are used by pedestrians as well as bicycles. The specific plan included the option of developing a loop road system that included bike lanes that would connect to the paseo system. However, this option was not exercised and neighborhood streets have been constructed with no bike lanes. This existing paseo system shall be incorporated as existing facilities in the non-motorized transportation plan.

West Creek Specific Plan

The West Creek Specific Plan incorporates the use of naturalized washes to develop a network of paseos intended to interconnect the neighborhood and provide a safe method for people to bike or walk. The majority of the specific plan area, including the areas around the naturalized washes, has already been constructed. Paved service access ways have been constructed along the naturalized washes that are currently being utilized by bicyclists, walkers and joggers. Although they have not been striped for bike or pedestrian use, the service access ways shall be identified as existing facilities in the non-motorized transportation plan.

Parkview Specific Plan

The Parkview Specific Plan includes a paseo system that will interconnect the majority of the neighborhoods in the specific plan. These paseos will include a paved bikeway/ pedestrian walk intended to provide residents alternatives means of mobility. These paseos shall be identified as planned facilities in the non-motorized transportation plan and should be analyzed for the possibility of being expanded into future developments.

The Crossings Specific Plan

The Crossings Specific Plan includes an open space component that calls for the development of 16.78 acres of networked trails/paseos. As the plan becomes implemented, the City of Victorville will have the opportunity to provide input into the design of these trails/paseos. These trails/paseos shall be identified as planned facilities in the non-motorized transportation plan.

Midtown Specific Plan

The Midtown Specific Plan provides the opportunity to develop primary and secondary paseos that would link commercial services and community facilities located within the plan, as well as provide a link to residential neighborhoods in the vicinity. The paseos would consist of dedicated pathways within greenbelts located along local and collector streets. The paseos would be ultimately dedicated to the City of Victorville. These paseos shall be identified as planned facilities in the non-motorized transportation plan.

Mojave Vistas Specific Plan

The Mojave Vistas Specific Plan proposes pedestrian and bicycle circulation via paseos with multi-purpose trails and enhanced parkways that provide convenient linkages to destinations within the community. The paseos will be located along linear open space areas, separated from vehicle traffic. The enhanced parkways are intended to make sidewalks along street right of ways more inviting to pedestrians and bicyclists, but do not include the development of bike lanes into the right of ways. The proposed paseos within the specific plan shall be identified as planned facilities in the non-motorized transportation plan.

Rancho Tierra Specific Plan

The Rancho Tierra Specific Plan includes a primary pedestrian link in the form of an esplanade, a landscaped enhanced public path along a roadway. The esplanade is intended to be located along the primary roadway that runs east to west and down the center of the community. However, the specific plan does not provide design guidelines for the esplanade, nor does it specify if the esplanade will be pedestrian only. The City

will have the opportunity to accommodate various means of non-motorized travel within the esplanade as construction of the plan begins. The proposed esplanade shall be identified as a planned facility in the non-motorized transportation plan.

Desert Gateway Specific Plan

The Desert Gateway Specific Plan includes a variety of components that enable and encourage the use of non-motorized transportation. A comprehensive network of off road trails and paths have been incorporated into the circulation plan offering connectivity throughout the specific plan area. The proposed off road trails and paths shall be identified as a planned facility in the non-motorized transportation plan.

Mojave Riverwalk Trail Project

The Mojave Riverwalk Trail is a master plan developed by the City of Victorville Public Works Department. The plan calls for the construction of an 8 mile multiuse trail that will run along the Mojave River levee from Interstate 15 to the north, to Victor Valley College to the south. The trail will be a combination of paved and earthen pathways and is intended to provide pedestrian, bicycle and equestrian users an alternative route between the Downtown area and the College. Presently, a ¾ mile portion of the trail has been completed from Interstate 15 to the Downtown area, with the intent to develop the entire trail in the near future. The constructed portion of the trail will be identified on the non-motorized transportation plan as an existing facility, while the remainder of the trail will be indentified as a planned facility. This Plan incorporates the Mojave Riverwalk Plan.

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2.2 Non-Motorized Transportation Plans of Neighboring Cities

City of Hesperia Non-Motorized Transportation Plan

The City of Hesperia has adopted a Non-Motorized Transportation Plan that includes Class 1 bike and multiuse trails, Class 2 striped bike lanes and Class 3 shared bike routes. The plan identifies the California Aqueduct as a proposed Class 1 path/trail. The Aqueduct was identified as an area of study for the Victorville Non-Motorized Plan and will link to bikeways in this Plan. The Hesperia plan also identifies north-south Class 2 bike lanes along street right of ways that continue into the City of Victorville. This Plan creates links to the following bikeways in Hesperia:

Cottonwood Avenue
7th Avenue
11th Avenue
Hesperia Road

Town of Apple Valley General Plan Circulation Element

The Town of Apple Valley has adopted an alternative transportation section as part of the General Plan Circulation Element. The section identifies a network of recreational/equestrian and bike trails/paths throughout the city. However, due to minimal crossings over the Mojave River, the potential to connect trails/paths between Apple Valley and Victorville is limited. The proposed Mojave Riverwalk Trail offers Victorville the best opportunity to connect with the recreational/equestrian trail in Apple Valley. In regards to bike routes, Apple Valley has identified three proposed Class 2 bike lanes that continue into the City of Victorville, which shall be analyzed for the potential of being included as Class 2 or Class 3 bike routes in the Victorville Non-Motorized Plan. This Plan creates links to the following bikeways in Apple Valley:

D Street/ 7th Street (State Route 18)
Yucca Loma Road
Bear Valley Road

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2.3 Consistency with Regional Plans

2001 San Bernardino Association of Governments (SANBAG) Non-Motorized Transportation Plan

The San Bernardino Association of Governments (SANBAG) developed a county wide Non-Motorized Transportation Plan to address the growing popularity of cycling for community and recreational purposes and to coordinate the individual bicycle plans of the County's 24 cities into a cohesive County bikeway system. The focus of the plan was to address the issues of safety, accessibility, quality of life, and education. As part of the development of this plan, public workshops were conducted to gather public comments on existing conditions and desired improvements. Based on all these factors, the plan identified a number of proposed routes within and through the City of Victorville. These routes are included in the City of Victorville's Non-Motorized Transportation Plan. The proposed routes identified by SANBAG are listed in Table 2.1 below.

Table 2.1 - *SANBAG Routes in the City of Victorville*

Class	Name	From	To
1	Mojave River	Hwy 18	Bear Valley Rd
2 or 3	7th Street	I-15 Fwy	D Street
2 or 3	Avenue D	7th Street	Mojave River
2 or 3	Hesperia Rd	D Street	Bear Valley Rd
2 or 3	Palmdale Rd	Hwy 395	I-15 Fwy
2 or 3	Highway 395	Palmdale Rd	Joshua St
2 or 3	Village Dr	Air Expwy	Mojave Dr
2 or 3	Bear Valley RdHesperia	Hwy 395	
2 or 3	Air Expwy	Village Dr	National Trails Hwy
2 or 3	Mariposa Rd	Bear Valley RdPalmdale Rd	
2 or 3	Mojave St	Hwy 395	Amargosa Rd

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2.4 Consistency with State Legislation

Senate Bill SB 97

The recently amended California Environmental Quality Act (CEQA) Environmental Checklist now requires discussion of potential impacts and conformance with adopted policies regarding non-motorized travel. Under the new CEQA guidelines, if a project is found to conflict with adopted policies regarding bicycle or pedestrian facilities, that project could be considered to have a potentially significant impact on the environment. As the City's Circulation Element has established Goals, Objectives and Policies requiring the development of Non-Motorized components in the Circulation Plan, future development projects may be hindered during the CEQA process without the development of a comprehensive Non-Motorized Transportation Plan.

Senate Bill SB 375

Under SB 375, the Southern California Association of Governments (SCAG) is required to develop Sustainable Communities Strategies as part of the Regional Transportation Plan in order to meet greenhouse gas (GHG) reduction targets for the region. As a result, state and federal transportation funding based on the Regional Transportation Plan must be consistent with Sustainable Communities Strategies. SCAG is currently working with SANBAG and local jurisdictions to develop Sustainable Communities Strategies that not only meet the GHG reduction targets, but that also serve the needs of San Bernardino County. SCAG is encouraging local jurisdictions to participate in the process to ensure their specific transportation needs are addressed and funding possibilities are not hindered. The development of a comprehensive Non-Motorized Transportation Plan would demonstrate a direct effort by the City of Victorville to participate in the development of Sustainable Communities Strategies in the SANBAG region.

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Assembly Bill AB 1358 (Complete Streets Act of 2008)

AB 1358 requires cities and counties to include street policies as part of their general plans so that roadways are designed to safely accommodate all users, including bicyclists, pedestrians, transit riders, children, older people, and disabled people, as well as motorists. Beginning January 2011, any revision of the circulation element in the general plan of a California government must include complete streets provisions. Although the City of Victorville recently adopted their circulation element in 2008, taking the present opportunity to develop a comprehensive Non-Motorized Transportation Plan would streamline any necessary circulation element revisions the City may need to address in the future.

Deputy Directive 64-R1 "Complete Streets"

The California Department of Transportation recently adopted an Implementation Action Plan for Deputy Directive 64-R1 "Complete Streets". Under DD-64-R1, Cal Trans and local agencies must work together to promote and facilitate increased bicycling and walking and provide for the safety and mobility needs of all who have legal access to the transportation system. Developing a Non-Motorized Transportation Plan could streamline future projects involving Interstate 15, US Route 395 and State Route 18.

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Chapter 3 Community Outreach

City of Victorville Non-Motorized Transportation Plan | Compass Blueprint Demonstration Project

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3.1 Outreach Strategy

As part of the public outreach for development of the non-motorized transportation plan, the consultant team along with the City of Victorville staff met with the community advocacy groups of the St. Mary Medical Center, the Desert Valley Hospital, and the Hanson Bike Group. The purpose of these meetings was to introduce the groups to the project and to obtain some feedback regarding trail systems, key facilities and activity areas, and other key healthy community objectives relevant to non-motorized transportation planning in the City. Follow up meetings with both groups were conducted to present the Draft Non-Motorized Transportation Plan and solicit feedback. The plan will also be scheduled for public hearings with the City Planning Commission and City Council for review and approval. Approval of the non-motorized transportation plan will constitute incorporation into the City of Victorville General Plan Circulation Element.

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3.2 St. Mary Medical Center and Desert Valley Hospital Meeting

Representatives from the St. Mary Medical Center and the Desert Valley Hospital attended the meeting to discuss the project. The community group members explained there were a number of existing health awareness events in an around the City that provide opportunity for grants from local, state and federal programs. These events include the Hi Desert Fitness Challenge, the National Breast Cancer Awareness event, the Heart and Soul Program and other similar events. A Non-Motorized Transportation Plan could serve to promote these types of events and help secure opportunities for grants. The Plan could also serve to promote health and safety education programs in the high desert area such as safety fairs and the American Medical Response bike safety event. As a result of the first meeting, the following concerns were identified:

- No bicycle or pedestrian link between Bear Valley Bridge and Victor Valley College.
- Victor Valley Mall and Liberty Center are popular commercial centers.
- Link to the proposed equestrian center in the community of Phelan.
- Bicycle/pedestrian link over 15 Freeway (Nisquali Road) would provide exceptional connectivity.
- The downtown area should be improved for pedestrian safety and connectivity.
- A number of intersections within the city are in need of improvements for pedestrian safety.
    - » *Mojave Rd. @ El Evado Rd.*
    - » *Luna Rd. @ El Evado Rd,*
    - » *Intersection of Palmdale, 7th and Greentree Blvd.*
    - » *Amargosa Rd. @ Seneca Rd.*
    - » *Palmdale Rd. @ Kenwood, @ El Evado Rd.*
    - » *Arlette Dr. @ Hook Blvd.*
    - » *Bear Valley Rd. @ Industrial, @ Hesperia Rd., @ Balsam*

We met a second time with these representatives to present our Draft Non-motorized Plan and to solicit feedback.

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3.3 Hanson Bike Group Meeting

Members of the Hanson Community Advocacy Group attended the meeting to discuss the project. The attendees included bicycling and jogging enthusiast as well as those with a general interest in developing a non-motorized transportation plan. All members were in general support of the project as they felt developing a non-motorized transportation plan could help address a number of present issues. The issues discussed at the first meeting were as follows:

- Lack of east-west connectivity in the City via trails/paths, especially along Bear Valley Road
- Lack of safety for cyclists on roads
- Lack of connectivity with other jurisdictions
- Joggers/runners have little opportunity for routes in the City.
- The project can be a good opportunity to discuss education for both drivers and cyclists about sharing the road.
- The project could help with forming a bicycle committee between local jurisdictions.
- The plan can help to promote community events.

We met a second time with these representatives to present our Draft Non-motorized Plan and to solicit feedback.

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3.4 Public Hearings

Prior to final approval of the non-motorized transportation plan, the project will be brought in front of the City of Victorville Planning Commission and City Council for public hearing on separate occasions. The public hearing meetings will be advertised in the local newspaper and provide an opportunity for all interested community members to comment on the project. Upon completion of those public hearings, the City Council will advice City Staff and the consultant team on any revisions that should be made to the project and ultimately adopt the Non-Motorized Transportation Plan into the City's General Plan Circulation Element.

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Chapter 4 Goals, Policies and Implementation

City of Victorville Non-Motorized Transportation Plan | Compass Blueprint Demonstration Project

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4.1 Bikeway Route Development

Goals

- Achieve a balanced transportation system that, consistent with the appropriate elements of the Victorville General Plan, provides residents with a variety of transportation choices, including automobile, transit, bicycle and pedestrian options.
- Establish a safe, comfortable, convenient and highly connected bikeway system that meets the transportation and recreation needs of avid, regular, youth and beginning bicycle riders, while balancing the needs of other transportation types including automobiles, train, transit and pedestrians.

Policies

- Each area of the City should include a range of bikeway types, including bike routes, bike lanes on arterial streets, bike lanes on collector streets, and off-street bike paths.
- The bikeway system should provide convenient and comfortable connections between residential areas, schools, parks, public transit stops, shopping centers, employment centers, and other uses.
- The City should cooperatively pursue connections to neighboring jurisdictions to ensure regional bikeway accessibility.
- Promote development patterns that enhance connectivity for transportation and recreation use and lessen distance of bicycle and pedestrian travel between uses.
- Class I off-street bike paths are preferred when they result in bikeway continuity with safe and preferably separated crossings of major streets.
- New streets should include Class II bike lanes when feasible.
- Class III on-street bike routes should be used to provide connections between or to Class I and Class II bikeways and on streets where the right of way width does not allow for bike lanes.
- Restriping projects on the existing street system without bike lanes should include an investigation of the feasibility of incorporating Class II bike lanes.

- Provide bicycle signal detectors per local and State standards at all new signalized intersections with bike lanes, and if feasible, when modifying existing signalized intersections with bike lanes.
- Coordinate regular training for staff and commission regarding best practices and principles to finance, plan, construct, operate and maintain bikeways.
- Coordinate between City Departments including Public Works, Engineering, Planning, and Parks and Recreation to provide continuity in the design and construction of bikeway facilities.

Implementation

- All bikeway construction projects should conform as applicable to the City of Victorville design and construction standards, parks construction standards, and applicable state and federal standards.
- All City and private development projects shall be reviewed by City Staff for conformance with the Non-Motorized Transportation Plan.
- Participate in regional bicycle and pedestrian planning activities.
- Coordinate bikeway system implementation internally and with adjacent jurisdictions.
- Provide training for the appropriate City departments and commissions on the guiding principles of bicycle and pedestrian system transportation planning, design and maintenance.

4.2 Bikeway Support Facilities

Goal

- Create an environment that includes support facilities necessary to encourage commuter and recreational bicycle riding.

Policies

- Support facilities that encourage bicycling should, to the extent feasible, be made a standard component of all private and public projects.
- Provide short-term bicycle parking (bicycle racks) conveniently located at business entrances and safe, secure and covered long-term, high-security bicycle parking (bicycle lockers and corals) at employment sites.
- Promote showers and changing facilities at major employment sites.
- Support facilities along bike paths may include trailhead parking lots, route map displays, rest areas/benches, drinking water, bicycle racks, restrooms, and, where deemed necessary for safety such as in under-crossings, lighting. The support facilities may be provided with parks or other public facilities or provided separately.

Implementation

- Update the Municipal Code and City Design Guidelines to enhance bicycle parking for new development.
- Develop standards for bicycle parking in the public realm of Old Town Victorville and other pedestrian activity areas.
- Consider developing a bicycle parking program to install long-term bicycle parking at park-and-ride facilities, commuter bus stops, transit transfer points, the Victor Valley Transportation Center, and short term bicycle parking at existing businesses with a demonstrated need.
- Consider increasing capacity of bicycle racks on transit vehicles if a need is demonstrated.
- Adopt guidelines for and encourage the installation of showers and changing facilities for employees at major employment sites.
- Where necessary to meet the needs of users, plan for the installation of bike path amenities.

- Consider the need for lighting along bike paths, especially in under-crossings of bridges.
- Designated bike routes shall include signs informing motorists of the presence of bicyclists and information signs informing bicyclists of upcoming destinations in accordance with California MUTCD and the Design/Construction Standards.
- Provide destination signs, trail maps, mile markers, open space, and bikeway regulations on bike paths where appropriate.

4.3 Pedestrian Facilities

Goal

- Create an environment that includes support facilities necessary to encourage commuter and recreational walking.

Policies

- Establish guidelines for the development of pedestrian friendly sidewalks and crossings.
- Establish an intersection improvement program.
- Provide reasonable accommodations for access in accordance with the Americans with Disabilities Act (ADA) for those who may need such assistance.
- Adopt guidelines for new development that encourage walkable neighborhoods with such features as mixed land use, compact land use and well-connected grids of streets with short blocks.

Implementation

- Sidewalk construction should be prioritized to increase access to schools, parks, shopping areas, employment centers and transit stops.
- Adopt guidelines for new sidewalks that include adequate width in each of the curb, furniture, through and frontage zones of the sidewalks. These guidelines should vary according to the street type, adjacent land use and land use intensity.
- Ensure that new developments build pedestrian access points to major thoroughfares at every opportunity.
- Retrofit pedestrian access to major thoroughfares where cul-de-sacs meet boundary walls.
- Use crossing facilities, including crosswalks and signage, to alert both motorists and pedestrians to the presence of the facility.
- Use crosswalk design to aid in increasing visibility through the use of specific striping patterns and lights.

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4.4 Education

Goal

- Increase bicycle rider and motorist awareness of the rights and responsibilities of bicycle riders in order to create a climate of acceptance for bicycle riding, reduce bicycle rider violations, improve safe bicycling and driving practices, reduce collisions, and increase bicycle riding to work, school and other destinations.
- Increase awareness of pedestrian rights and safety for both pedestrians and motorists.
- Increase awareness of users of multi-use paths of the rights and responsibilities of the various users

Policies

- Education programs targeted to adults and children should explain safe bicycle riding techniques and the importance of proper helmet use, and provide information on the Victorville Non-Motorized Transportation Plan.
- Education programs targeted to school-age children should recognize the unique challenges associated with child and youth bicycle riders.
- Raise motorist awareness of the rights of bicyclists to ride on the road, and provide motorists information on ways they can modify their driving behavior to more safely accommodate bicyclists.
- Education programs should teach pedestrians safe walking habits, and motorists about the rights of pedestrians and how to safely accommodate pedestrians.

Implementation

- Create a coordinated and comprehensive bicycle and pedestrian safety education program that provides bicycle education annually to all school-age children.
- Develop Safe Route to School (SR2S) programs.
- Create a coordinated and comprehensive bicycle education program targeted to adult bicycle riders with information regarding rider rights and responsibilities and proper bicycle riding techniques.

- Create a coordinated and comprehensive pedestrian education program targeted at all levels of pedestrians, as well as motorists regarding proper pedestrian behavior and legal and proper motorists behavior around pedestrians.
- Create a public education campaign targeting motorists that provides information on the rights and responsibilities of bicyclists and pedestrians.
- Work with local law enforcement to identify opportunities for incorporating bicycle and pedestrian safety curriculum into motorist education and training.
- Develop education materials for presentation to schools, neighborhood groups, businesses, and other groups that promote bicycle safety.
- Develop criteria and promote trail etiquette for use of off-street trails/paths by bicyclists, pedestrians, skaters, and persons with disabilities.
- Coordinate education and encouragement efforts with the Community Services Department, public health agencies and/or other groups as opportunities arise.

4.5 Encouragement

Goal

- Increase transportation and recreation bicycle riding and walking to work, school, play and other destinations
- Gain acceptance of bicycle and pedestrian commuting as a mainstream activity through incentive and encouragement efforts.

Policies

- Encourage public participation through local coordination with City Staff.
- Build coalitions with local businesses, schools, clubs, bicycle shops and organizations.
- Explore alternatives to provide incentives to bicycle and pedestrian commuters.
- Support recreational bikeway and trail facilities, programs and events as an important part of the effort to promote bicycling and walking within the City.

Implementation

- Continue to support regional efforts to promote bicycling and walking.
- As feasible, enhance incentives for bicycle and pedestrian commuting.
- Sponsor, in association with local bicycle organizations, bicycle parking at special events.
- Sponsor, in association with local bicycle organizations, health, environmental and other groups, bicycle races, walk-to-school days, "walking school bus" programs and other similar events.
- If warranted by user levels and if an appropriate need is identified, support efforts of local bicycle groups to establish a bicycle station that delivers bicycle parking, showers, restrooms, and other bicycle services.

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4.6 Environmental

Goal

- Reduce travel by car, improve air quality, and reduce emissions that contribute to climate change by providing viable commute alternatives to the automobile.
- Enhance public access to open space and natural areas while, to the extent feasible, minimizing the environmental impacts of off-street bike path/trail projects.

Policies

- Promote the beneficial aspects of bicycle usage and walking on air quality.
- Work with other City departments to identify opportunities for construction of bike paths and trails in open space areas.
- Coordinate bike trail projects with stream bank restoration, flood control projects, and other related open space projects where feasible and beneficial.
- Bicycle and walking trails through open space may, where appropriate and feasible, include interpretive signs informing the public of the environmental resources present and directing users to behave in a matter that reduces impacts on open space.
- Bike path and trail planning, construction and maintenance should be consistent with open space management plans.
- Comply with all local, State and Federal environmental regulations.
- Bikeway projects should minimize environmental impacts to the extent feasible.

Implementation

- Coordinate the planning, environmental review, design, construction and maintenance of open space bike and trail projects with City Departments, local, State and Federal agencies, and local interest groups.
- Partner with health organizations where appropriate to promote bicycling and walking.

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4.7 Funding

Goal

- Ensure adequate funding for construction and maintenance of bikeways, pedestrian facilities and support facilities.
- Ensure adequate funding for education and encouragement programs.

Policies

- Create a bikeway and pedestrian system that is cost effective to construct and maintain.
- Maximize funding opportunities through a combination of federal, state and local sources, including development agreements, community facilities districts and grants.
- Utilize grant funds to leverage local bikeway and pedestrian funds.
- Include the development of non-motorized transportation projects as part of the Capital Improvement Program (CIP).
- Where appropriate, partner bike path and trail projects with flood control, redevelopment, utilities access, air quality improvement and open space/ stream restoration projects.
- Where bikeway and trail projects cross jurisdictional boundaries, partner with adjacent jurisdictions to reduce costs.

Implementation

- Submit grant applications in accordance with the City's guidelines as grant programs become available.
- Coordinate bikeway and pedestrian projects internally and with other agencies to determine partnering potential.
- As part of the Capital Improvement Program effort, consider allocation of funds toward completion of some portion of the Non-Motorized components of the Circulation Plan.
- Where determined appropriate, adopt fee programs for bikeways.

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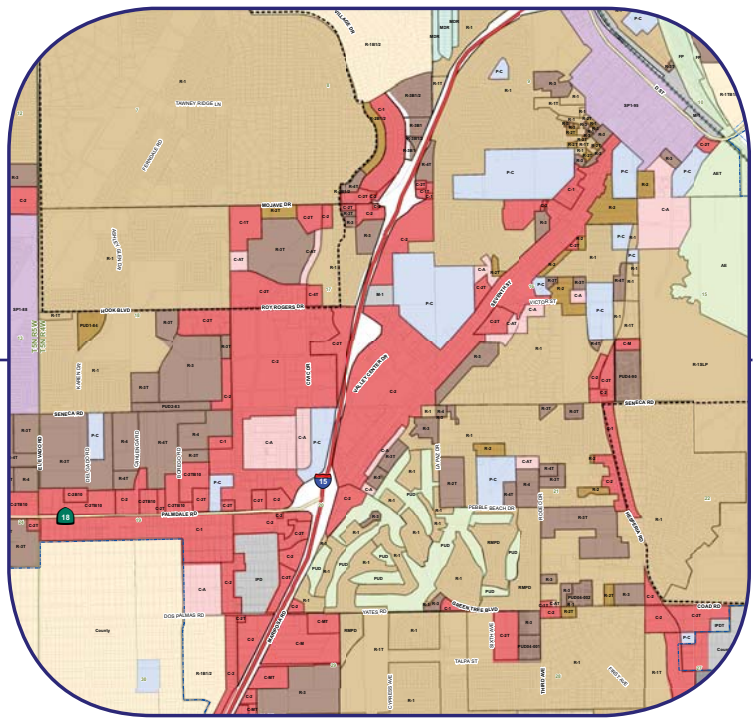
Chapter 5 Existing Conditions

City of Victorville Non-Motorized Transportation Plan | Compass Blueprint Demonstration Project



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5.1 City Overview

The City of Victorville is located at the southern edge of the Mojave Desert in the Victor Valley of western San Bernardino County. The city is situated 82 miles northeast of Los Angeles, and is surrounded by the nearby communities of Adelanto, Apple Valley, and Hesperia. Victorville is serviced principally by Interstate I-15, California State Highway 18, and U.S. Route 395. The city was incorporated on September 21, 1962, as a Charter City with a population of approximately 8,110 and an area of 9.7 square miles. As of January 1, 2010 the City's population is estimated to be 106,913 and the area is 74.16 square miles.

Over the last several years the City of Victorville has experienced significant growth with an increased demand and need for non-motorized transportation facilities and recreational opportunities. The potential for creating a city-wide system of trails and bikeways requires a non-motorized transportation plan to facilitate the coordination of the many facets of its development. The plan would serve to guide future development of trails and bikeways to serve the recreation and non-motorized travel needs of existing and future city residents.

Victor Valley Horizon

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5.2 Land Use

Exhibit 5.1 shows the current and future land use patterns in the City of Victorville. In the past the City has tried to maintain a focus on developing a sustainable balance of residential, commercial and industrial development. As a result of the housing boom of the early 2000's, the city experienced a substantial amount of residential tract map development. The tract maps developed sporadically resulting in "hopscotch" development with large gaps of vacant land with minimal street improvements. As a result of the economy going into a recession and the demand for new housing diminishing, these large gaps in development still remain. The City is now focusing its efforts on the best use for infilling these large gaps by considering sustainable development principles and alternative transportation methods. Although existing tract map entitlements still constitute a considerable amount of these gaps in development, the City still has the opportunity to introduce alternative transportation methods within unimproved street right of ways.

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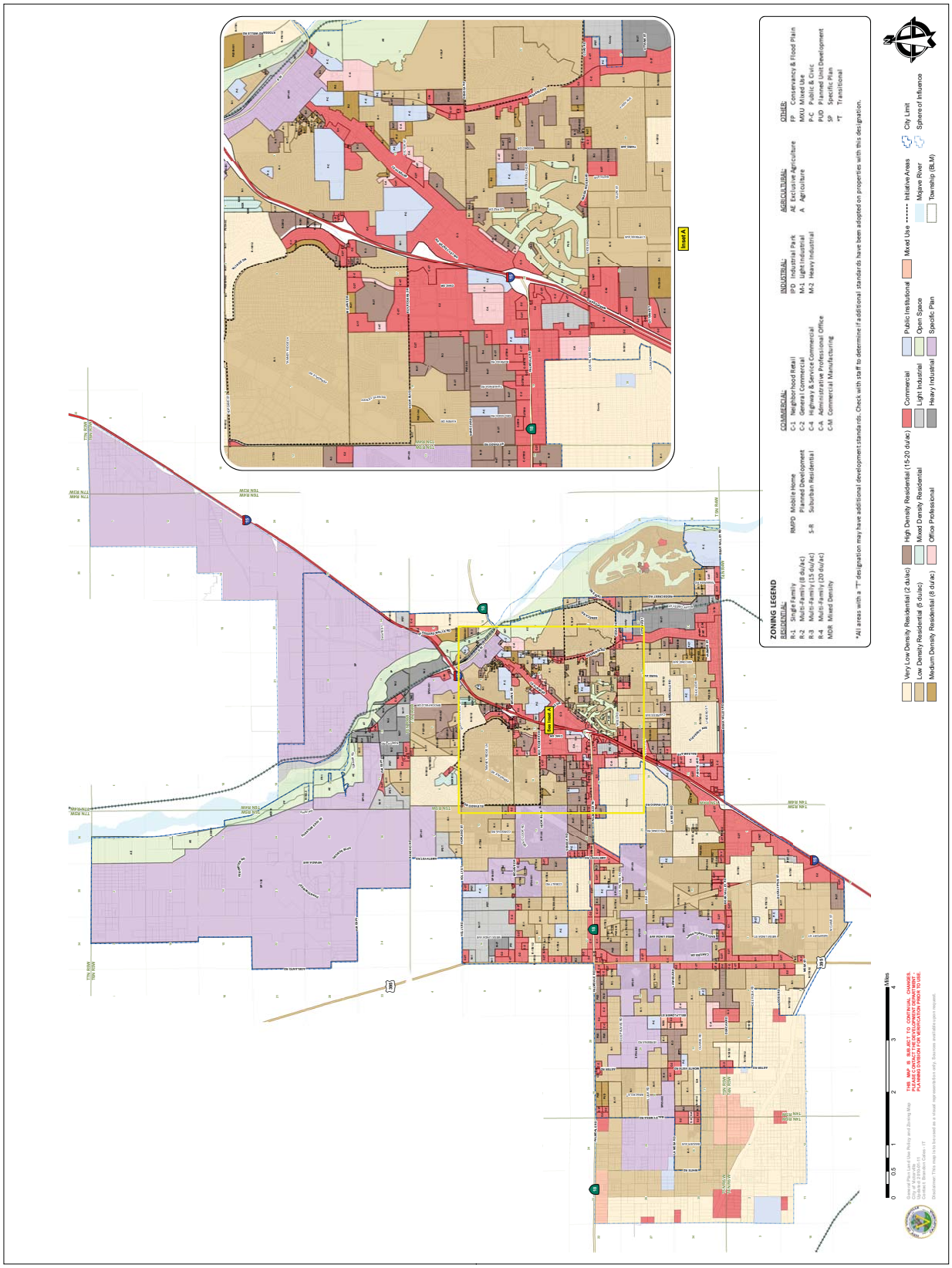

Exhibit 5.1
Land Use and Zoning Map

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5.3 Non-motorized facilities

Currently, the City of Victorville has minimal non-motorized transportation trails/paths and facilities, and there is no established comprehensive plan for the development of a non-motorized transportation system throughout the city. Consequently, existing paseos and sidewalks are utilized by bicyclists and pedestrians with large gaps in facilities and no purposeful connectivity to public and private facilities. Individual riders and walkers have developed routes that work for them.

Bicycle commuters

According to the 2000 Census data, the City of Victorville had 110 residents who used a bicycle as their means of commuting to work, which comprised approximately 0.5% of the working population of the city at that time. With the development of a comprehensive non-motorized transportation plan, residents will be provided safe routes with more connectivity to commercial areas and other places of business. In doing so, the city could increase the percentage of residents who commute via bicycle from 0.5% to 3-5% of the working population.

Trails/paths

The City of Victorville currently has approximately 4.2 miles of Class 1 multi-use trails/paths developed, comprising of existing paseos in the Brentwood, Mesa Verde and West Creek specific plans, as well as a section of the Mojave Riverwalk project. These trails/paths are located in different areas of the City and provide little to no connectivity to one another. There are no Class 2 striped bike lanes or Class 3 shared bike routes within the City. Exhibit 5.2 shows the existing trails/path in the City of Victorville.

Mojave Riverwalk Trail

End of trip facilities

Bicycle parking can be provided in two general types: racks and high-security bicycle parking. Racks are best for short-term needs like quick shopping trips, stops to the library, etc. Racks should be placed at dispersed locations to take advantage of the point-to-point flexibility of the bicycle. Commuters and those who park for longer times need higher security parking. High security parking may consist of lockers, attendant parking, or automated parking.

The City of Victorville has 10 bike lockers at the Victor Valley Transportation Center, located in Downtown Victorville. Bike racks are dispersed throughout the City, with the majority being found at schools and parks. Changing facilities can be utilized by non-motorized commuters at the Wellness Center located at City Hall and at Victor Valley College. Exhibit 5.2 shows a map of the existing end of trip facilities in the City.

Bike Lockers at Victor Valley Transportation Center

Bike Racks at Mesa Linda Middle School

Multimodal Facilities

The City of Victorville has two existing multimodal facilities, the Victor Valley Transportation Center in Downtown Victorville and the Park and Ride lot on the corner of Armargosa Road and Bear Valley Road. The Park and Ride lot offers parking spaces for carpooling commuters and also has a bus stop for Route 53 of the Victor Valley Transit Authority. Currently, there are no bicycle parking facilities at the lot. The Victor Valley Transportation Center also includes parking for carpooling commuters and has bus stops for Routes 22 and 41 of the Victor Valley Transit Authority. In addition, the Victor Valley Transportation Center also serves as a Greyhound bus station and an Amtrak train station. There are 10 bike lockers located at the Transportation center. The Victor Valley Transit Authority buses provide bicycle racks on the front of each bus, which can accommodate two bicycles each. Exhibit 5.2 shows the existing multimodal facilities.

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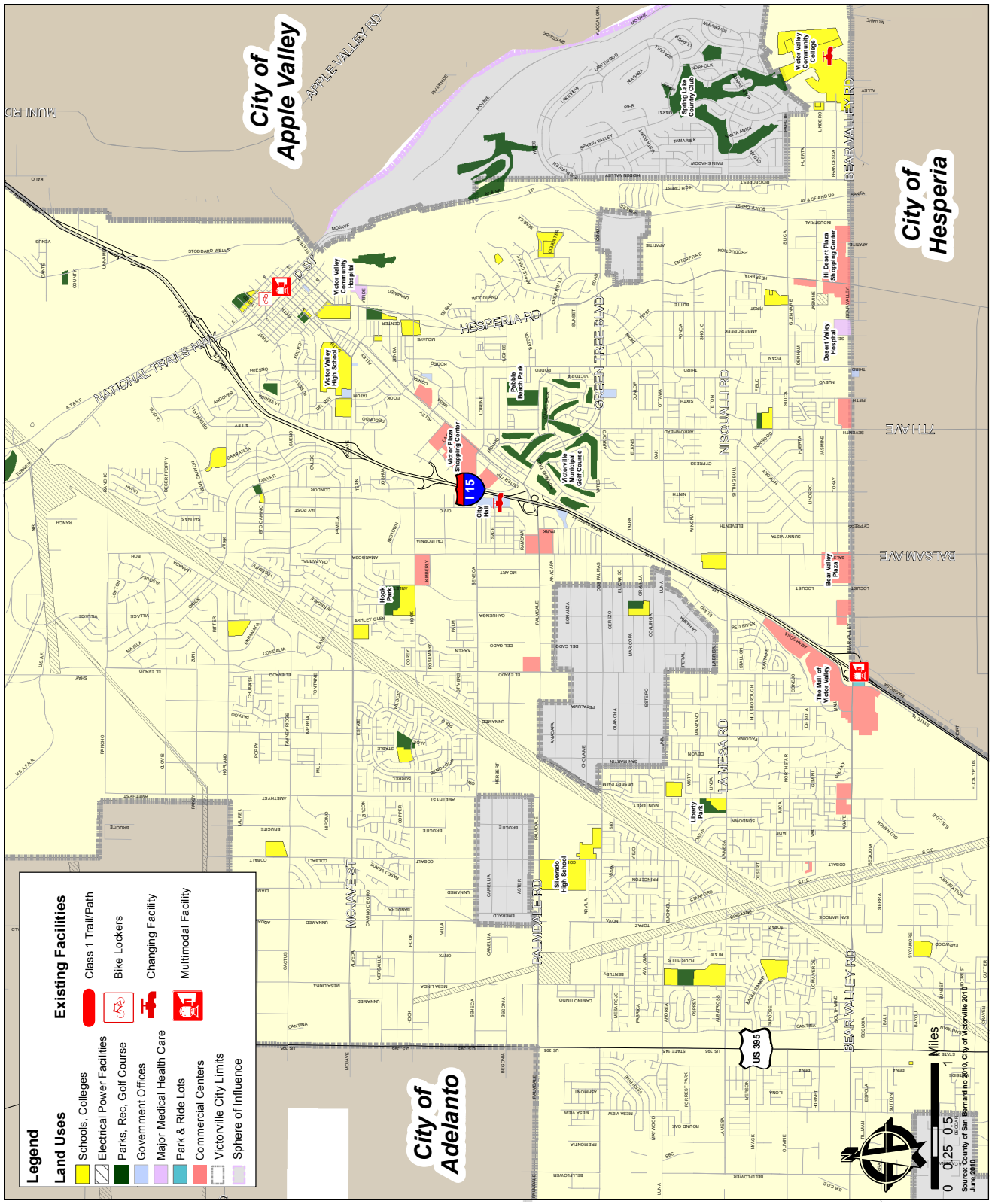

Exhibit 5.2
Existing Non-Motorized Facilities

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5.4 Safety and Education Programs

Currently, the City of Victorville does not host any city organized bicycle safety and education programs. However, local community groups and businesses conduct safety fairs and events within the city which also promote bicycle safety and education. The events are organized by local church groups, local retail centers and The American Medical Response (AMR) Company, and have been sponsored by the City of Victorville Police and Fire Departments. There is opportunity for the City of Victorville to conduct city organized safety events with sponsorship from other local law enforcement such as the California Highway Patrol and the County of San Bernardino Sheriff's Search and Rescue Team, as both have provided sponsorship to the neighboring jurisdictions of Hesperia and Apple Valley for their annual safety fairs.

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5.5 Collisions Involving Bicyclists

The following table provides statistics for motor vehicles collisions involving bicyclists that resulted in a serious injury or fatality for the years 2006 through 2008:

Table 5.1: *Collisions Involving Bicyclists*

Number of Bicycle Involved Collisions 2006 (SWITRS 2006)		Number of Bicycle Involved Collisions 2007 (SWITRS 2007)		Number of Bicycle Involved Collisions 2008 (SWITRS 2008)		Total # of Bicycle Collisions for 3 Years	Average # of Bicycle Collisions per Year	2006-2008 Population (American Fact Finder)	Collisions per 1000 people/yr.	Index (relative to state avg. of .29/1000)
Fatality	Injury	Fatality	Injury	Fatality	Injury					
0	4	1	9	0	9	23	8	108,586	0.07	.24

The City of Victorville experiences a significantly lower amount of bicycle collisions per year than the state average. Based on these statistics, Victorville averages .07 collisions per 1,000 people per year, which is approximately one quarter of the state average of .29 collisions per 1,000 people per year. However, the individual city statistics indicate that the number of bicycle collisions has more than doubled since 2006. This increase in collisions can be attributed to a lack of bicycle facilities to accommodate the growing population, as well as lack of safety and education programs.

Exhibit 5.3 shows all reported bicycle collisions in the City of Victorville from June of 2006 to May of 2009. These collisions include those that resulted in no/minor injury, serious injury, and fatality. As evident on the map, a majority of the collisions occur in or near street intersections, which is typically found in bicycle-vehicle collision data. This can be attributed to lack of bike facility improvements at intersections, and lack of education on the rights and responsibilities of bicyclists as well as motorists.

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5.6 Collisions Involving Pedestrians

Exhibit 5.3 shows all reported pedestrian collisions in the City of Victorville from June of 2006 to May of 2009. These collisions include those that resulted in no/minor injury, serious injury, and fatality of the pedestrian. A total of 76 collisions were reported, 65 of those resulting in serious injury and 11 of those resulting in a fatality. As evident on the map, a majority of the collisions occur in or near street intersections, which is typically found in pedestrian-vehicle collision data. As part of the effort to develop the non-motorized transportation plan, a number of design guidelines for intersection improvements were developed to improve pedestrian safety. These design guidelines are intended to be used at intersections exhibiting significant pedestrian collision activity and any other intersections lacking safe pedestrian access. The developed guidelines for intersection improvements are discussed in Chapter 8. Additionally, design guidelines for the development of pedestrian friendly streetscapes and neighborhoods are also discussed in Chapter 8.

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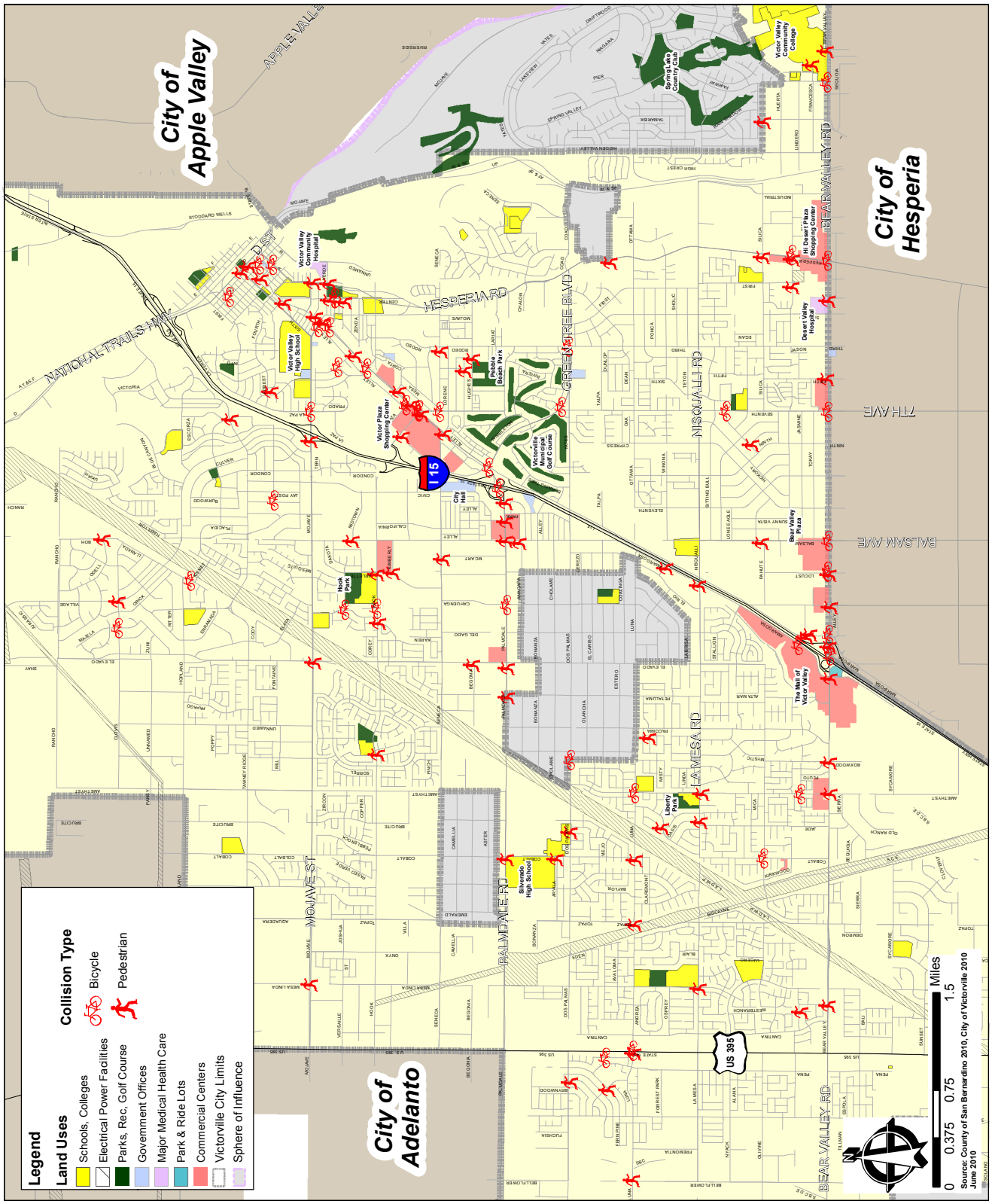

Exhibit 5.3
Bicycle/Pedestrian Collision Data 2006-2009

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Chapter 6 Recommendations

City of Victorville Non-Motorized Transportation Plan | Compass Blueprint Demonstration Project

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6.1 Off-Road Trails

Victorville offers a unique combination of waterways and power line rights-of-way that could enable the city to construct an extensive network of off-road paths for use by bicyclists, joggers, equestrians and other non-motorized transportation users.

The most important design feature will be the street crossings. In order for these trails to work well, these crossings must be designed for safety and convenience. The specific design for each crossing will depend on the street. Street crossing designs will be discussed in the Recommendations and Strategies section of the plan

The City has jurisdiction over the Mojave River and the Oro Grande River and can make the decisions as to where the trails go. Southern California Edison owns the power line rights-of-way. One line is owned by the Los Angeles Department of Water and Power. Both of these entities have been contacted and have given tentative agreement to negotiate easements for these trails under their power lines.

The following trails have been identified as proposed routes and shall be identified as Class 1 bikeway/multiuse facilities:

Paseos

As previously discussed in Chapter 2, the City of Victorville has a number of specific plans that have incorporated components of non-motorized transportation. Bike and pedestrian paseos have been designed into these plans as community connections to neighborhood facilities through the use of natural washes, drainage channels, and increased street right of ways. These paseos have been identified as proposed Class 1 bike/multiuse trails. Where these specific plans were adjacent to vacant land, expansions of these paseos have also been proposed.

Mojave River Trail

The Mojave Riverwalk Trail plan comprises a nine-mile-long bike path along the Mojave River from the northern city limit north of the I-15 freeway to the southern city limit near Victor Valley College. The trail will provide access to the college. One segment has already been constructed and connects downtown Victorville and the Victorville Transportation Center. This current planning effort incorporates the previously adopted Mojave Riverwalk Trail plan.

Mojave Riverwalk Trail

Oro Grande River Trail

The Oro Grande River runs through much of Victorville. A trail along the Oro Grande River could become a central feature of Victorville that would link The Mall of Victor Valley, downtown, as well as parks and schools. The Oro Grande River trail would be a combination bike path and decomposed granite (DG) path. In constrained areas it would only be a paved path.

Starting at the south end of Victorville this path would begin at the California Aqueduct and run the length of the Oro Grande River. It would traverse along the backside of The Mall of Victor Valley. Ideally, it would cross the I-15 freeway with a separate bridge to the east side of Victorville. (Alternatively, access could be constructed on a future bridge for Nisqualli Road. This would be less expensive, but also much less attractive.

Continuity of the high quality of the trail is very important.) On the east side of I-15 it would continue up past a mobile home park using an existing underpass. Further north, where the trail meets Yates Road, the route would be a Class III bike route around the Victorville Municipal Golf Course. The route would follow Yates Road east to Arrowhead Drive, up Arrowhead Drive to Camelback Drive, follow Camelback Drive to Burning Tree Drive, then up to Pebble Beach Drive where it would resume its course along the riverbed through Pebble Beach Park and further north.

Somewhere in the vicinity of Seneca Drive or further north, the trail would split into two. One leg would cross east over Hesperia Road to connect with the Mojave Riverwalk Trail. The exact alignment of this would result from further study. One of the challenges will be finding a way to cross the railroad that parallels the Mojave River. The other leg would continue north along the Oro Grande River to Center Street Park. The path would terminate there. Users would be routed along a Class III bike path on Verde Street to Center Street, crossing 7th Street to Yucca Avenue, and following Yucca Avenue to 6th Street. If a street right of way reduction, or road diet, were done on 7th Street, this crossing would preferably be done with a roundabout. Class II bike lanes on 6th Street would take cyclists through downtown, to the Victorville Transportation Center, and to the existing Mojave River bike path.

Oro Grande River Wash

Power Line Corridors

Power line corridors crisscross Victorville and offer outstanding opportunities for trails to connect many neighborhoods in the City. They are wide enough to accommodate a paved bike path, a DG path for joggers, and less improved path for equestrians and hikers. Providing multiuse trails in powerline corridors will require permission from the Los Angeles Department of Water and Power (LADWP) and Southern California Edison (SCE). The following trails have been identified as proposed routes:

- Northeast-southwest corridor (center): This corridor runs all the way from the northeastern city limit to the southwestern city limit of Victorville. It should connect with and run as far as the Mojave Riverwalk Trail on the northeast, and to the California Aqueduct in the southwest. This trail is recommended to have a bike path, a DG path and an equestrian path.
- Northwest-southeast corridor: This corridor runs all the way from the northwestern city limit at US-395 north of Mojave Boulevard, crossing the I-15 freeway at the far south end of Victorville, and continues further southeast. This trail is recommended to have a bike path, a DG path and an equestrian path.
- Northeast-southwest corridor (west): This line begins at an electrical station on Palmdale Road between Mesa Linda Avenue and Topaz Road on the south end, and connects up with the northeast-southwest corridor (center) near the Mojave River. It should run this whole length. This trail is recommended to have a bike path, a DG path and an equestrian path.
- East-west corridor: This power line corridor runs from the northwest-southeast line to Victor Valley Community College. Part of the right-of-way is built upon east of Hesperia Road. Further east, there is no existing workable crossing of a railroad line east of Industrial Way. This trail should begin at the northwest-southeast line and continue as far east as just west of Hesperia Road. The most challenging portion of this trail will be crossing the I-15 freeway. It is recommended to run north at Locust Avenue, cross Nisqualli Road and connect up with the trail on the Oro Grande River. Users will cross the freeway along with the Oro Grande River trail and reconnect to this path behind The Mall of Victor Valley. This trail is recommended to have a bike path, and a DG path.

As part of the development of the Class I paths/trails along the Power Line Corridors, it is recommended that signalized intersections be incorporated where the corridors cross major streets and that crossing islands be provided at all other street crossings. When possible, the Class I paths/trails should be routed in a manner that allows for the use

of existing street intersection crosswalks. Improvements should then be added to these intersections to enhance the crossings. Trail crossing design guidelines are discussed in Chapter 8.

SCE and LADWP Power line Corridors

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6.2 Feasibility of Off-Road Trails

Upon determining the network of proposed off-road trails for the non-motorized transportation plan, the consultants contacted the various governing agencies whose consent would be required to determine the feasibility of the proposed routes. These agencies included Southern California Edison (SCE), the Los Angeles Department of Water and Power (LADWP), the State Department of Water Resources, and the San Bernardino County Flood Control District. Contacts were made via emails, phone calls, and in-person meetings when possible.

Southern California Edison

The consultant team met in person with representatives of Southern California Edison (SCE) to discuss the City of Victorville Non-Motorized Transportation Plan. The consultant team explained that due to their size and location, the power line corridors offered an opportunity to develop dedicated trails that would connect the northern and southern ends of the City. A dedicated trail along the corridor could also serve as a link between other secondary trails in the system.

The SCE representatives explained the power line corridors in question are comprised of fee simple property as well as easements. In either case, the process of review and conditions of use would be the same for SCE. However, in the case of easement use, the process would also require the applicant to obtain approval from the individual property owners of those easements. The following provides a summary of the application process and conditions of use as explained by SCE:

Application, Review and Approval Process.

- Application fees are deposit based and are dependent on the project. The appropriate fees will be determined at time of project submittal.
- Applications submitted for fee simple property will require approval of a license from SCE.
- Applications submitted for easements will require granting of consent from SCE, along with consent of use from individual property owners.

- There are no typical fees for license or grant of consent. Fees are dependent on the project and determined within 3 to 4 weeks of application submittal.
- Licensing and grants of consent are approved for segments 2 to 3 miles long.
- Licensing and grants of consent are approved on 5 year lease terms. Lease terms include a 30-day termination clause, allowing SCE to revoke any approvals with proper notice.

Conditions of Use as Described by SCE Staff

- Surveys of power line conductor clearance through the use of LIDAR (Light Detection And Ranging) may be required to ensure safety of use.
- No permanent structures, such as benches or signs shall be permitted within SCE property or easements.
- Existing access ways may be used for trails. New trails shall be made of Decomposed Granite (DG). Asphalt may be used for trails, provided it can accommodate the 40 ton weight capacity of SCE service trucks.
- Trails shall be a minimum of 16 feet wide. Trails can be made wider to accommodate pedestrian trails.
- Trails shall be made of one type of material. Trails cannot be half asphalt, half DG.
- For meandering trails, a 50-foot minimum radius will be required to allow accessibility for SCE service trucks.
- Trails shall have a minimum clearance of 50 feet from any suspension towers and 100 feet from dead end, stand alone towers
- Anti climbing devices shall be required around all electrical towers in areas where public access will be permitted. The anti climbing devices shall be installed by an SCE contractor at an expense of $10,000 to $25,000 per tower to the applicant.
- Equestrian access is typically not allowed but would be reviewed upon application submittal
- The City shall be responsible for maintenance of all trails in corridors and shall be responsible for keeping corridors clean.

Should the City decide to proceed with the application for licensing and/or grants of consent, SCE would be willing to review the application and discuss the possibility of trails in more detail at that time. It was explained to the consultants that the power line corridors are anticipated to see substantial growth in the near future due to the

push for green development which could result in the construction of new electrical towers or upgrading of existing towers. This type of intensification, along with routine maintenance of existing facilities can result in the closure of trails within the corridors for periods as long as 6 months, or in some situations permanent closure. SCE explained it would be in the City's best interest to identify alternative routes that could be utilized in these situations so as to not interrupt the overall non-motorized transportation plan.

Los Angeles Department of Water and Power

The consultant team contacted a representative of the Los Angeles Department of Water and Power (LADWP) Real Estate Office via email and telephone. The Real Estate Office is responsible for managing, leasing, and maintaining records of LADWP-owned real estate. The consultant team explained the City of Victorville's interest in developing trails within LADWP's power line corridor to be included in a city-wide Non-Motorized Transportation Plan. The representative explained that the LADWP had permitted the use of right-of ways for trails before, but could not provide detailed comment until a formal submittal for right–of-way use had been received. The representative did explain that there were different ways a use could be permitted over LADWP right-of-ways. If a permanent easement were requested for the use, the process could be extensive. An alternative that would not take as long to process would be to request a lease on the right-of-way for the use of trails. The lease could be granted on a 5-year term, renewable at the end of every term. It was further explained that processing a request for permanent structures, such as concrete paths, in the right-of-ways would be difficult to obtain approval for. Decomposed granite trails would be better suited for this type of request.

State Department of Water Resources

The consultant team contacted a representative of the State Department of Water Resources via email. The consultant team provided a description of the non-motorized transportation plan project and identified the East Branch of the California Aqueduct as a proposed trail/path in the plan. The representative provided a response explaining that a bike path was open to the public at one time along the Aqueduct but it is now closed. It is uncertain if and when the path will be open to the public again.

San Bernardino County Flood Control District

The consultant team contacted a representative of the San Bernardino County Flood Control District via telephone. The consultant team explained that the section of the Oro Grande Wash that runs through the City of Victorville had been identified as a proposed multi-use trail to be included in the City's Non-Motorized

Transportation Plan. The representative stated that the Flood Control District was open to the proposal of trails along any flood control channels, including the Oro Grande Wash, and added that the process is relatively general. The following are general conditions of use for the development of trails along flood control channels:

- Memorandum of Understanding between the City and the Flood Control District stating the intended use of flood control channels for trails.
- Plans for the proposed trails would be submitted to the Flood Control District for review and approval.
- The City would be responsible for maintaining the trails.
- Accessibility to the channels must be maintained for service vehicles.

6.3 On-Road Bikeways

To expand on the proposed off-road trails and provide connectivity to public facilities, retail establishments and other points of interest, a comprehensive network of on-road Class 2 striped bike lanes and Class 3 shared routes has been proposed. The incorporation of these routes into the non-motorized transportation plan would also address the lack of east-west connectivity within the city for bicycle riders, improve accessibility over the I-15 Freeway, improve connectivity to neighboring cities, and improve the safety of bicycle riders by providing identified routes.

The proposed routes will utilize the existing City street system based on the 2008 General Plan Circulation Element. As a number of the routes are being proposed on streets with fully constructed improvements, the proposed network is intended to be incorporated into the existing street right of ways.

The type of route proposed was dependent on the street type, street width, as well as volume and speed of traffic for the particular street. For those streets with low traffic volume and lower posted speed limits, Class 3 shared routes were proposed. On streets with higher posted speed limits and traffic volume, Class 2 striped bike lanes were proposed to improve safety. In instances where the volume and speed of traffic was significant, Class 2 hatched bike lanes were recommend. These types of lanes provide an additional 2-foot wide buffer between the bike and traffic lanes.

The following is a list of streets where the routes are being proposed. Unless specifically noted, the proposed route type is intended for the entire length of the street within city boundaries. The design standards for the types of routes will be discussed in the Design Guidelines chapter of the plan.

Table 4.1 - *East-West Routes*

East-West Routes			
Street	**From**	**To**	**Class**
Bear Valley Rd	Western City Limits	Oro Grande Wash	Class II Hatched
Bear Valley Rd	Apatite Ln	Eastern City Limits	Class II Hatched
Cactus Rd	Power Line Corridor 2	Whitecap Way	Class II
Clovis St	Western City Limits	Power Line Corridor 1	Class II
Dos Palmas Rd	Western City Limits	Amargosa Rd	Class II
Eucalyptus Rd	Western City Limits	Eastern City Limits	Class II
Forest Ave	Fourth St	Hesperia Rd	Class II
Green Tree Blvd/Yates Rd	Seventh St	Eastern City Limits	Class II
Hook Blvd	Western City Limits	Topaz Rd	Class II
La Mesa Rd	Western City Limits	Mesa View Rd	Class II
La Mesa Rd	El Rio Rd	Mariposa Rd	Class II
Luna Rd	Western City Limits	Mesa View Rd	Class II
Mojave Rd	Western City Limits	Village Dr	Class II
Ottawa St	Oro Grande Wash	Hesperia Rd	Class II
Palmdale Rd	Western City Limits	Amargosa Rd	Class II
Rancho Rd	Western City Limits	Power Line Corridor 1	Class II
Smoke Tree Rd	California Aqueduct	I-15	Class II
Sycamore St	Western City Limits	Oro Grande Wash	Class II
Bear Valley Rd	Oro Grande Wash	Cottonwood Ave	Class III
Hook Blvd	Topaz Rd	I-15	Class III
Hopland St	Cantina Rd	Power Line Corridor 1	Class III
La Mesa Rd	Mesa View Dr	El Rio Rd	Class III
Luna Rd	Mesa View Dr	El Rio Rd	Class III
Mojave Rd	Village Dr	Ramada Rd	Class III
Nisqualli Rd	Mariposa Rd	Balsam Rd	Class III
Northstar Ave	Power Line Corridor 2	El Evado Rd	Class III
Palmdale Rd	Amargosa Rd	Seventh St	Class III
Puesta Del Sol Dr	Village Dr	Tawny Ridge Ln	Class III
Seneca Rd	Seventh St	Hesperia Rd	Class III
Seneca Rd	Amethyst Rd	Civic Dr	Class III
Silica Dr	Third Ave	Hesperia Rd	Class III
Tawny Ridge Ln	Whitecap Way	National Trails Hwy	Class III
Winona St	Balsam Rd	Ninth Ave	Class III

Table 4.2 - *North-South Routes*

North-South Routes			
Street	**From**	**To**	**Class**
Hesperia Rd	Bear Valley Rd	Verde St	Class II Hatched
Seventh St	Green Tree Blvd	Forest Ave	Class II Hatched
Arrowhead Dr	Nisqualli Rd	Talpa St	Class II
Baldy Mesa Rd	Olivine Rd	Palmdale Rd	Class II
Bellflower St	Bear Valley Rd	Palmdale Rd	Class II
Cantina Rd	Honeybear Ln	Hopland St	Class II
Civic Dr	Roy Rogers Dr	Mojave dr	Class II
El Evado Rd	La Mesa Rd	Turner Rd	Class II
Fourth St	Forest Ave	D St	Class II
Hesperia Rd	Verde St	D St	Class II
Mesa Linda Ave	La Mesa Rd	Hopland St	Class II
Mesa View Rd	Bear Valley Rd	Dos Palmas Rd	Class II
Monte Vista Rd	Bear Valley Rd	Palmdale Rd	Class II
National Trails Hwy/D St	Hesperia Rd	Northern City Limits	Class II
Pena Rd	Mesa St	Luna Rd	Class II
Richmond Rd	Mesa St	Sequoia St	Class II
Sixth St	Mojave Rd	Forest Ave	Class II
Village Dr	Mojave Rd	Air Expressway	Class II
Amargosa Rd	Yates Rd	Power Line Corridor 1	Class III
Amethyst Rd	Bear Valley Rd	Hopland St	Class III
Arrowhead Dr	Talpa St	Pebble Beach Park	Class III
Balsam Rd	Nisqualli Rd	Winona St	Class III
Civic Dr	Amargosa Rd	Roy Rogers Dr	Class III
Cobalt Rd	Bear Valley Rd	Hopland St	Class III
Eagle Ranch Pkwy/Mesa Linda St	Honeybear Ln	Sequoia St	Class III
El Evado Rd	Northstar Ave	La Mesa Rd	Class III
Ninth Ave	Winona St	Ottawa st	Class III
Seventh Ave	Bear Valley Rd	Nisqualli Rd	Class III
Third Ave/Jarvis Rd/ Rodeo Dr	Bear Valley Rd	Seventh St	Class III
Topaz Rd	Mesa St	Power Line Corridor 2	Class III
Yucca Ave/Center St/ Verde St	Sixth Ave	Hesperia Rd	Class III

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6.4 Non-Motorized Transportation Plan Map

Exhibit 6.1 shows the map of the proposed off-road and on-road routes for the City of Victorville's Non-Motorized Transportation Plan. The plan includes all existing and proposed trails/paths identified in City documents discussed in Chapter 2 as well as all proposed routes discussed in this chapter. The map identifies the recommended trail crossings for the proposed off-road paths as well as the potential connections the non-motorized transportation plan will have to existing and proposed regional non-motorized trails and paths. The map also identifies schools, parks, commercial center, and other public facilities determined to be points of interests in the plan.

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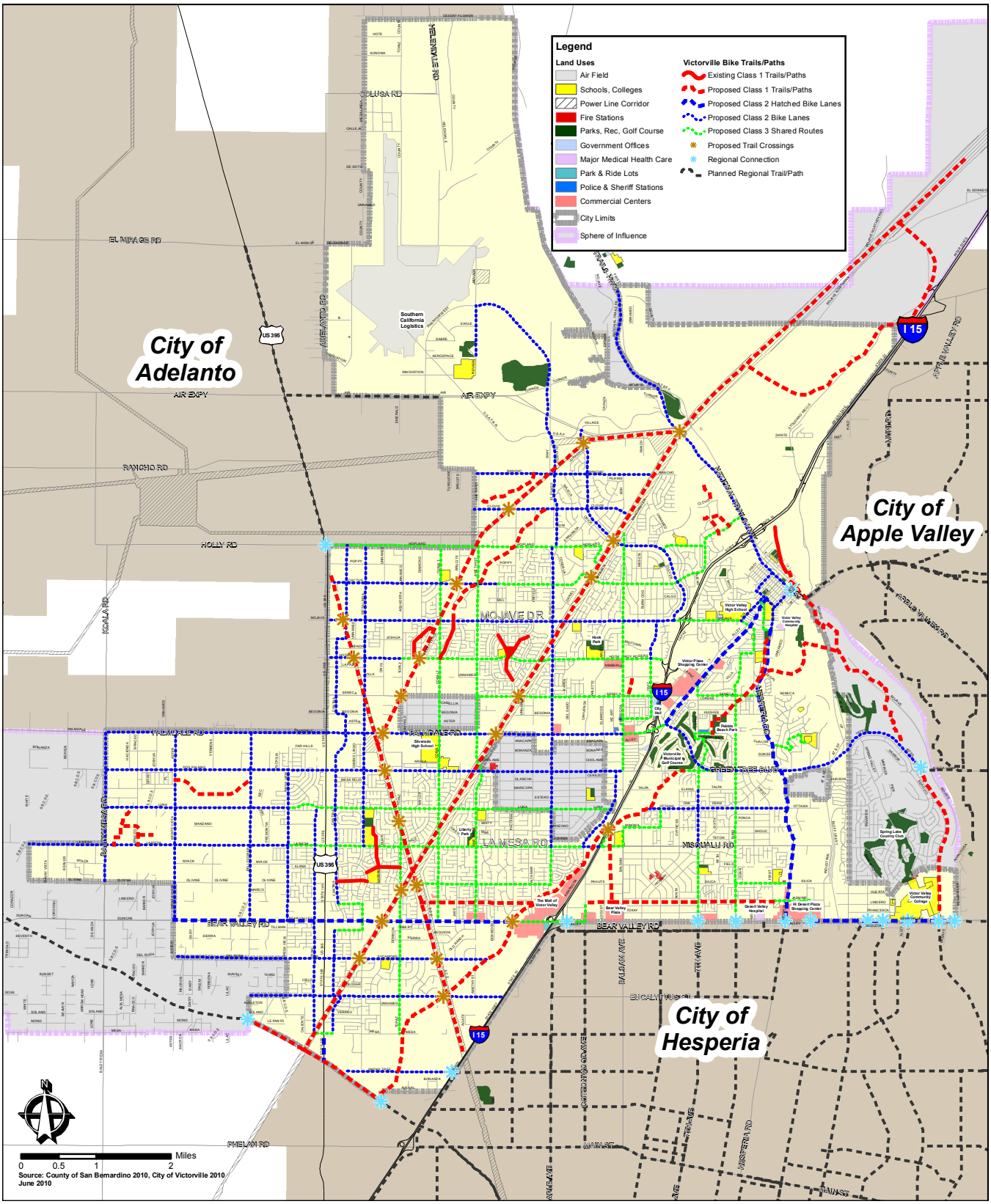

Exhibit 6.1
Non-Motorized Transportation Plan Map

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6.5 Bicycle Parking

Bicycle parking includes standard bike racks, covered lockers, and corrals. Bicycle parking should be provided at public destinations, including community centers, parks, schools and shopping centers. Bicycle parking should be installed in a safe, secure area visible to passersby and should be installed to meet ADA standards and not block pedestrian through traffic. Bike racks should adhere to the basic functional requirement of supporting the bicycle by the frame (not only the wheel) and accepting a U-lock. Specific design recommendations for bicycle parking are provided in Chapter 8.

It is recommended that the City develop a bike parking program to insure a minimum of 10 bike racks are provided at every school and every park in Victorville. Exhibit 6.2 shows a map identifying the proposed locations for bicycle parking. Additional bike parking should then be installed as it is requested and at locations where bicycles are regularly seen locked to trees, poles, or other features. Bicycle parking should also be installed in the Old Town Victorville area, specifically along the 7th Street commercial corridor. Funding sources that can be utilized to develop this bike program are discussed in Chapter 7. As the initial goals are met and more funding becomes available, the city should consider offering bike racks to commercial centers on an as needed basis as part of the bike parking program.

The City of Victorville Municipal Code does not include provisions for the requirement of bicycle parking and/or storage facilities. In order to facilitate the expansion of available bicycle parking, the City should consider adoption of a bicycle parking ordinance. This type of ordinance could insure that bicycle parking facilities are included in all new commercial and office development projects in the City.

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6.6 Bicycle Amenities

The City should consider an ordinance or other developer mandates to require showers and clothing lockers in new work sites of significant size. The requirements may use the following as a guide:

- Retail and commercial developments over 25,000 square feet should have at least one shower per gender and an additional shower per gender for each additional 50,000 square feet.
- Industrial developments over 50,000 square feet should have at least one shower per gender, and an additional shower per gender for each additional 100,000 square feet.
- Retail and commercial developments over 25,000 square feet should have at least one clothing locker per gender, and an additional clothing locker per gender for each additional 50,000 square feet.
- Industrial developments over 50,000 square feet should have at least one clothing locker per gender, and an additional clothing locker per gender for each additional 100,000 square feet.
- Showers and clothing lockers should be placed in the same facility.
- Signs should direct cyclists to the showers and clothing lockers.

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6.7 Links to Other Transportation Modes

It is recommended that a combination of bike racks for occasional users and higher security parking for every day users be provided at all existing and proposed multimodal facilities within the City. This higher security parking may consist of bicycle lockers. Exhibit 6.2 is a map identifying the existing and proposed non-motorized facilities within the City of Victorville. The Victor Valley Transportation Center already provides bicycle lockers and racks. As demand grows, additional lockers and racks should be installed.

The existing park and ride facility at Amargosa Rd and Bear Valley Rd currently does not provide any bike parking. A future park and ride facility is proposed to be located at the Victor Valley College. For both the existing and proposed park and ride locations, a minimum of 4 bike lockers and 6 bike racks are recommended for each facility.

The Desert Xpress is a proposed high speed rail project which will offer non-stop passenger train service from Victorville to Las Vegas, Nevada. The proposed Victorville station will be located at one of two sites along the west side of I-15 between the North and South Stoddard Wells Road interchanges on about 60 acres of land, plus parking. There are also plans to expand the Desert Xpress route to Palmdale, where it could then link to the proposed California High-Speed Rail system. As the project continues to develop, it is recommended that the City work with the developer to include bicycle parking facilities and amenities at the station.

The Victor Valley Transit Authority buses currently provide bicycle racks on the front of each bus, which can accommodate two bicycles each. It is recommended that the City coordinate with the Victor Valley Transit Authority to ensure that these bike racks remain in service and that additional bike racks be provided as needed.

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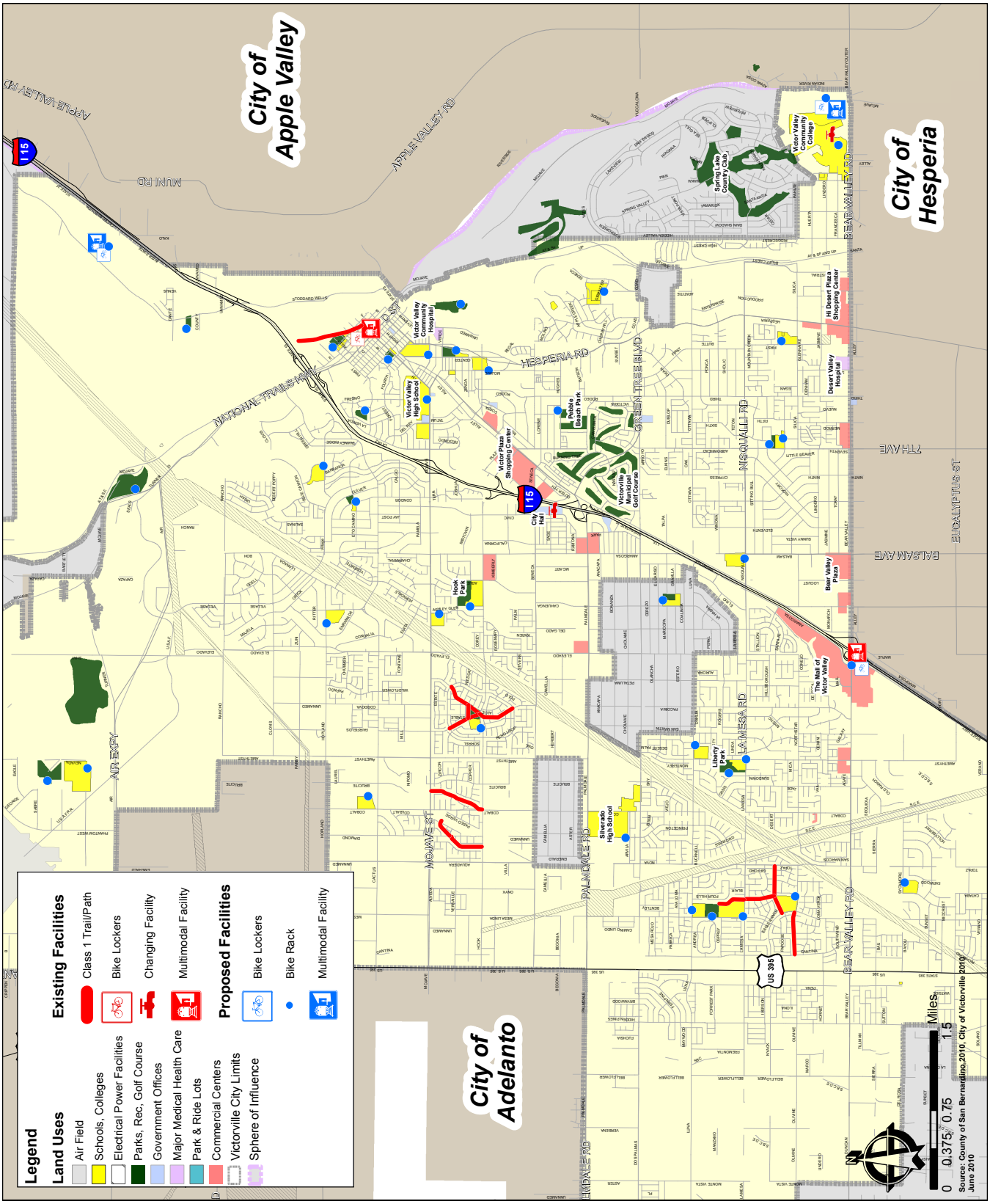

Exhibit 6.2
Existing and Proposed Facilities Map

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6.8 Education and Promotion

Safety Education Programs

Currently, the City of Victorville does not offer any city organized bicycle safety and education programs. The development of a bicycle safety education program is recommended as part of this Plan. The program should teach bicycle safety to children, adults, and other groups that encounter bicyclists. A specific curriculum geared for each audience, along with a handbook or other literature, is recommended.

- Children: All children in public schools should go through a bicycle safety program before they graduate. This should start at a young age. In addition, bicycle safety should be taught to students who are taking drivers education classes at school. This should be part of the Safe Routes to School programs.
- Adults: A bicycle safety education component should also be available to adults at employment sites, and on selected weekends for the general public.
- Motorists: The safety curriculum should educate motorists as to how to interact with bicyclists.
- Other groups: Safety education should be taught to others who come in to contact with bicyclists, such as bus drivers and local police.
- City staff: Bicycle safety education can be incorporated into existing training and orientations.

Safety Fairs/Events

Currently, local community groups and businesses within the City and the Victor Valley conduct safety fairs and events which also promote bicycle safety and education. The events are organized by local church groups, local retail centers and The American Medical Response (AMR) Company. The City of Victorville Police and Fire Departments have sponsored some of these events in the past. There is opportunity for the City of Victorville to conduct city organized safety events with sponsorship from other local law enforcement such as the California Highway Patrol and the County of San Bernardino Sheriff's Search and Rescue Team, as both have provided sponsorship to the neighboring jurisdictions of Hesperia and Apple Valley for their annual safety fairs. It is recommended that the City coordinate with these agencies to include them in regular city organized events.

Safe Routes to School

It is recommended that the City of Victorville develop a Safe Routes to School (SR2S) program to improve the safety of schoolchildren that walk and bicycle to school. SR2S programs promote walking and bicycling to school through educational efforts and incentives that stress safety and fun for the participants. SR2S programs are often designed in a manner that decreases traffic and pollution while increasing the health of children and the community at large. The programs also address the safety concerns of parents by encouraging greater enforcement of traffic laws, educating the public, and exploring ways to create safer streets. The City is encouraged to coordinate with school administrators and teachers, local PTA's and other groups, neighborhood groups and the public, and local law enforcement to develop effective SR2S programs. Funding for SR2S programs is discussed in Chapter 7.

Bike Events

Conducting regular bike events helps to raise the profile of bicycling in the area. The Hanson Bike Group conducts an organized bike riding event along Bear Valley Road on a regular basis. The event is open to all ages and is intended to promote bike safety and the use of bicycles for health and recreation. Other similar events within the City include the Hi Desert Fitness Challenge, the National Breast Cancer Awareness event, and the Heart and Soul Program.

It is recommended that the City of Victorville coordinate with the facilitators of these events and other future events to offer support and help raise community awareness of the events, bicycle safety, and the benefits of bicycling. The City could offer support to these events by offering permits, financial assistance and/or staff time during the events.

Bicycle and Pedestrian Advisory Committee

Establishing a community-based bicycle and pedestrian advisory committee allows community members to become directly involved in the process of developing and improving the existing bicycle and pedestrian networks. As regular users of Victorville's bicycle and pedestrian network, members of the Hanson Bike Group and other active bicycle and running groups are in a unique position to highlight areas of concern that the City may not have identified. The City should coordinate with these groups and other jurisdictions to create a bicycle and/or pedestrian advisory committee that should encompass the entire Victor Valley.

Healthy High Desert/Healthy Victor Valley

The City has been working with representatives from the St. Mary Medical Center and Desert Valley Hospital as well as community members from the entire Victor Valley to create a Healthy High Desert/Healthy Victor Valley collaborative. The purpose of the collaborative is to develop strategies for combating childhood obesity, promoting healthy living, and ultimately develop a Healthy City Committee in Victorville. It is recommended that the City continue working with community representatives to create the Healthy High Desert/Healthy Victor Valley collaborative. Creating the collaborative will help to promote the health and safety benefits of implementing the non-motorized transportation plan.

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Chapter 7 Cost Analysis and Funding

City of Victorville Non-Motorized Transportation Plan | Compass Blueprint Demonstration Project

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7.1 Cost Analysis

Past Expenditures

The City of Victorville has dedicated approximately $1.2 million to the development of the Mojave Riverwalk Plan and has constructed the first phase of the project, including a trail head at Sixth Street in Old Town and approximately 3,200 feet of paved pathway. In addition, $4.1 million from the San Bernardino Association of Governments and $3.1 million in federal and state transportation grants have been allocated to the construction of the project. Realizing the lack of non-motorized transportation facilities available within the city, Victorville applied for and was awarded a grant of $135,000 through the Southern California Association of Government's (SCAG) Compass Blueprint Demonstration Project Program for the development of this comprehensive Non-Motorized Transportation Plan.

Under Policy 2.1.1 of the General Plan Circulation Element, the city is to consider the allocation of funds from the Capital Improvement Program for the completion of non-motorized transportation components on a yearly basis. The adoption of a comprehensive Non-Motorized Transportation Plan will help facilitate this process and streamline the development of plan components.

Future Financial Needs

Altogether implementation of the Non-Motorized Transportation Plan would require funds for 60.6 miles of Class I bike trails/paths, 103.3 miles of Class II bike lanes, and 58.2 miles of Class III bike routes. At an estimated per-mile cost of $1 million for Class I paths, $50,000 for Class II lanes, and $10,000 for Class III routes, the total cost of constructing the recommended bikeways is estimated to be $66,347,000. As part of the development of the Class I bike paths/trails along the Power Line Corridors, it is recommended that signalized intersections be incorporated where the corridors cross major streets and that crossing islands be provided at all other street crossings. At approximately $200,000 for each signalized intersection and $4,000 for each crossing island, an estimated 6 signalized intersections and 15 crossing islands are recommended for the Power Line Corridors, for a total cost of $1,260,000. As part of the development of the Oro Grande River Trail, it is recommended that a bike path bridge be constructed over the I-15 Freeway and an underpass under Bear Valley Rd be provided. The bike path bridge is estimated to cost approximately $3 million and the underpass approximately $500,000.

Additional proposed improvements include bike storage and parking at existing and future multi-modal facilities, and also at schools and parks. For the existing park and ride facility at Amargosa Rd and Bear Valley Rd and the future facility at Victor Valley College, 4 bike lockers and 6 bike racks are recommended for each facility. It is also recommended that a minimum of 10 bike racks be provided at each school and park. At a cost of $1,500 per bike locker and $250 per bike rack, it is anticipated to cost approximately $100,000 to implement the bike storage and parking recommendations. A summary of all Capital Financial Needs for the Non-Motorized Transportation Plan is provided in Table 7.1.

Table 7.1: *Capital Financial Needs*

Project Component	Approximate Cost
Class I Bike Trails/Paths	$60,600,000
Class II Bike Lanes	$5,165,000
Class III Bike Routes	$582,000
Trail/Path Signalized Intersections	$1,200,000
Trail/Path Crossing Islands	$60,000
Oro Grande I-15 Bridge	$3,000,000
Oro Grande Bear Valley Underpass	$500,000
Bike Lockers	$12,000
Bike Racks	$88,000
TOTAL CAPITAL COST	$71,207,000

Project Component Cost Analysis

For the recommended bikeways, cost estimates are based on per-mile averages of bikeway construction in California. The estimated cost per mile for Class I facilities is $1 million, $50,000 for Class II facilities, and $10,000 for Class III facilities. The cost estimates for the additional recommended bike facilities, such as path/trail crossings and bike racks, are based on per-unit averages of construction. All cost estimates are planning level, and do not include feasibility, environmental clearance or acquisition

costs. Project-specific factors such as grading, landscaping, intersection modification and right-of-way acquisition may increase the actual cost of construction, sometimes significantly. This Plan will be implemented as funds become available to the City.

Estimated improvement costs for the individual bikeways are provided in **Table 7.2: Cost Summary of Recommended Bikeways and Facilities.**

Table 7.2: *Cost Summary of Recommended Bikeway Facilities*

NAME	START	END	PROPOSED CLASS	LENGTH (miles)	COST	NOTES
Mojave Riverwalk	Downtown	Victor Valley College	Class I	5.5	$5,500,000	
Oro Grande River Trail	California Aqueduct	Center Street Park	Class I	8.0	$8,000,000	
Oro Grande River Trail (East Expansion)	Hesperia Rd	Mojave Riverwalk	Class I	1.5	$1,500,000	
Power Line Corridor 1 (LADWP)	California Aqueduct	Air Expressway	Class I	9.6	$9,600,000	
Power Line Corridor 2 (SCE)	I-15 Freeway	US 395	Class I	6.5	$6,500,000	
Power Line Corridor 3 (SCE)	Power Line Corridor 2	Air Expressway	Class I	6.2	$6,200,000	
Power Line Corridor 4 (LADWP, SCE)	Air Expressway	Desert Gateway	Class I	5.3	$5,300,000	Proposed under Desert Gateway Specific Plan
California Aqueduct	Southern City Limits	Southern City Limits	Class I	2.1	$2,100,000	
SCE Easement (Western Segment)	Power Line Corridor 2	Oro Grande River Trail	Class I	1.5	$1,500,000	
SCE Easement (Eastern Segment)	Locust Ave	Hesperia Rd	Class I	3.5	$3,500,000	
Parkview Paseos	Paseo system proposed for Parkview Specific Plan		Class I	1.3	$1,300,000	

NAME	START	END	PROPOSED CLASS	LENGTH (miles)	COST	NOTES
The Crossings Paseo	Paseo proposed for The Crossings Specific Plan		Class I	1.1	$1,100,000	
West Creek Paseo Expansion	Mojave St	Clovis St	Class I	2.1	$2,100,000	Northern expansion of existing West Creek Paseo along natural wash
Rancho Tierra Paseo	Paseo proposed for The Rancho Tierra Specific Plan		Class I	0.9	$900,000	
Mojave Vistas Paseos	Paseos system proposed for Mojave Vistas Specific Plan		Class I	1.0	$1,000,000	
Midtown Paseo	Paseo proposed for The Midtown Specific Plan		Class I	0.2	$200,000	
Desert Gateway Paseo	Paseo proposed for The Desert Gateway Specific Plan		Class I	4.3	$4,300,000	
Total Class I				**60.6**	**$60,600,00**	
Arrowhead Dr	Nisqualli Rd	Talpa St	Class II	0.8	$40,000	
Baldy Mesa Rd	Olivine Rd	Palmdale Rd	Class II	2.0	$100,000	
Bear Valley Rd	Apatite Ln	Eastern City Limits	Class II	1.9	$95,000	Recommend addition of 2-foot hatched lane
Bear Valley Rd	Western City Limits	Oro Grande Wash	Class II	4.5	$225,000	Recommend addition of 2-foot hatched lane
Bellflower St	Bear Valley Rd	Palmdale Rd	Class II	2.5	$125,000	
Cactus Rd	Power Line Corridor 2	Whitecap Way	Class II	2.2	$110,000	
Cantina Rd	Honeybear Ln	Hopland St	Class II	5.1	$255,000	
Civic Dr	Roy Rogers Dr	Mojave dr	Class II	0.5	$25,000	
Clovis St	Western City Limits	Power Line Corridor 1	Class II	2.0	$100,000	
Dos Palmas Rd	Western City Limits	Amargosa Rd	Class II	6.9	$345,000	A portion of Dos Palmas is located within San Bernardino County jurisdiction

NAME	START	END	PROPOSED CLASS	LENGTH (miles)	COST	NOTES
El Evado Rd	La Mesa Rd	Turner Rd	Class II	6.2	$310,000	
El Rio Road	La Mesa Rd	Dos Palmas Rd	Class II	1.2	$60,000	
Eucalyptus Rd	Western City Limits	Eastern City Limits	Class II	3.4	$170,000	
Forest Ave	Fourth St	Hesperia Rd	Class II	0.3	$15,000	
Fourth St	Forest Ave	D St	Class II	0.3	$15,000	
Green Tree Blvd/Yates Rd	Seventh St	Eastern City Limits	Class II	4.1	$205,000	Proposed expansion of Green Tree Blvd. to Yates Rd.
Hesperia Rd	Bear Valley Rd	Verde St	Class II	4.0	$200,000	Recommend addition of 2-foot hatched lane
Hesperia Rd	Verde St	D St	Class II	0.6	$30,000	
Hook Blvd	Western City Limits	Topaz Rd	Class II	1.0	$50,000	
La Mesa Rd	El Rio Rd	Mesa View Rd	Class II	3.6	$180,000	
Luna Rd	Western City Limits	Mesa View Rd	Class II	2.5	$125,000	
Mesa Linda Ave	La Mesa Rd	Hopland St	Class II	4.0	$200,000	
Mesa View Rd	Bear Valley Rd	Dos Palmas Rd	Class II	2.0	$100,000	
Mojave Rd	Western City Limits	Village Dr	Class II	4.6	$230,000	
Monte Vista Rd	Bear Valley Rd	Palmdale Rd	Class II	2.5	$125,000	
National Trails Hwy/D St	Hesperia Rd	Northern City Limits	Class II	4.8	$240,000	
Nevada Ave	Cory Blvd	Phantom St	Class II	0.7	$35,000	
Ottawa St	Oro Grande Wash	Hesperia Rd	Class II	1.8	$90,000	
Palmdale Rd	Western City Limits	Amargosa Rd	Class II	6.9	$345,000	
Pena Rd	Mesa St	Luna Rd	Class II	3.0	$150,000	
Phantom St	Nevada Ave	Turner Rd	Class II	1.7	$85,000	
Rancho Rd	Western City Limits	Power Line Corridor 1	Class II	2.3	$115,000	

NAME	START	END	PROPOSED CLASS	LENGTH (miles)	COST	NOTES
Richmond Rd	Mesa St	Sequoia St	Class II	1.4	$70,000	
Seventh St	Green Tree Blvd	Forest Ave	Class II	2.2	$110,000	Recommend addition of 2-foot hatched lane
Sixth St	Mojave Rd	Forest Ave	Class II	0.4	$20,000	
Smoke Tree Rd	California Aqueduct	I-15	Class II	1.4	$70,000	
Sycamore St	Western City Limits	Oro Grande Wash	Class II	4.2	$210,000	
US 395	California Aqueduct	Mesa St	Class II	0.4	$20,000	Recommend addition of 2-foot hatched lane
Village Dr	Mojave Rd	Air Expressway	Class II	3.4	$170,000	
Total Class II				**103.3**	**$5,165,000**	
Amargosa Rd	Yates Rd	Power Line Corridor 1	Class III	3.2	$32,000	
Amethyst Rd	Bear Valley Rd	Hopland St	Class III	5.0	$50,000	
Apatite Ln	Bear Valley Rd	Jasmine St	Class III	0.3	$3,000	
Arrowhead Dr	Talpa St	Pebble Beach Park	Class III	1.2	$12,000	Connects Oro Grande River Trail around Golf Course
Bear Valley Rd	Oro Grande Wash	Cottonwood Ave	Class III	1.0	$10,000	
Balsam Rd	Nisqualli Rd	Winona St	Class III	0.3	$3,000	
Cherryhill Dr/Millbrock Dr	Hesperia Rd	Gibralter Dr	Class III	0.8	$8,000	
Civic Dr	Amargosa Rd	Roy Rogers Dr	Class III	1.2	$12,000	
Cobalt Rd	Bear Valley Rd	Hopland St	Class III	5.0	$50,000	
Cottonwood Ave	Bear Valley Rd	SCE Easement (Eastern Segment)	Class III	0.3	$3,000	
Eagle Ranch Pkwy/Mesa Linda St	Honeybear Ln	Sequoia St	Class III	0.4	$4,000	
El Evado Rd	Northstar Ave	La Mesa Rd	Class III	0.5	$5,000	

NAME	START	END	PROPOSED CLASS	LENGTH (miles)	COST	NOTES
Honeybear Ln	Cantina Dr	Eagle Ranch Pkwy	Class III	0.3	$3,000	
Hook Blvd	Topaz Rd	I-15	Class III	3.5	$35,000	
Hopland St	Cantina Rd	Power Line Corridor 1	Class III	3.9	$39,000	
Jasmine St	First Ave	Apatite Ln	Class III	0.5	$5,000	
La Mesa Rd	Mesa View Dr	El Rio Rd	Class III	3.9	$39,000	
Luna Rd	Mesa View Dr	El Rio Rd	Class III	4.3	$43,000	
Mariposa Rd	Nisqualli Rd	Oro Grande River Trail	Class III	0.2	$2,000	
Mesa St	Pena Rd	Richmond Rd	Class III	0.2	$2,000	
Mojave Rd	Village Dr	Ramada Rd	Class III	1.4	$14,000	
Ninth Ave	Winona St	Ottawa st	Class III	0.3	$3,000	
Nisqualli Rd	Mariposa Rd	Balsam Rd	Class III	0.3	$3,000	
Northstar Ave	Power Line Corridor 2	El Evado Rd	Class III	1.8	$18,000	
Palmdale Rd	Amargosa Rd	Seventh St	Class III	0.6	$6,000	
Puesta Del Sol Dr	Village Dr	Tawny Ridge Ln	Class III	0.6	$6,000	
Seneca Rd	Amethyst Rd	Civic Dr	Class III	2.3	$23,000	
Seneca Rd	Seventh St	Hesperia Rd	Class III	1.0	$10,000	
Sequoia St	Mesa Linda St	Richmond Ave	Class III	0.4	$4,000	
Seventh Ave	Bear Valley Rd	Nisqualli Rd	Class III	1.0	$10,000	
Silica Dr	Third Ave	Hesperia Rd	Class III	0.7	$7,000	
Tawny Ridge Ln	Whitecap Way	National Trails Hwy	Class III	3.8	$38,000	
Third Ave/ Jarvis Rd/ Rodeo Dr	Bear Valley Rd	Seventh St	Class III	3.8	$38,000	
Topaz Rd	Mesa St	Power Line Corridor 2	Class III	2.7	$27,000	
Winona St	Balsam Rd	Ninth Ave	Class III	0.5	$5,000	
Yates Rd	Oro Grande Wash	Green Tree Blvd	Class III	0.4	$4,000	
Yucca Ave/ Center St/ Verde St	Sixth Ave	Hesperia Rd	Class III	0.6	$6,000	
Total Class III				**58.2**	**$582,000**	

NAME	START	END	PROPOSED CLASS	LENGTH (miles)	COST	NOTES
Oro Grande I-15 Bridge	Component of Oro Grande River Trail		N/A	N/A	$3,000,000	
Oro Grande Bear Valley Underpass	Component of Oro Grande River Trail		N/A	N/A	$500,000	
Trail/Path Signalized Intersections	Components of Power Line Corridors		N/A	N/A	$1,200,000	
Trail/Path Crossing Islands	Components of Power Line Corridors		N/A	N/A	$60,000	
Bike Lockers	Various Locations		N/A	N/A	$12,000	
Bike Racks	Various Locations		N/A	N/A	$88,000	
Total Additional Bike Facilities					**$4,860,000**	
GRAND TOTAL OF RECOMMENDED BIKEWAYS AND FACILITIES					**$71,207,000**	

Project Priorities

This Plan will be implemented as funds become available to the City. Projects are prioritized into three categories, Short-Term, Medium-Term and Long-Term according to the following criteria:

- Destinations served
- Completion of a network
- History of bicycle-involved crashes
- Improvements that serve an immediate safety need
- Current availability and/or suitability of right-of-way
- Likelihood of attracting large numbers of users
- Connectivity with the regional bikeway system
- Links to other transportation modes
- Cost effectiveness

The City will also seek to implement bikeways based on opportunity, such as when streets are resurfaced, when other street projects are taking place, or as funding becomes available. The following tables (7.3, 7.4, and 7.5) identify all the projects grouped according to their priority category. Exhibits (7.1, 7.2 and 7.3) accompany the tables illustaring the prioritized projects on maps. The projects have not been ranked within each priority category. A summary of the estimated costs for each priority category is provided in Table 7.6. It is important to note that the proposed facilities and the prioritizing of projects are flexible concepts that serve as guidelines to those responsible for implementation. The system and segments themselves may change over time as a result of changing bicycling patterns and implementation constraints and opportunities.

Table 7.3: *Short-Term Projects*

Name	Proposed Class	Cost
Green Tree Blvd/Yates Rd	Class II	$205,000
Hesperia Rd	Class II	$200,000
Mojave Rd	Class II	$230,000
Seventh St	Class II	$110,000
Village Dr	Class II	$170,000
Amargosa Rd	Class III	$32,000
Amethyst Rd	Class III	$50,000
Apatite Ln	Class III	$3,000
Arrowhead Dr	Class III	$12,000
Cherryhill Dr/Millbrock Dr	Class III	$8,000
Civic Dr	Class III	$12,000
Cobalt Rd	Class III	$50,000
El Evado Rd	Class III	$5,000
Hook Blvd	Class III	$35,000
Jasmine St	Class III	$5,000
La Mesa Rd	Class III	$39,000
Luna Rd	Class III	$43,000
Mojave Rd	Class III	$14,000
Northstar Ave	Class III	$18,000
Palmdale Rd	Class III	$6,000
Puesta Del Sol Dr	Class III	$6,000
Seneca Rd	Class III	$33,000
Seventh Ave	Class III	$10,000
Silica Dr	Class III	$7,000
Tawny Ridge Ln	Class III	$38,000
Third Ave/Jarvis Rd/Rodeo Dr	Class III	$38,000
Topaz Rd	Class III	$27,000
Yates Rd	Class III	$4,000
Yucca Ave/Center St/Verde St	Class III	$6,000
TOTAL		**$1,416,000**

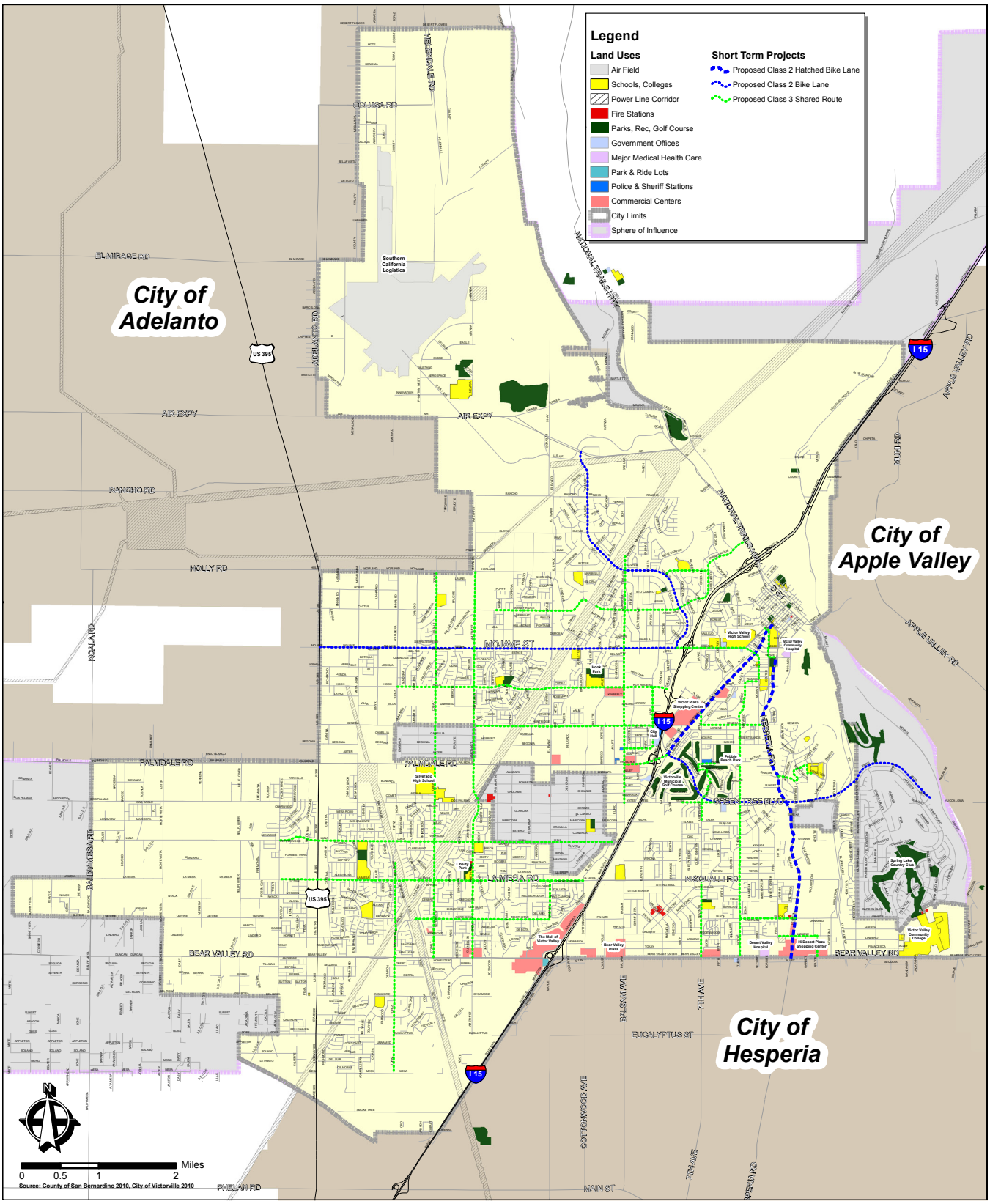

Exhibit 7.1 Short-Term Projects

Table 7.4: *Medium-Term Projects*

Name	Proposed Class	Cost
Arrowhead Dr	Class II	$40,000
Baldy Mesa Rd	Class II	$100,000
Bellflower St	Class II	$125,000
Cactus Rd	Class II	$110,000
Cantina Rd	Class II	$255,000
Civic Dr	Class II	$25,000
Clovis St	Class II	$100,000
Dos Palmas Rd	Class II	$345,000
El Evado Rd	Class II	$310,000
El Rio Road	Class II	$60,000
Eucalyptus Rd	Class II	$170,000
Forest Ave	Class II	$15,000
Fourth St	Class II	$15,000
Hesperia Rd	Class II	$15,000
Hook Blvd	Class II	$50,000
La Mesa Rd	Class II	$180,000
Luna Rd	Class II	$125,000
Mesa Linda Ave	Class II	$200,000
Mesa View Rd	Class II	$100,000
Monte Vista Rd	Class II	$125,000
Nevada Ave	Class II	$35,000
Ottawa St	Class II	$90,000
Pena Rd	Class II	$150,000
Phantom St	Class II	$85,000
Rancho Rd	Class II	$115,000
Richmond Rd	Class II	$70,000
Sixth St	Class II	$20,000
Smoke Tree Rd	Class II	$70,000
Sycamore St	Class II	$210,000
Balsam Rd	Class III	$3,000
Eagle Ranch Pkwy/Mesa Linda St	Class III	$4,000
Honeybear Ln	Class III	$3,000
Hopland St	Class III	$39,000
Mariposa Rd	Class III	$2,000
Mesa St	Class III	$2,000
Ninth Ave	Class III	$3,000
Nisqualli Rd	Class III	$3,000
Sequoia St	Class III	$4,000
Winona St	Class III	$5,000
Bike Lockers	N/A	$12,000
Bike Racks	N/A	$88,000
TOTAL		**$3,478,000**

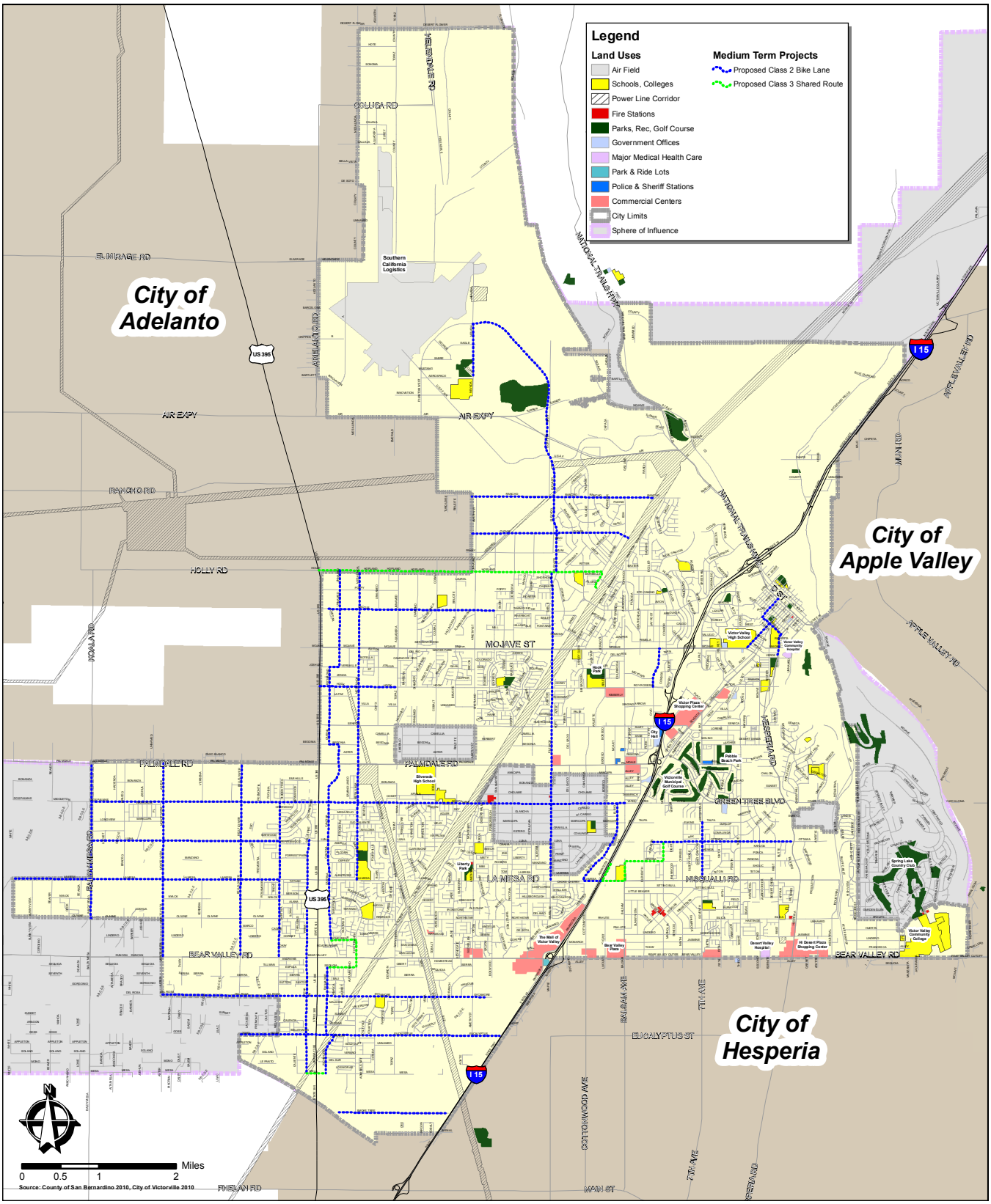

Exhibit 7.2
Medium-Term Projects

Table 7.5: *Long-Term Projects*

Name	Proposed Class	Cost
Mojave Riverwalk	Class I	$5,500,000
Oro Grande River Trail	Class I	$8,000,000
Oro Grande River Trail (East Expansion)	Class I	$1,500,000
Power Line Corridor 1 (LADWP)	Class I	$9,600,000
Power Line Corridor 2 (SCE)	Class I	$6,500,000
Power Line Corridor 3 (SCE)	Class I	$6,200,000
Power Line Corridor 4 (LADWP, SCE)	Class I	$5,300,000
SCE Easement (Eastern Segment)	Class I	$3,500,000
SCE Easement (Western Segment)	Class I	$1,500,000
California Aqueduct	Class I	$2,100,000
West Creek Paseo Expansion	Class I	$2,100,000
Desert Gateway Paseo	Class I	$4,300,000
Midtown Paseo	Class I	$200,000
Mojave Vistas Paseos	Class I	$1,000,000
Parkview Paseos	Class I	$1,300,000
Rancho Tierra Paseo	Class I	$900,000
The Crossings Paseo	Class I	$1,100,000
Bear Valley Rd	Class II	$320,000
Hesperia Rd	Class II	$15,000
National Trails Hwy/D St	Class II	$240,000
Palmdale Rd	Class II	$345,000
US 395	Class II	$20,000
Bear Valley Rd	Class III	$10,000
Cottonwood Ave	Class III	$3,000
Oro Grande I-15 Bridge	N/A	$3,000,000
Oro Grande Bear Valley Underpass	N/A	$500,000
Trail/Path Signalized Intersections	N/A	$1,200,000
Trail/Path Crossing Islands	N/A	$60,000
Total		**$66,313,000**

Table 7.6: *Cost Summary by Project Priority*

Project Priority	Cost
Short-Term Projects	$1,416,000
Medium-Term Projects	$3,478,000
Long-Term Projects	$66,313,000
TOTAL	**$71,207,000**

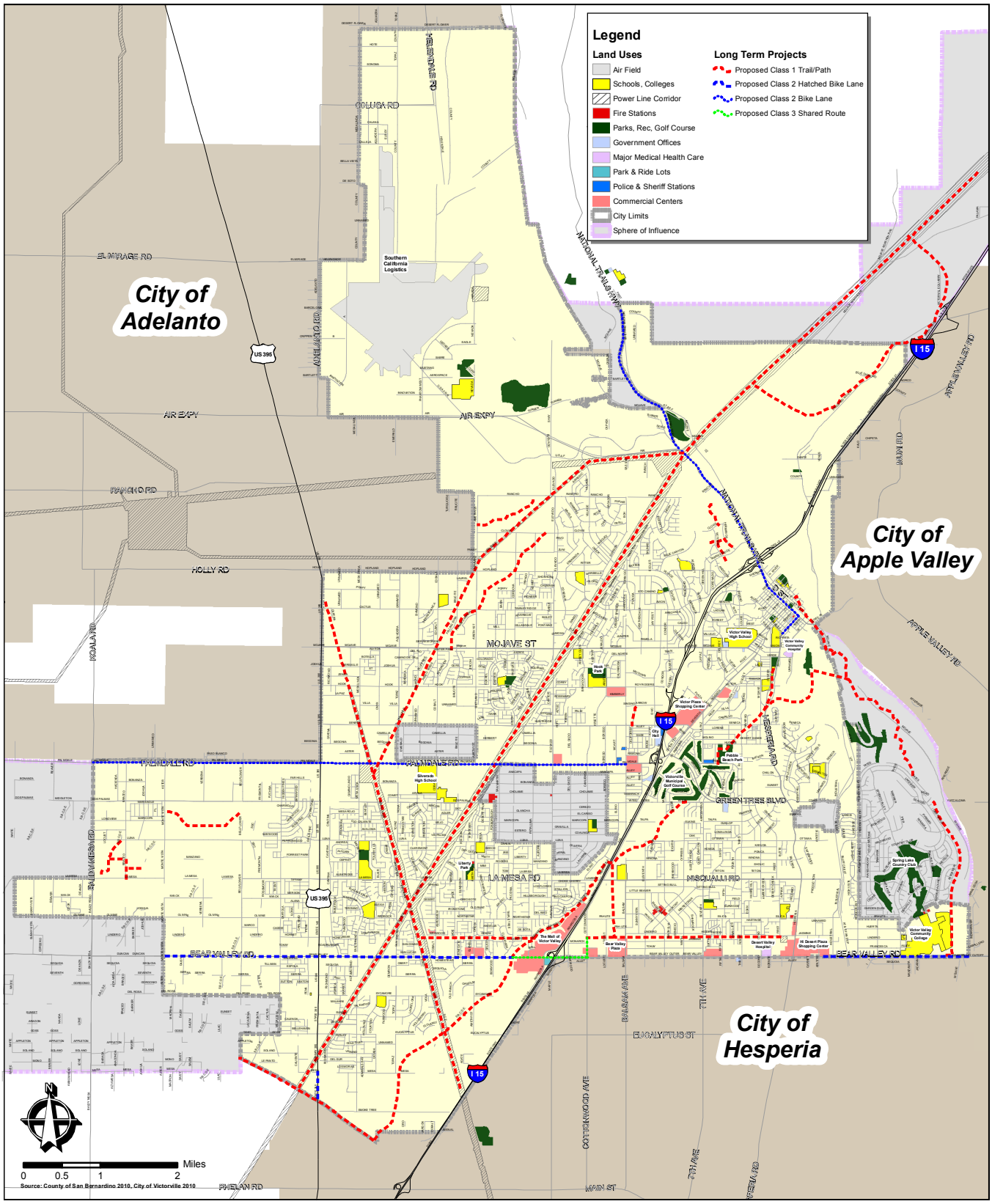

Exhibit 7.3
Long-Term Projects

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7.2 Funding

A variety of potential funding sources, including local, state, regional, and federal funding programs, may be used to construct the proposed bicycle and pedestrian improvements in this Plan. These sources could also fund bicycle and pedestrian projects in Victorville that are not in this Plan. Most of the Federal and State programs are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. Local funding for projects can come from sources within jurisdictions that compete only with other projects in each jurisdiction's budget. A detailed program-by-program explanation of available funding along with the latest relevant information follows.

Federal Funding Program

SAFETEA-LU

The Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) sets the framework for spending federal transportation revenue. SAFETEA-LU expired with the federal fiscal year in 2009, although Congress has extended its provisions until a new bill can be passed. Congress will adopt successor legislation with new funding programs and guidelines. Many of the programs described in this section may remain once there is a new transportation bill.

Federal funding through SAFETEA-LU will likely provide some of the outside funding for Victorville projects. SAFETEA-LU currently contains three major programs that fund bikeway and/or trail projects: Surface Transportation Program (STP), Transportation Enhancement Activities (TEA), and Congestion Mitigation 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 Highway funds.

SAFETEA-LU funding is administered through the California Department of Transportation (Caltrans) and the San Bernardino Associated Governments (SANBAG).

While STP and CMAQ are eligible to be expended on non-motorized transportation infrastructure improvements, SANBAG does not typically use STP or CMAQ funds to do so. STP is typically allocated by the Board to regional mobility projects and

CMAQ is used to fund transit and regional projects with air quality benefits. Therefore, typically only TEA funds are allocated to jurisdictions for bicycle and/or pedestrian projects. These TEA funded projects have historically been Class I bike paths, but Class II improvements are also eligible. TEA funds are allocated through the State Transportation Improvement Program (STIP) on a biennial basis.

More information can be found at:
http://www.sanbag.ca.gov/funding/fed_tea-21_SAFETEA.html

Safe Routes to School (SRTS)

As of 2006, a new federal Safe Routes to School program offers grants to local agencies and others for facilities and programs. Bikeways, sidewalks, intersection improvements, traffic calming, and other projects that enhance bicycle and pedestrian safety to elementary and middle schools are eligible. Safety education, enforcement, and promotional programs are also eligible.

Caltrans administers this grant and releases the funds in multi-year cycles through its district offices. Approximately $46 million was spent statewide in 2008 on SRTS-funded projects. The funds are distributed to each Caltrans district according to school enrollment. Local jurisdictions, school districts, and other agencies compete for these funds. This program will have to be reauthorized with the upcoming federal transportation bill.

More information can be found at:
http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm

Recreational Trails Fund

The Recreational Trails Fund (RTF) is also a SAFETEA-LU program that is subject to the same reauthorization process. The California State Parks Department administers the funds. RTF annually funds recreational trails, including bicycle and pedestrian paths. Cities, counties, districts, state agencies, federal agencies and non-profit organizations may apply, but not COGs. A 12 percent match is required. Federal, state, local and private funds may be used to match the grant.

More information can be found at: http://www.parks.ca.gov/?Page_id=24324

State Funding Programs

Transportation Development Act (TDA) Article 3 (SB 821)

TDA Article 3 funds—also known as the Local Transportation Fund (LTF)—are used by cities within San Bernardino County for the planning and construction of bicycle and pedestrian facilities. Every two years the San Bernardino Association of Governments (SANBAG) issues a Call for Projects for local jurisdictions to apply and compete for the money. This may be extended to three years. Applications are scored according to the following criteria:

- The presence of an adopted bicycle plan or bicycle sub-element of a circulation element
- Regional and local connectivity, gap closures
- Destinations served
- Safety
- Matching funds
- Project readiness/cost effectiveness
- Built as part of another street project
- Design/environmental clearance complete
- Population (fair share)
- Experience of the jurisdiction in delivering projects on time in the past

Applications with the highest scores receive funds. In 2009 over $2.4 million Article 3 funds were distributed by SANBAG.

TDA Article 3 funds may be used for the following activities related to the planning and construction of bicycle and pedestrian facilities:

- Engineering expenses leading to construction.
- Right-of-way acquisition.
- Construction and reconstruction.
- Retrofitting existing bicycle facilities to comply with the Americans with Disabilities Act (ADA).
- Route improvements, such as signal controls for cyclists, bicycle loop detectors, rubberized rail crossings, and bicycle-friendly drainage grates.

- Purchase and installation of bicycle facilities, such as improved intersections, secure bicycle parking, benches, drinking fountains, changing rooms, rest rooms, and showers adjacent to bicycle trails, employment centers, park-and-ride lots, and/or transit terminals accessible to the general public.

More information can be found at:
http://www.rctc.org/federalandstatefunding.asp

Bicycle Transportation Account (BTA)

The State Bicycle Transportation Account (BTA) is an annual statewide discretionary program that is available through the Caltrans Bicycle Facilities Unit for funding bicycle projects. Available as grants to local jurisdictions, the BTA emphasizes projects that benefit bicycling for commuting purposes. Agencies may apply for these funds through the Caltrans Office of Bicycle Facilities. Applicant cities and counties are required to have an approved bicycle plan that conforms to Streets and Highways Code 891.2 to qualify and compete for funding on a project-by-project basis. Cities may apply for these funds through the Caltrans Office of Bicycle Facilities. A local match of 10 percent is required for all awarded funds. Every year $7.2-million is allocated for bicycle projects statewide.

More information about BTA grants can be found at:
http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm

Safe Routes to School (SR2S)

The Safe Routes to School (SR2S) program uses allocated funds from the Hazard Elimination Safety (HES) program of SAFETEA-LU. This program, initiated in 2000, is meant to improve school commute routes by improving safety to bicycle and pedestrian travel through bikeways, sidewalks, intersection improvements, traffic calming, and ongoing programs. This program funds improvements for elementary, middle, and high schools. A local match of 10 percent is required for this competitive program, which allocates over $20-million annually or $40 million to $50 million in two-year cycles. Each year the state legislature decides whether to allocate funds to the program. Caltrans administers SR2S funds through its district offices.

More information can be found at:
http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm

Office of Traffic Safety (OTS)

The California Office of Traffic Safety (OTS) seeks to reduce motor vehicle fatalities and injuries through a national highway safety program. Priority areas include police traffic services, alcohol and other drugs, occupant protection, pedestrian and bicycle safety, emergency medical services, traffic records, roadway safety, and community-based organizations. The OTS provides grants for one to two years. The California Vehicle Code (Sections 2908 and 2909) authorizes the apportionment of federal highway safety funds to the OTS program. Bicycle and pedestrian safety programs are eligible programs for OTS start-up funds. City and county agencies are eligible to apply. For 2010 OTS awarded $82 million in grants altogether, with $1.87 million given to bicycle and pedestrian safety programs.

More information can be found at:
http://www.ots.ca.gov/Grants/Apply/Proposals_2011.asp

Environmental Enhancement and Mitigation Program (EEMP)

EEM Program funds are allocated to projects that offset environmental impacts of modified or new public transportation facilities, including streets, mass transit guideways, park-n-ride facilities, transit stations, tree planting to mitigate the effects of vehicular emissions, off-road trails, and the acquisition or development of roadside recreational facilities. The annual amount of funds available is approximately $10 million statewide. The State Resources Agency administers the funds. Up to $10 million is available each year statewide.

More information can be found at: http://www.resources.ca.gov/eem/

AB 2766

AB 2766 Clean Air Funds are generated by a surcharge on automobile registration. The Mojave Desert Air Quality Management District allocates 25 percent of these funds to cities generally according to their proportion of the Mojave Desert's population for projects that improve air quality. The projects are up to the discretion of the city and may be used for bicycle projects that could encourage people to bicycle in lieu of driving. Another 25 percent is allocated through a competitive grant program that funds projects that improve air quality. The allocations are based on those projects that can quantify air emissions reductions and which reduce the most. Usually the competitive program puts out a call for projects twice per year. The last cycle $824,000 was made available.

More information can be found at:
http://www.mdaqmd.ca.gov/index.aspx?page=206

Per Capita Grant Program

The Per Capita Grant Program is intended to maintain a high quality of life for California's growing population by providing a continuing investment in parks and recreational facilities. Specifically it is for the acquisition and development of neighborhood, community, and regional parks and recreation lands and facilities in urban and rural areas.

Eligible projects include acquisition, development, improvement, rehabilitation, restoration, enhancement, and the development of interpretive facilities for local parks and recreational lands and facilities. Per Capita grant funds can only be used for capital outlay. The California State Parks Department administers them. The Per Capita Grant program results from Proposition 40 passed by California voters in 2002. It set aside $326,725,000. The program will expire when the funds are used up.

More information can be found at:
http://www.parks.ca.gov/?page_id=22333

Roberti-Z'Berg-Harris (RZH) Grant Program - Proposition 40

Funds for this grant program are to be allocated for projects pursuant to the Roberti-Z'berg-Harris Urban Open Space and Recreational Grant Program and are to be used for:

- High priority projects that satisfy the most urgent park and recreation needs, with emphasis on unmet needs in the most heavily populated and most economically disadvantaged areas within each jurisdiction.
- Projects for which funding supplements--rather than supplants--local expenditures for park and recreation facilities and does not diminish a local jurisdiction's efforts to provide park and recreation services.
- Block grants allocated on the basis of population and location in urbanized areas.
- Need-basis grants to be awarded competitively to eligible entities in urbanized areas and in non-urbanized areas.

Eligible projects include:

- Acquisition of park and recreation lands and facilities
- Development/rehabilitation of park and recreation lands and facilities
- Special Major Maintenance of park and recreation lands and facilities

- Innovative Recreation Programs

The California State Parks Department administers them. The RZH Grant program results from Proposition 40 passed by California voters in 2002. It set aside $200,000,000. The program will expire when the funds are used up.

More information can be found at:
http://www.parks.ca.gov/default.asp?page_id=22329

Land and Water Conservation Fund

States receive individual allocations of LWCF grant funds based upon a national formula, with state population being the most influential factor. States initiate a statewide competition for the amount available annually. Applications are received by the State up to its specified deadline date. Then, they are scored and ranked according to the project selection criteria so that only the top-ranked projects (up to the total amount available that year) are chosen for funding. Chosen applications are then forwarded to the National Park Service for formal approval and obligation of federal grant monies. The California State Parks Department administers them.

Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply. Applicants must fund the entire project, and will be reimbursed for 50 percent of costs. Property acquired or developed under the program must be retained in perpetuity for public recreational use. The grant process for local agencies is competitive, and sixty percent of grants are reserved for Southern California. The last three years, approximately $2 million has been available statewide.

More information can be found at:
http://www.parks.ca.gov/?Page_id=21360

Proposition 84 - Statewide Park Program

The Statewide Park Act will award grants on a competitive basis to the most critically underserved communities across California for the creation of new parks and new recreational facilities. Altogether, $368 million will be given in two funding cycles. The first funding cycle in 2009 awarded $184 million. Grants range from $100,000 to $5 million. No match is required. Bikeways and trails can be funded with this program. They do not have to be in a park.

The creation of new parks in neighborhoods where none currently exist will be given priority. These new parks will meet the recreational, cultural, social, educational, and environmental needs of families, youth, senior citizens, and other population groups. Cities, counties, districts with a park and recreation director, COGs, joint power authorities, or nonprofit organizations are eligible to apply for these funds. The California State Parks Department administers the Statewide Park Program funds.

More information can be found at: http://www.parks.ca.gov/?Page_id=26025

Proposition 84 – Urban Greening Project Grants

In 2006 California voters passed Proposition 84 to expand recreational facilities and to fund environmental quality projects. Of this, $70 million was set aside to fund urban greening projects that reduce energy consumption, conserve water, improve air and water quality, reduce global warming gases. This money will be dispersed in three funding cycles. The first cycle ended in April 2010. Cities, counties, and nonprofit organizations (but not COGs) are eligible to apply for these funds. No matching funds are required, but they are encouraged. Bike paths and recreational trails are eligible uses of this money. The State of California Strategic Growth Council administers this program.

More information can be found at: urbangreening@resources.ca.gov

Caltrans Disabled Rights Court Settlement

Caltrans has reached an agreement to settle a class action suit brought by Californians for Disability Rights and California Council for the Blind. The court decision is scheduled to be finalized in April of 2010. The agreement calls for Caltrans to spend $1.1 billion over the next 30 years on removing barriers to disabled pedestrians along state highways and at Caltrans park-and-ride facilities. Caltrans will administer the funds. The funds will be dispersed annually in the following amounts:

- $25 million for the first five years
- $35 million for the next 10 years
- $40 million for the following 10 years
- $45 million for the last five years

More information can be found at:
http://www.dot.ca.gov/hq/paffairs/news/pressrel/09pr28.htm

Local Funding

Measure I

In 1989 San Bernardino County voters approved Measure I, a half-cent sales tax for transportation. In 2004 the Measure was extended until 2040. Approximately $105 million of Measure I funds are budgeted countywide for 2010. The $105 million is distributed to each Measure I subarea on a return to source basis.

Following receipt of subarea revenues, Victor Valley jurisdictions receive their funds through one of four programs. First, the cities receive 68 percent of Measure I revenue through the Local Street Program for local streets, roads, maintenance and other transportation projects as they wish. The funds are distributed based on 50% population and 50% return to source. Victorville may choose to use any portion of this money for bicycle or pedestrian projects.

Another 25 percent of Measure I revenue goes to the Major Local Highway Program and is intended to fund projects of regional significance. The funds are allocated based on a recommendation of Victor Valley Subarea Representatives and the Mountain/Desert Committee. The Victor Valley Subarea Representative are the individual SANBAG Board Members from each jurisdiction in the Victor Valley, including Adelanto, Apple Valley, Hesperia, Victorville and the 1st District Supervisor. The Mountain/Desert Committee is comprised of the Board Member from every jurisdiction in the Mountain/Desert Subareas of the County and 1st and 3rd District Supervisors. Bicycle and pedestrian improvements may be included as elements of a project funded by the Major Local Highway Program, but would need to be included as part of a larger project.

Transit agencies spend 5 percent of Measure I funds for senior and disabled transit. Pedestrian improvements for disabled passengers, such as curb ramps and accessible bus stops, could be funded with this revenue if they are on the transit agency's Short Range Transit Plan.

The remaining 2 percent of Measure I revenue can be used for planning, engineering, environmental review or transportation management systems. Bicycle and pedestrian projects are considered transportation demand management projects and are eligible. Bicycle and pedestrian projects may also use these funds for planning, engineering or environmental review. These funds are allocated similar to the Major Local Highway Funds described above.

Redevelopment Agency Funds

Redevelopment Agency funds are tax increments derived from taxes on property within redevelopment areas. They must be spent on improvements in the designated redevelopment area. The City of Victorville currently has four separate Redevelopment Areas (RDAs). These areas include the Bear Valley RDA (300 acres), the Hook RDA (30 acres), the Old Town/Midtown RDA (515 acres), and the Victor Valley Economic Development Authority RDA (85,128 acres), the largest RDA in California. All of the Redevelopment Areas contain street segments and locations that have been identified in the Non-Motorized Transportation Plan for proposed bikeway and/or bike facility improvements.

New Construction

Future road widening and construction projects are one means of providing bike lanes. To ensure that roadway construction projects provide bike lanes where needed, it is important that an effective review process is in place to ensure that new roads meet the standards and guidelines presented in this master plan. Developers may also be required to dedicate land toward the widening of roadways in order to provide for enhanced bicycle mobility.

Impact Fees and Developer Mitigation

Impact fees may be assessed on new development to pay for transportation projects, typically tied to vehicle trip generation rates and traffic impacts generated by a proposed project. A developer may reduce the number of trips (and hence impacts and cost) by paying for on- or off-site bikeway improvements that will encourage residents to bicycle rather than drive. In-lieu parking fees may also be used to contribute to the construction of new or improved bicycle parking facilities. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical in avoiding a potential lawsuit. Local jurisdictions have the option to create their own impact fee and mitigation requirements.

Benefit Assessment Districts

Bike paths, lanes, parking, and related facilities can be funded as part of a local benefit assessment district. However, defining the boundaries of the benefit district may be difficult since the bikeways will have citywide or regionwide benefit. Sidewalks, trails, intersection crossings and other pedestrian improvements can also be funded through benefit assessments.

Business Improvement Districts

Bicycle improvements can often be included as part of larger efforts of business improvement and retail district beautification. Similar to benefit assessments, Business Improvement Districts (BIDs) collect levies on businesses in order to fund area-wide improvements that benefit businesses and improve access for customers. These districts may include provisions for bicycle improvements such as bicycle parking or shower and clothing locker amenities.

Parking Meter Revenues

Cities can fund various improvements through parking meter revenues. The ordinance that governs the use of the revenues would specify eligible uses. Cities have the option to pass ordinances that specify bicycle facilities as eligible expenditures.

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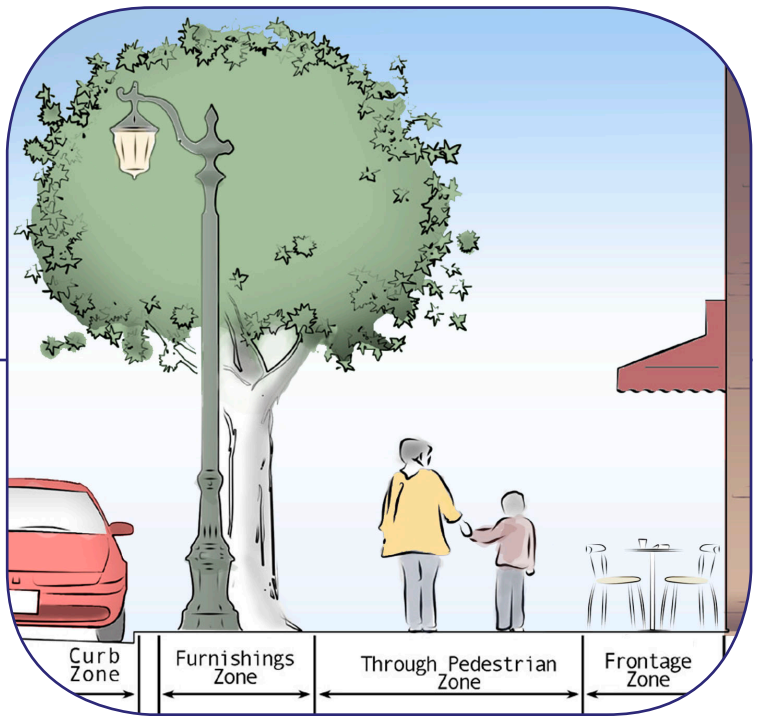
Chapter 8 Design Guidelines

City of Victorville Non-Motorized Transportation Plan | Compass Blueprint Demonstration Project



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8.1 Bicycle Network Recommendations

Bikeway Definitions

The following section summarizes the design definitions of the three types of routes identified in the Non-Motorized Transportation Plan as stated in the City of Victorville Circulation Element.

Class I: Referred to as bike paths or shared use paths. Provide a completely separated right of way for exclusive use of bicycles and pedestrian with minimum cross flows by motorist. These are paths that may be used by pedestrians, skaters, wheelchair, joggers and other non-motorized user.

Class II: Referred to as a bike lane. Provides a restricted right of way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with permitted vehicle parking and cross flows by pedestrians and motorists. This is a portion of roadway that has been designated by striping, signing, pavement delineation, and pavement markings for preferential or exclusive use of bicyclists.

Class III: Referred to as a bike route. Provide a right of way designated by signs or permanent markings and shared with pedestrians or motorists. Under the Caltrans Design Standards, Class III bikeways are designated by signage as a preferred route for bicycle use and routes.

Bikeway Design Recommendations

The following guidelines present the recommended minimum design standards and other recommended ancillary support items for Class I shared use paths, Class II bike lanes, and Class III bike routes. Where possible, it may be desirable to exceed the minimum standards for shared use paths or bike lane widths, signage, lighting, and traffic signal detectors. These guidelines cover basic concepts. The Caltrans

Highway Design Manual Chapter 1000 and the American Association of State Highway and Transportation Officials' (AASHTO) Guide for the Development of Bicycle Facilities contain more detailed standards and guidance and should be followed.

Class I Bike Path Facilities Design Recommendations

- All Class I bike paths should conform to the design guidelines set forth by Caltrans.
- Class I bike paths should generally be designed as separated facilities away from parallel streets. They are commonly planned along rights-of-way such as waterways, utility corridors, railroads, and the like that offer continuous separated riding opportunities.
- Both AASHTO and Caltrans recommend against using most sidewalks for bike paths. This is due to conflicts with driveways and intersections. Where sidewalks are used as bike paths, they should be placed in locations with few driveways and intersections, be properly separated from the roadway, and have carefully designed intersection crossings.
- Bike paths should have a minimum of eight feet of pavement, with at least two feet of unpaved shoulders for pedestrians/runners, or a separate tread way where feasible. Pavement width of 12 feet is preferred.
- Multi-use trails and unpaved facilities that serve primarily a recreation rather than transportation function and will not be funded with federal transportation dollars may not need to be designed to Caltrans standards.
- Class I bike path crossings of roadways should be carefully engineered to accommodate safe and visible crossing for users. The design needs to consider the width of the roadway, whether it has a median, and the roadway's average daily and peak-hour traffic volumes. Crossings of low-volume streets may require simple stop signs. Crossings of streets with Average Daily Traffic (ADT) of approximately 15,000 should be assessed for signalized crossing, flashing LED beacons, crossing islands, or other devices. Roundabouts can provide desirable treatment for a bike path intersecting with roadways where the bike path is not next to a parallel street.
- Landscaping should generally consist of low water-consuming native vegetation and should produce the least amount of debris.
- Lighting should be provided where commuters will likely use the bike path in the late evening.
- Barriers at pathway entrances should be clearly marked with reflectors and be ADA accessible (minimum five feet clearance), see Figure 1.

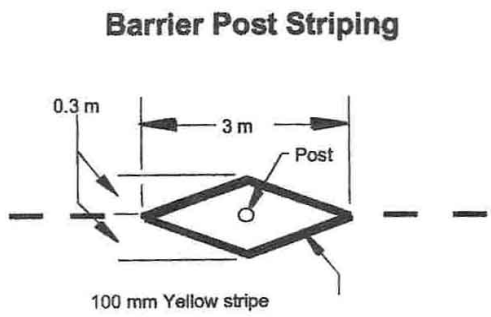


Figure 1: Bike Path Barrier Post Treatment

- Bike path construction should take into account vertical requirements and the impacts of maintenance and emergency vehicles on shoulders.

Class II Bike Path Facilities Design Recommendations

The following guidelines should be used when designing Class II bikeway facilities. These guidelines are provided by the Caltrans Highway Design Manual Chapter 1000, the American Association of State Highway and Transportation Officials (AASHTO), the Manual on Uniform Traffic Control Devices (MUTCD), and the Caltrans Traffic Manual.

- Class II Bike Lane facilities should conform to the minimum design standard of 5 feet in width in the direction of vehicle travel adjacent to the curb lane. Where space is available, a width of 6 to 8 feet is preferred, especially on busy arterial streets, on grades, and adjacent to parallel parking.
- Under certain circumstances, bike lanes may be 4 feet in width. Situations where this is permitted include the following.
- Bike lanes located between through traffic lanes and right turn pockets at intersection approaches (see Figure 4).
- Where there is no parking, the gutter pan is no more than 12" wide, and the pavement is smooth and flush with the gutter pan.
- Where there is no curb and the pavement is smooth to the curb.

- "Bike Lane" signage, as shown in Figure 2, shall be posted after every significant intersection along the route of the bike lane facility. Directional signage may also accompany this sign to guide bicyclists along the route. If a bike lane exists where parking is prohibited, "no parking" signage may accompany bike lane signage.

Figure 2: Bike Lane Sign (Caltrans)

- Bike lanes should be striped with a solid white stripe of width at least 4 inches and may be dashed up to 200 feet before the approach to an intersection. This design of a dashed bike lane allows for its dual use as a right-turn pocket for motor vehicles.
- Stencils shall also be used within the lane on the pavement that read "bike lane" and include a stencil of a bicycle with an arrow showing the direction of travel (see Figure 3).

Figure 3: Bike Lane Striping and Stencil

- Bike lanes with two stripes are more visible than those with one and are preferred. The second stripe would differentiate the bike lane from the parking lane where appropriate.
- Where space permits, intersection treatments should include bike lane 'pockets' as shown in Figure 4.
- Loop detectors that detect bicycles should be installed near the stop bar in the bike lane at all signalized intersections where bicycles are not reasonably accommodated. Signal timing and phasing should be set to accommodate bicycle acceleration speeds (see Figure 4.)

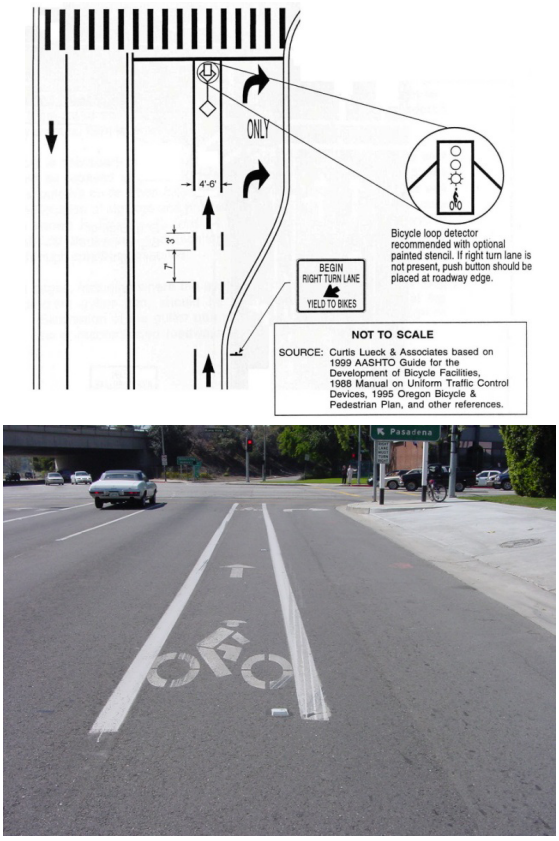


Figure 4: Bike Lane Treatment at Intersection (MUTCD, AASHTO)

Class III Bike Route Facilities Design Recommendations

Bike routes have been typically designated as simple signed routes along street corridors, usually local streets and collectors, and sometimes along arterials. With proper route signage, design, and maintenance, bike routes can be effective in guiding bicyclists along a route suited for bicycling without having enough roadway space to provide a dedicated Class II bike lane. Class III Bike Routes can be designed in a manner that encourages bicycle usage, convenience, and safety. There are a variety of other improvements that can enhance the safety and attraction of streets for bicyclists. Bike routes can become more useful when coupled with such techniques as the following:

- Route, directional, and distance signage
- Wide curb lanes
- Sharrow stencils painted in the traffic lane along the appropriate path of where a bicyclist would ride in the lane
- Accelerated pavement maintenance schedules
- Traffic signals timed and coordinated for cyclists (where appropriate)
- Traffic calming measures

Proper "Bike Route" signage, as shown in Figure 5, should be posted after every intersection along the route of the bikeway. This will inform bicyclists that the bikeway facility continues and will alert motorists to the presence of bicyclists along the route. Directional signage may accompany this sign as well to guide bicyclists along the route.

Figure 5: Class III Bike Route Sign

This Plan recommends using the sharrow stencil (Figure 6) as a way to enhance the visibility and safety of new Class III Bike Route facilities. The stencil should be placed outside of on-street vehicle parking to encourage cyclists to ride away from parked cars' open doors. Stencils should also be placed at one or two locations on every block.

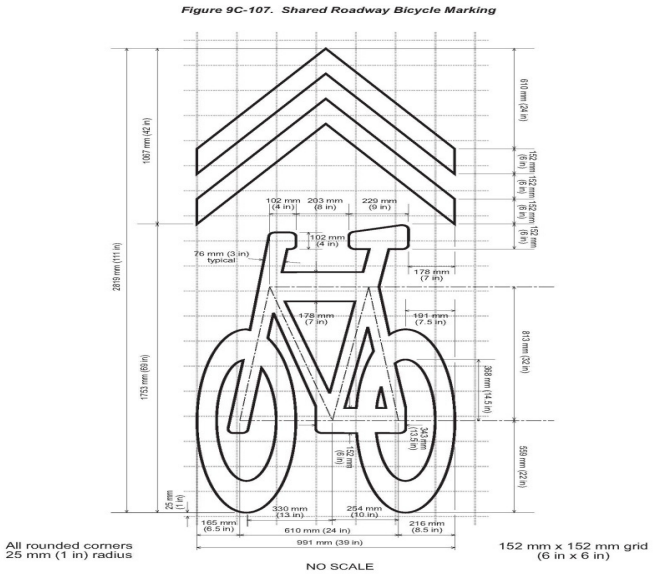


Figure 6: Sharrow Stencil

A numbered bike route network may be devised as a convenient way for bicyclists to navigate through the valley much the way the numbered highway system guides motorists efficiently through the roadway network. This could be used on all classes of bikeways. An example of a numbered bikeway sign is shown in Figure 7.

Figure 7: Numbered Bikeway Sign (MUTCD)

Destination signs add value to bike routes and assist cyclists to develop a mental map of the route system. Arrows pointing to "downtown," "Metrolink Station," or "Community College" should be a standard part of the bikeway network. Destination signs should be placed at the intersection of bikeways to notify cyclists where each bike route goes.

Bikeway Signage and Marking Recommendations

Bikeway signage should conform to the signage standards identified in the Manual on Uniform Traffic Control Devices (MUTCD, 2003) and the Caltrans Traffic Manual. These documents give specific information on the type and location of signage for the primary bikeway system. A full list of applicable on-street bikeway signage from the MUTCD is shown in Table 8.1.

Table 8.1: *Recommended Bikeway Signage and Markings*

Signage	Location	Color	Caltrans Designation	MUTCD Designation
Bike Lane Ahead: Right Lane Bikes Only	At beginning of bike lanes	B on W	N/A	R3-16 R3-17
Bicycle Crossing	For motorists at a bikeway crossing	B on Y	N/A	W11-15 w/ W11-15a
Bike Lane	At the far side of significant arterial intersections	B on W	R81	D11-1
STOP Ahead	Where a STOP sign is obscured	B,R on Y	W17	W3-1
Signal Ahead	Where signal is obscured	B,R,G	YW41	W3-3
Pedestrian Crossing	Where a pedestrian walkway crosses a bikeway	B on Y	W54	W11A-2
Directional Signs	At intersections where access to major destinations is available	W on G	G7 G8	D1-1b(r/l) D1-1c
Right Lane Must Turn Right; Begin Right Turn Here, Yield to Bikes	Where a bike lane ends before an intersection	B on W	R18	R3-7 R4-4

Custom Bikeway Signage

The City of Victorville may want to add its own logo to give the bikeway signage a distinctive local style as in the pictures below.

Figure 8: Destination Sign

Figure 9: Street Signs

Directional Bikeway Signage

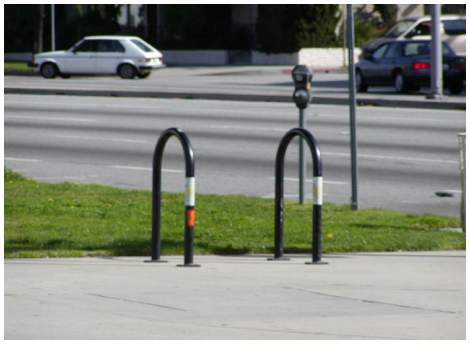
It is important to provide information to cyclists where bike routes turn, or where bikeways intersect. This can be done with both signs and pavement markings as shown below:

Figure 10: Bicycle Signage and Pavement Markings

Bicycle Parking

Bicycle parking is not standardized in any state or municipal code. However, there are preferable types of secure bicycle accommodations available. Bicycle parking is a critical component of the network and facilitates bicycle travel, especially for commuting and utilitarian purposes. The provision of bicycle parking at every destination ensures that bicyclists have a place to safely secure their mode of travel. Elements of proper bicycle parking accommodation are outlined below.

- Bicycle parking should be located close to the front door of buildings and retail establishments in order to provide for the convenience, visibility, and safety of those who park their bicycles.
- Bike racks provide short-term parking. Bicycle racks should offer adequate support for the bicycles and should be easy to lock to. Figures 11 and 12 display a common inverted-U design that does this. Figure 13 depicts a multi-bicycle rack that works well. Figure 14 shows an innovative concept in which the bike rack itself looks like a bicycle.



Figures 11 and 12: "Inverted-U" Bicycle Rack

Figure 13: Multi-Bicycle Rack *Figure 14: BikeBike Rack*

- Long-term parking should be provided for those needing all day storage or enhanced safety. Bicycle lockers offer good long-term storage, as shown in Figure 15. Attendant and automated parking also serves long-term uses as shown in Figure 16. Bicycle lockers should be labeled explicitly as such and shall not be used for other types of storage.

Figure 15: Bicycle Lockers Figure *16: Automated Bicycle Parking*

- Bicycle lockers should have informational signage, placards, or stickers placed on or immediately adjacent to them identifying the procedure for how to use a locker. This information at a minimum should include the following:
  - » Contact information to obtain a locker at city hall or other administrating establishment
  - » Cost (if any) for locker use
  - » Terms of use
  - » Emergency contact information
- Bicycle parking should be clearly identified by signage, such as in Figure 17. Signage shall also identify the location of racks and lockers at the entrance to shopping centers, buildings, and other establishments where parking may not be provided in an obvious location, such as near a front door.

Figure 17: Bicycle Parking Sign (Caltrans)

Bicycle racks and storage lockers should be bolted tightly to the ground in a manner that prevents tampering.
Bike corrals are created when a local jurisdiction replaces on-street auto-parking spaces with rows of bicycle racks. They should be used where bicycle parking is in high demand.

Additional Bikeway Design Recommendations

Bike Boulevards

Bike boulevards are created where streets allow through traffic for bicyclists, but divert motor vehicle traffic in order to keep these streets quiet, pleasant, low-traffic volume streets to cycle on. These diverters may consist of bridges, dead-end streets with passages for bicycles, curbed islands with gaps for bicyclists or traffic signals that allow cyclists to pass through, but require motor vehicles to turn right or left. In order to keep traffic volumes low, diverters are generally needed every ½ mile or mile. Bike boulevards also may have features to slow traffic, such as chicanes, mini-roundabouts or mini-circles. The mini-roundabouts have the added advantage of allowing cyclists to go through

intersections without slowing down. These type of bikeway design features should be considered as part of new development as a means of creating new bikeways or expanding on the existing network.

Figure 18: Emphasized Bikeways

Figure 19: Mini-Circle

Green Bicycle Lanes

Green bicycle lanes (Figure 20) are short lanes that are used where right-turn pockets direct motorists through a bicycle lane to turn right. The green lane makes it obvious to motorists that they are crossing the bicycle lane and makes them more likely to be cautious and to look for bicycles. Green bicycle lanes can also be used as continuous treatment as well, not only in conflict zones. The City of Long Beach is presently experimenting with green coloring of travel lanes (see Figure 21) with sharrows. The wide green stripe sends a strong signal to cyclists as to where they should ride and to motorists that bicyclists are legitimate users of the entire travel lane. Although no standards are established, multi-lane streets with narrow curb lanes are likely the most appropriate to apply this treatment. Neither treatment has been approved as part of the California Manual of Uniform Traffic Control Devices (CA MUTCD). Until they are approved, the cities would have to use them under a sanctioned experimental process.

Figure 20: Green Bicycle Lanes

Figure 21: Green Sharrow Lanes

Loop Detectors

Loop detectors at signalized intersections should be designed to detect when a bicycle rides or stops over them. Loop detectors at the signalized intersections of minor streets (minor arterials or collectors) should have priority when retrofitting existing detectors where the minor approaches do not call a green phase during every signal cycle. However, in the long run all signalized intersections should provide loops or other detection device to detect cyclists to provide for enhanced seamless travel. The State of California passed a new law that became effective in 2009 requiring local jurisdictions to add bicycle-sensitive loop detectors to all new signals and those that are replaced. The general specifications are that a detection area of 6' by 6' be created behind the limit line, and that bicyclists be given enough time to travel through the intersection with the clearance speed calculated at 14.7 feet per second plus 6 seconds for start-up. Painting the loop detectors and adding a bicycle stencil can help to notify cyclists where they need to be to trip the detectors.

Drainage Grates

Care must be taken to ensure that drainage grates are bicycle-safe. If not, a bicycle wheel may fall into the slots of the grate, causing the cyclist to tumble. Replacing existing grates or welding thin metal straps across the grate perpendicular to the direction of travel is required to make them bicycle safe. These should be checked periodically to ensure that the straps remain in place. Grates with bars perpendicular to the roadway must not be placed at curb cuts, because wheelchairs could also get caught in the slot. Figure 22 shows the appropriate types of drainage grates that should be used.

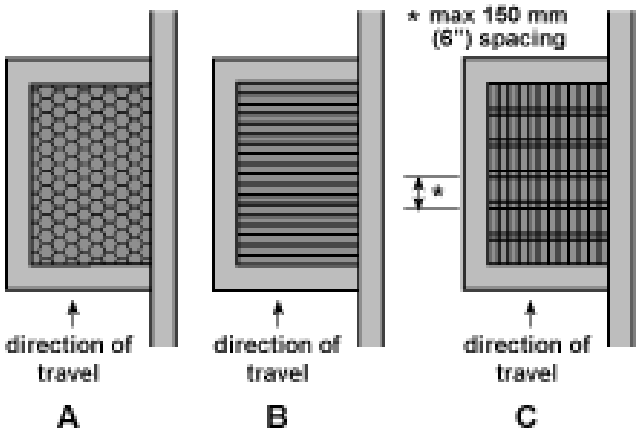


Figure 22: Proper Drainage Grate Design

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8.2 Pedestrian Design Guidelines

It is the intent of the Non-Motorized Transportation Plan for pedestrians to utilize all Class I shared use paths for recreational purposes as well as a means of access to public facilities such as schools, parks, transit facilities, and other points of interest. However, in order to provide adequate pedestrians connectivity throughout the city, an effort must be made to improve on existing conditions that hinder pedestrian walkability and safety. These conditions include unsafe street crossings, gaps in the sidewalk system resulting from sporadic "hopscotch development, and the deterioration of existing sidewalks. Additionally, planning principles that improve walkability and provide safe pedestrian connectivity should be applied to new development to expand on existing facilities and improve the overall pedestrian connectivity in the city.

Pedestrian Crossings

Safe pedestrian crossings are critical components of the pedestrian network. Although the California Vehicle Code states that a crosswalk implicitly exists on every leg at every intersection, it is important to recognize that visibility and safety are important factors that determine where people will attempt to cross a street. The following guidelines are recommended for pedestrian crossings, including both signalized and unsignalized crosswalks:

- Crosswalks should be a minimum of 6 feet in width, and at least 10 feet in business districts. Wider crosswalks should be considered in areas of high pedestrian volumes.
- Appropriate pedestrian crossing signage should be displayed in advance of and adjacent to all marked unsignalized crosswalks in order to enhance visibility of pedestrians by motorists.
- Unsignalized pedestrian crosswalks should be adequately lighted, have clear sight distances, and be free from obstructions, such as foliage and poles.
- Unsignalized crosswalks should be well marked with high visibility paint.
- Mid-block crosswalks should be designated in areas with relatively high pedestrian activity and crossing patterns, and where the distance to the nearest marked crosswalk is greater than 200 feet.

- At signalized intersections, efforts should be made to install marked crosswalks at every leg of the intersection where feasible given traffic and other considerations.
- Pedestrian signals should be timed in order to accommodate slower pedestrians. This should take into consideration people with slower walking speeds, such as seniors and persons with disabilities, in areas where this is appropriate. This may also be achieved by using Pedestrian-Friendly-User-Intelligent (PUFFIN) signals that detect pedestrians in the crosswalk and extend the walk time to allow pedestrians to finish their crossing.
- In Pedestrian-Oriented Retail Districts the "walk" signals should be automatically timed with the traffic signal and no push buttons should be needed.
- All crossings should meet all ADA standards and guidelines.
- ADA-compliant curb ramps should be provided at all corners. Where physically feasible, every corner should have two perpendicular ramps.
- Where feasible, pedestrian crossing islands should be considered where pedestrians are required to cross a wide multi-lane street, especially at uncontrolled locations.
- Consideration should be given to reducing the turning radius of corners at intersections in order to minimize the crossing distance of pedestrians and to slow traffic, especially across busy multi-lane arterials. The presence of buses, trucks and other large vehicles should be considered in designing the turning radii.
- Curb extensions should be considered at intersection corners as a way to minimize the crossing distance of pedestrians and to increase visibility.

Intersection Improvements

A growing number of communities are using a variety of techniques to improve pedestrian safety and access at intersections. Many of these are listed below. Local jurisdictions can select from this list and apply the appropriate tool at each given location.

- Accessible pedestrian signal: A pedestrian signal that provides for accessible information to pedestrians who are visually impaired using audible or transmittable tones or speech messages. These signals may also include vibrating surfaces to provide accessibility to those who have visual or hearing impairments. These should be provided at all signalized intersections with those having significant pedestrian activity retrofitted first.

Figure 23: Audible Pedestrian Signal

- Advanced limit line/advanced stop bar: A placing of the stop limit line for vehicle traffic at a traffic signal behind the crosswalk for the added safety of crossing pedestrians. Advanced limit lines should be placed in front of stop controlled intersections, usually about 4 to 6 feet in front of the crosswalk.

Figure 24: Advanced Stop Bar

- Advanced yield line: A placing of the yield line (shark's teeth) for vehicle traffic in advance of a crosswalk at uncontrolled locations. Advanced yield lines should be placed 20 to 50 feet in advance of crosswalks.

Figure 25: Advanced Yield Line

- Bulbout/curb extension: A segment of sidewalk, landscaping, or curb that is extended into the street, usually associated with crosswalks, in order to shorten the crossing distance for pedestrians and improve visibility. It can also have the effect of slowing traffic, especially turning vehicles. Curb extensions should be provided at any intersection with significant pedestrian traffic that is along a street with parallel parking. If there is no parallel parking, the street can be narrowed at the pedestrian crossing with a curb extension that is tapered to prevent oncoming traffic from hitting it.

Figure 26: Curb Extension

- Countdown signal: A walk signal that provides a countdown to the next solid "don't walk" signal phase in order to provide pedestrians with information on how much time they have to cross. These should be placed at every signalized intersection with pedestrian heads.

Figure 27: Countdown Signal

- Curb ramp: A ramp and landing that allows for a smooth transition between sidewalk and street via a moderate slope. They should have tactile devices that provide both texture and color cues for sight-impaired people to know where the street begins. requires wheelchair access at every street corner. This feature complies with the Americans with Disabilities Act, allowing persons using wheelchairs to cross the street. Double, perpendicular curb ramps should be used

in lieu of single, diagonal ramps except on streets with low traffic volumes. Double curb ramps make the trip across the street shorter and more direct than diagonal ramps.

Figure 28: Double Curb Ramp

- High-visibility "Zebra" crosswalk: Well-marked crosswalk, usually the "zebra" type. These should be provided at any intersection where a significant number of pedestrians cross. They are most important at uncontrolled crossings of multi-lane streets.

Figure 29: "Zebra" Crosswalk

- PUFFIN crossing: Pedestrian User-Friendly Intelligent crossings detect pedestrians and hold the signal red for motor vehicles until pedestrians have crossed. They are most appropriate where a significant number of senior citizens or disabled people cross.

Figure 30: PUFFIN Crossing

- HAWK Signals: Provide a stop phase so that pedestrians can safely cross and are most appropriate where a significant number of pedestrians need to cross and the location does not meet signal warrants. HAWK signals are an approved device in the MUTCD, but not yet in the CA MUTCD.

Figure 31: HAWK Signal

- Mid-block crossing: A crosswalk designed at a mid-point between intersections. These are most suited where there is a long distance (greater than 400 feet) between crosswalks on retail streets and in front of schools.

Figure 32: Mid-Block Crossing

- Pedestrian crossing island: A raised area in the center of the street that provides a refuge area for pedestrians crossing a busy street. They can be used at any street crossing, but are most important at uncontrolled crossings.

Figure 33: Crossing Island

- Raised crosswalk: A crosswalk that has been raised in order to slow motor vehicles and to enhance the visibility of crossing pedestrians. They are most appropriate in front of schools and in busy retail districts.

Figure 34: Raised Crossing

- Rapid-Flash LED Beacons: High-visibility beacons that activate when pedestrians cross. They are most suitable at uncontrolled crossings that don't warrant signals, but need more than basic crossing devices. These are approved for experimental use by the national MUTCD.

Figure 35: Crossing with LED Beacons

- Scramble intersection: Provides a separate all-direction red phase in the traffic signal to allow pedestrians to cross linearly and diagonally. They are most appropriate in retail districts with heavy volumes of both pedestrians and motor vehicles.

Figure 36 and 37: Scramble Intersection

- Signs: Alerts motorists to the presence of crosswalks and pedestrians. Center signs can help slow traffic. These are placed according to the CA MUTCD.

Figure 38 and 39: Pedestrian Crossing Signs

- Speed feedback signs: Alerts motorists when they are going over the speed limit. They are most appropriate where motor vehicles commonly speed and there are pedestrians or bicyclists.

Figure 40: Speed Feedback Sign

Locating Intersection Improvements

It is important to use the correct device in making pedestrian crossings safe. The following provides general guidelines for typical intersection types and the recommended pedestrian improvements.

- Common Treatments at Crossings of Two-Lane Streets
  - » Marked crosswalks
  - » Signs
  - » Perpendicular curb ramps
  - » Tactile warning devices
  - » Advanced yield bars (at uncontrolled crossings)
  - » Advanced stop bars (at stop-controlled crossings)

- Common Treatments at Uncontrolled Crossings of Three-Lane Streets
  - » High-visibility crosswalks
  - » Signs
  - » Perpendicular curb ramps
  - » Tactile warning devices
  - » Advanced yield bars
  - » Crossing islands
  - » Bulb-outs

- Common Treatments at Uncontrolled Crossings of Four and Five-Lane Streets with ADTs < 25,000 to 30,000 and speed limits 35 mph or less
  - » High-visibility crosswalks
  - » Signs
  - » Perpendicular curb ramps
  - » Tactile warning devices
  - » Advanced yield bars
  - » Crossing islands
  - » Bulb-outs
  - » Rapid-flash LED beacons
  - » Use more devices

- Common Treatments at Crossings of Four-Lane +Streets with ADTs >25,000 to 30,000, or with lower ADTs and speed limits over 35 mph
  - » Signals
  - » Advanced stop bars
  - » High-visibility crosswalks
  - » Countdown and accessible pedestrian signals
  - » Bulb-outs
  - » Crossing islands

Sidewalk Design Guidelines

Some pedestrian design guidelines vary according to the type of street involved. Streets may be classified by type based on the uses they serve and the level of pedestrian activity expected there. The following classifications will be referenced in the design guidelines:

- Pedestrian-Oriented Retail Districts: Areas where the greatest numbers of pedestrians are encouraged and expected. Ideally, they will have the widest sidewalks, the widest crosswalks, the brightest street lighting, the most furnishings, and other features that will enhance the pedestrian environment. Retail, restaurant, and entertainment areas are most often located along these streets.
- General Commercial and Civic Streets: Arterial streets with retail, office, civic, and recreational uses. Transit service runs along them and pedestrians often require buffers from traffic.
- Multi-Family Residential Streets: These streets often have greater volumes of pedestrians than single-family residential streets. In some cases they are served by transit service. Streets that have transit service require good pedestrian links to bus stops.
- Single-Family Residential Streets: These streets require basic pedestrian amenities, such as sidewalks. These streets are typically quieter than others and generally do not carry transit vehicles or high volumes of traffic, although pedestrians require a pleasant walking environment in order to access transit on the nearest arterial roadway.

Guidelines for Each Classification of Street

Sidewalks along city streets are the most important part of pedestrian mobility. Sidewalks provide pedestrian access to virtually every activity and critical connections between modes of travel, including the automobile, transit, and bicycles. General provisions for sidewalks include standard width, provisions for street furniture and other obstructions, and guidelines for Americans with Disabilities Act (ADA) compliance. Sidewalks can be segmented into four zones that designers should provide for: the Frontage Zone, the Through Pedestrian Zone, the Furnishings Zone and the Curb Zone. The following describes these sidewalk zones and recommends specific guidelines that apply to each:

- Frontage Zone: The Frontage Zone is located immediately adjacent to buildings and provides a buffer between buildings, walls, fences, or property lines to pedestrian walkways. It can include landscaping (permanent or temporary) as well as awnings, news racks, benches, outdoor café seating, and other furnishings typically found in the Furnishings Zone. In residential neighborhoods, landscaping typically occupies the Frontage Zone. The recommended minimum Frontage Zone width is:
  - » 30 inches in Pedestrian-Oriented Retail Districts, 8 feet where outdoor café seating is desired
  - » 18 inches along General Commercial and Civic Streets, Multi-Family Residential Streets, and Single-Family Residential Streets

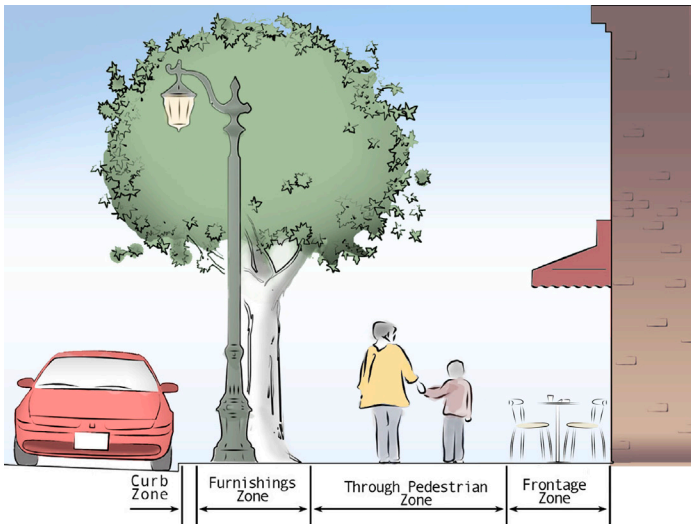

Figure 41: Typical Sidewalk Zone Cross Section

- Through Pedestrian Zone: The Through Pedestrian Zone serves as the area dedicated to walking and should be kept clear of all fixtures and obstructions. The clearance provided in the Through Pedestrian Zone should generally be straight for convenience of all pedestrians, but especially for the sight-impaired. This zone is located between the Frontage Zone and the Furnishings Zone. The recommended minimum Through Pedestrian Zone width is:
  - » 8 feet in Pedestrian-Oriented Retail Districts; wider where heavy pedestrian traffic is expected
  - » 6 feet along General Commercial and Civic Streets
  - » 4 feet, preferably 5 feet, along Multi-Family Residential Streets
  - » 4 feet, preferably 5 feet, along Single-Family Residential Streets

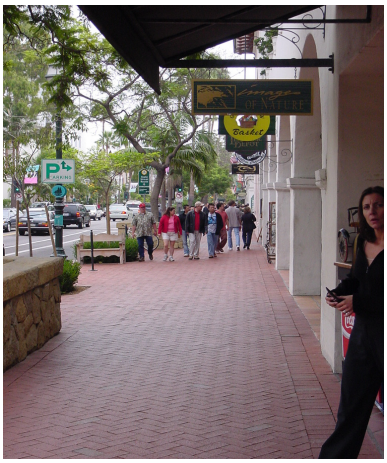

Figure 42: Through Pedestrian Zone

- Furnishings Zone: The Furnishings Zone lies between the Through Pedestrian Zone and the Curb Zone. All fixtures, such as street trees, utility poles and boxes, lamp posts, signage, bike racks, news racks, benches, waste receptacles, drinking fountains, and other street furniture should be contained in the Furnishings Zone to keep the Through Pedestrian Zone free for walking. In residential neighborhoods, a planting strip often occupies the Furnishings Zone. The recommended minimum Furnishings Zone width is 4 feet and 8 feet where bus stops exist.

- Curb Zone: The Curb Zone provides a buffer between the sidewalk and the street. It defines the pedestrian area from the street. It may simply consist of the width of the curb or may contain extra space for the unloading of passengers or freight. The recommended minimum Curb Zone width is:
  - » 18 inches where pedestrian or freight loading is expected and may conflict with obstacles in the Furnishings Zone
  - » 6 inches along segments of all other streets

The following additional sidewalk guidelines are recommended for all sidewalk zones discussed above, unless a specific zone is referenced:

- All sidewalks should adhere to the latest Americans with Disability Act standards and guidelines.
- Driveway aprons should be confined to the Furnishings and Curb Zones.
- Landscaped buffers or fences should separate sidewalks from parking or off-street passenger loading areas.
- Sidewalks surface should be stable, firm, smooth, and slip-resistant.
- Pedestrian and driver sight distances should be maintained near driveways.
- Regulations regarding fencing and foliage near the intersection of sidewalks and driveways should be developed to ensure proper sight distance between vehicles and pedestrians when vehicles enter or exit a driveway across a sidewalk.

Additional Pedestrian Network Recommendations

In order to expand on existing facilities and improve the overall pedestrian connectivity in the city, planning principles that improve walkability and provide safe pedestrian connectivity should be applied to new development and redevelopment when possible. Walkability depends much on the design and configuration of the built environment. Some features attract and encourage walking, while others discourage it. To the extent that the distance between land uses is minimized and the environment is safe, pleasant, and interesting, people will be encouraged to walk. As the City of Victorville continues to grow, opportunities will arise to enhance the pedestrian-friendliness of the community. The following planning principles can serve as a guide for the continuation and further enhancement of existing and future neighborhoods.

- Compact, clustered developments: Locate a greater number of destinations within walking distance than linear development.

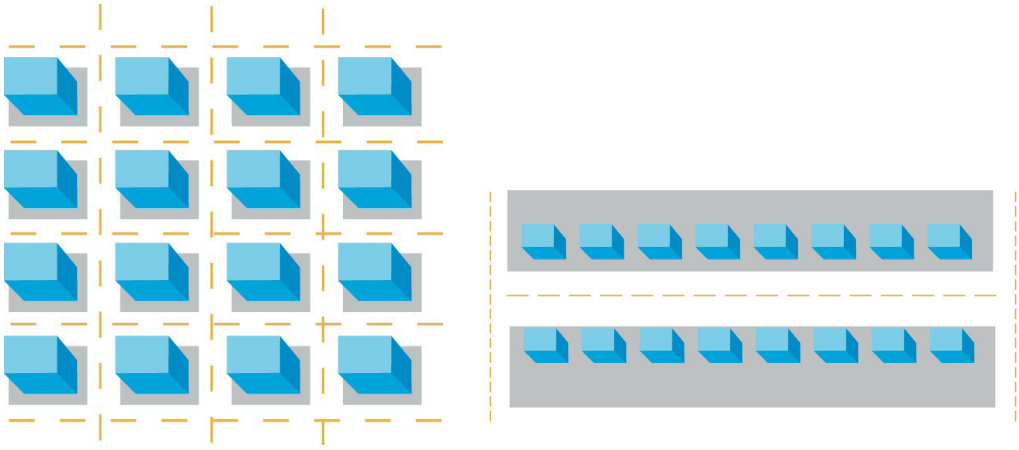

Figure 43: Clustered Development vs. Linear Development

- High storefront density: Makes walking interesting in retail districts and attracts pedestrians.

Figure 44: Street with High Storefront Density

- Zero lot line zoning: Allows buildings to abut one another, keeping the distance between them convenient for walkers.

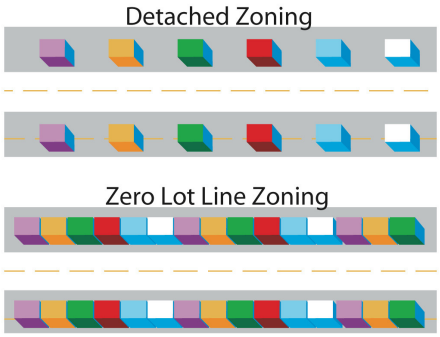

Figure 45: Zero Lot Line Zoning vs. Detached Zoning

- Clear glass as opposed to opaque windows on building fronts enhances the feeling of permeability and makes for interesting window shopping.

- Ground floor retail: Ground floor retail and other interesting uses on the ground floor of buildings also attract window shoppers and make for interesting and pleasant walking environments, as opposed to large blank walls.

Figure 46: Ground Floor Retail

Figure 47: Buildings with Blank Walls

- Mixed land uses: Mixed land uses make it convenient to walk between land uses -- from home to work, from home to the store, from work to restaurants, etc.

Figure 48: Building with Retail, Office and Housing

- Convenient transit access: Encourages a mode of travel that stimulates walking at either end of the trip.

Figure 49: Commercial Area with Bus Lane

- Compact parking structures: Spread walking destinations less than large surface parking lots.

Figure 50: Compact Parking Structure

Figure 51: Large Surface Parking Lot

- Sidewalks adjacent to business: Sidewalks adjacent to business and storefronts make access more convenient than those with parking separating sidewalks from entrances. This is safer for pedestrians as well. Sidewalks next to businesses attract window shoppers and make for interesting and pleasant walking environments.

Figure 52: Sidewalk Adjacent to Stores

Figure 53: Store with Parking in Fron

- Short blocks: Short block development bring more destinations within walking distance than long blocks.

Figure 54: Destinations Reached on Short Blocks

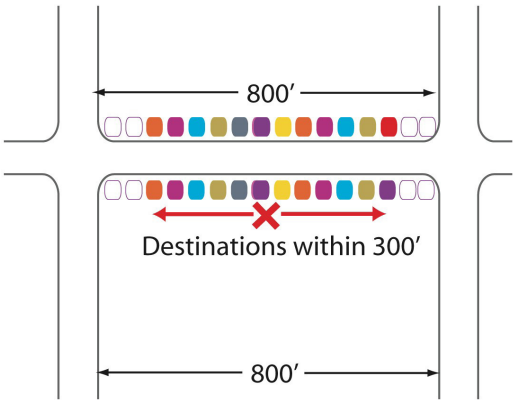

Figure 55: Destinations Reached on Long Blocks

- Architecture: Architecture that blends well with its surroundings brings visual and functional interest and attracts pedestrians.

Figure 56: Building with Attractive Architecture

- Pedestrian-friendly street standards: Produce narrower streets that slow traffic and are easier to cross. They also make for more compact neighborhoods than wide streets.

Figure 57: Commercial Street with Narrow Lanes

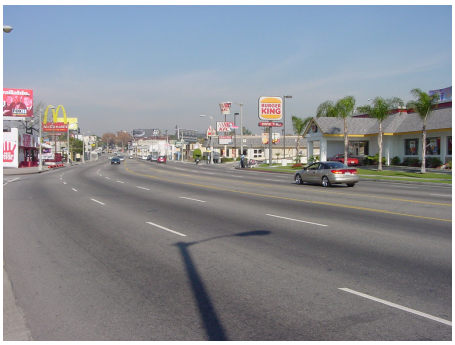

Figure 58: Commercial Street with Wide Lanes

- Walled-in development: Tract boundary walls take life off streets and prevent people from walking in and out of the neighborhood. Walled development has become necessary with high-speed arterial streets feeding large housing tracts. As street standards are revised, the walls become unnecessary and allow for neighborhoods to integrate with each other.

Figure 59: Walled in Housing Development

- Cul-de-sac development: Cul-de-sacs separate streets and neighborhoods from one another, making walking either inconvenient or impossible. Where cul-de-sacs are built they should be linked to allow for pedestrians and bicycles to pass through.

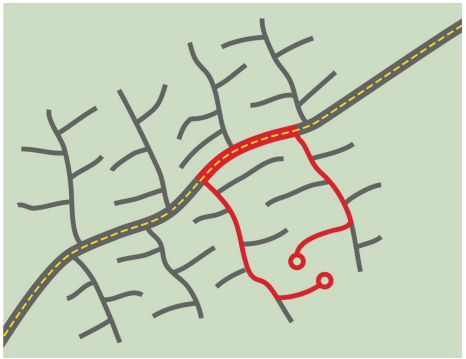

Figure 60: Cul de sac Trip Trip

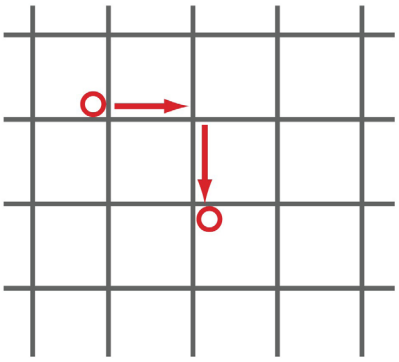

Figure 61: Grid Trip

8.3 Equestrian Design Guidelines

It is the intent of the Non-Motorized Transportation Plan for equestrian trails to be incorporated into the Class I shared use paths when feasible, particularly the trails along the powerline corridors, the Mojave Riverwalk Trail and the unimproved southern portion of the Oro Grande Wash. Equestrian accessibility along these trails will provide an opportunity to connect with existing and proposed equestrian trails in the neighboring Town of Apple Valley to the east and the proposed equestrian center in the communities of Phelan and Piñon Hills to the southwest.

Equestrian trail development requires minimal improvements. These trails can be as simple as a single-track path a minimum of 2 feet wide that has been cleared of brush and debris. The paths can be made wider to accommodate additional equestrian use, provided the terrain is suitable. Special attention should be taken when incorporating equestrian trails around other bike and pedestrian trails by providing ample separation between the uses and developing buffers, such as landscape barriers, when feasible. Additional equestrian trail improvements can also include the development of trail crossings, signage, trail amenities, and trail head facilities. These improvements are discussed in the General Trail Design Recommendations section of this report.

Equestrian Single-Track Path

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8.4 General Trail Design Guidelines

Trail Cross-Section

Some of the Class I shared use paths in the Non-Motorized Transportation Plan lend themselves to the possibility of incorporating additional trail types. At a minimum, all Class I paths are recommended to incorporate a paved path to be used by bicyclist as well as pedestrians. When right of ways permit, the opportunity to incorporate additional trails should be analyzed. The following are descriptions of the three types of trails recommended for Class I shared use paths

- A paved path will serve bicyclists and other wheeled users best. Bike paths should have a minimum width of eight feet, with at least two feet of paved or unpaved graded shoulders. Where significant use is expected, they should be at least 12-feet wide.
- A decomposed granite (DG) path is best for joggers and walkers. A well-graded "dirt road" can serve joggers and walkers in less developed areas. Stabilizers can be added to graded earthen trails to provide a surface that is in between a basic dirt road and a full DG path. These paths should be at least four to five-feet wide, preferably eight-feet wide in areas with significant use.
- Hikers and equestrians can use a less-improved single-track path. These can be just an unimproved trail, or at least a trail that has been cleared of brush and large rocks. They should be at least two-feet wide and can be wider depending on terrain, vegetation, etc.

The overall cross-section may look like Figure 62. A minimum separation of 2 feet should be provided between different trails. In instances where a significant amount of equestrian uses is anticipated, the single track path should be located further away from other paths and landscape buffers should be incorporated when feasible.

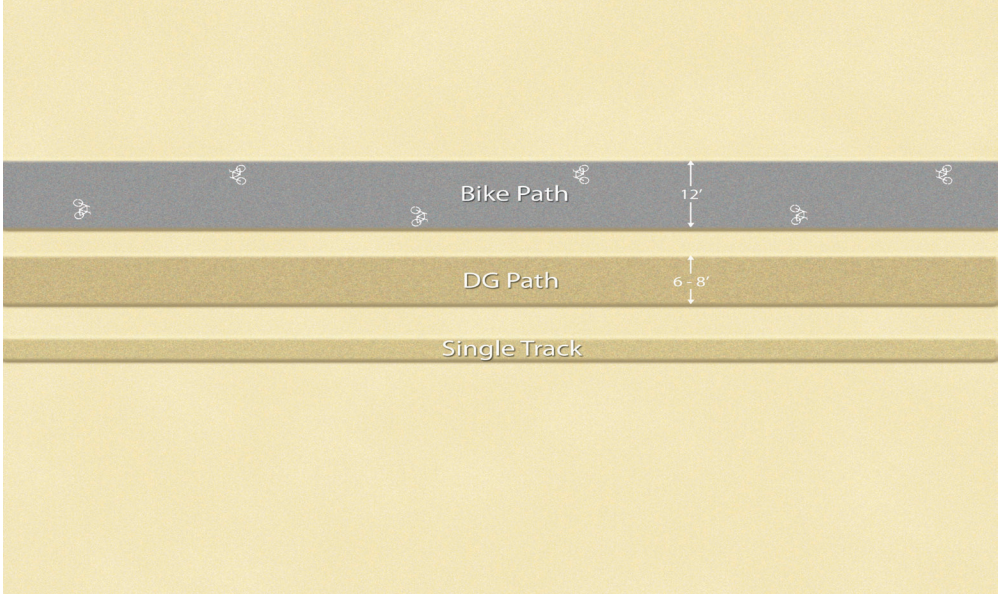

Figure 62: Typical Trail Cross-Section

Trail Crossing Design Guidelines

Victorville has immense opportunity to create a bikeway and trail network that will serve much of the community. The powerline corridors and waterways provide plenty of right-of-way for bike paths and trails. Designing good street crossings will be key to making these rights-of-way work. The following provides preliminary design guidelines for these crossings over the various streets in Victorville. All of these must follow all Caltrans standards and the California MUTCD. Each location will need to be designed in detail separately.

Signalized Crossing

- To be used on crossings of:
- Six-lane roads with medians or center turn lanes
- Four-lane roads with medians or center turn lanes and ADTs greater than 15,000
- The unpaved trail segments will merge onto the paved trail a short distance before the crossing
- Align to cross at a right angle
- Add a user-activated signal (where there are equestrians, add a special push button at a height that is accessible to those on horses)

- Add a 12'-wide zebra-stripe crosswalk
- Add crossing islands
- Add MUTCD designated W 11-1 bike signs
- Add "Bike Xing" pavement markings on approach
- Add loop detectors for trail users to trip the signals in advance

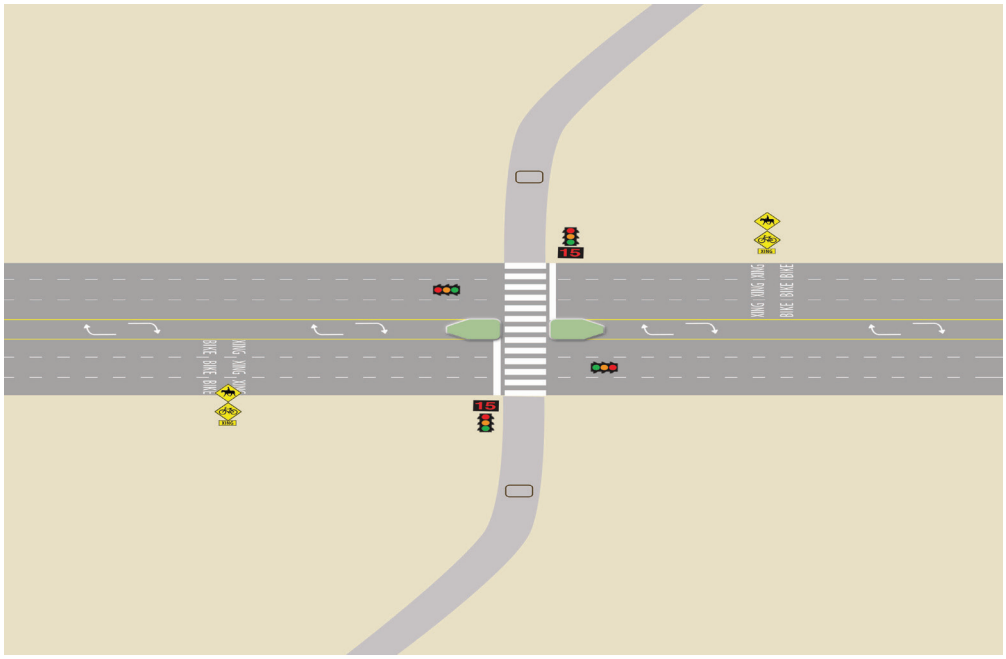

Figure 63: Signalized Crossing

Uncontrolled Crossing of Four-Lane Roads

- The unpaved trail segments will merge onto the paved trail a short distance before the crossing
- Align to cross at a right angle
- Taper the cross street to reduce the crossing distance for trail users
- Add user-activated LED rapid-flash beacons* (with ADTs > 10,000 and < 15,000)
- Add a 12'-wide zebra-stripe crosswalk
- Add crossing islands where medians or center turn lanes exist

- Add MUTCD designated W 11-1 bike signs
- Add "Bike Xing" pavement markings on approach
- Leave adequate sight distance
- Add advanced yield bars and advanced yield signs
- Consider rumble bars on approach

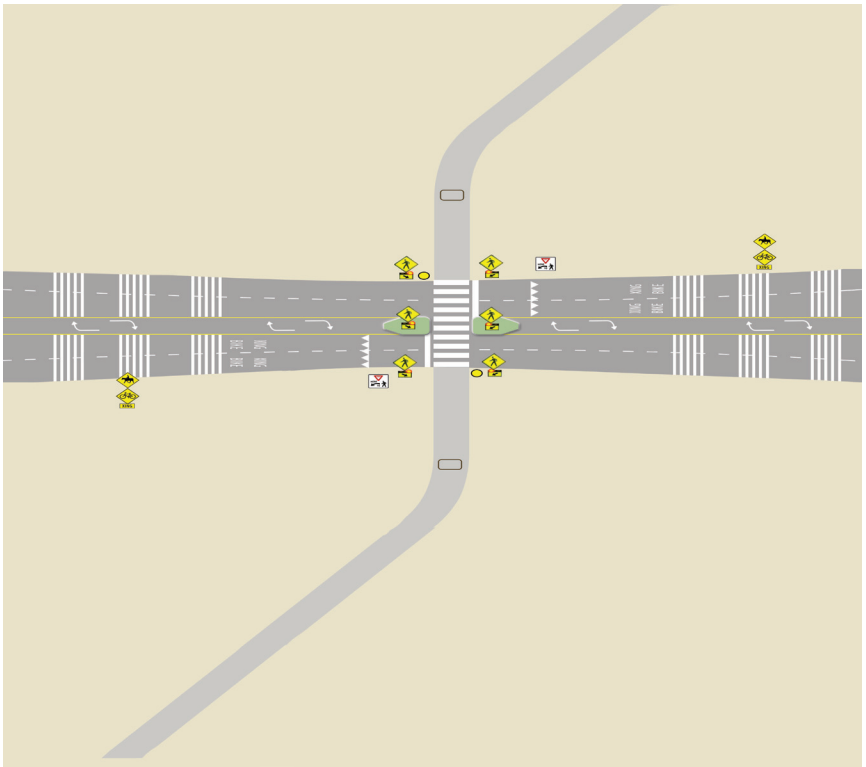

Figure 64: Uncontrolled Crossing, Four Lanes

Uncontrolled Crossing of Two-Lane Roads

Option 1 (preferred):

- The unpaved trail segments will merge onto the paved trail a short distance before the crossing

- Align to cross at a right angle
- Add a roundabout for trail users and users of the streets; this may be a mini-roundabout at crossings of narrow streets
- Add signs and bollards to prevent motorists from driving onto the trail
- Add MUTCD designated W 11-1 bike signs on approach
- Add "Bike Xing" pavement markings on approach
- Leave adequate sight distance

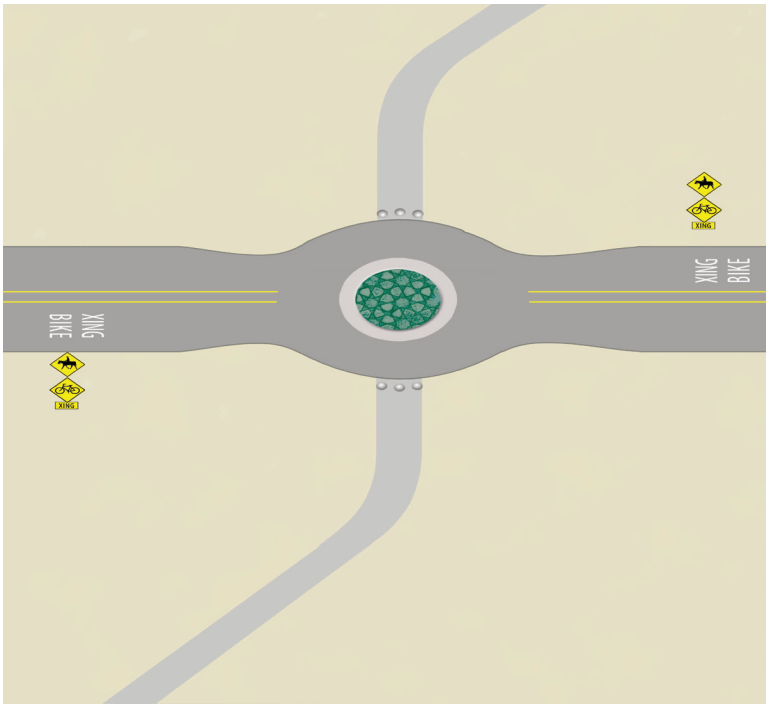

Figure 65: Uncontrolled Crossing, Two Lanes (Option 1)

Option 2:

- The unpaved trail segments will merge onto the paved trail a short distance before the crossing
- Align to cross at a right angle
- Taper the cross street to reduce the crossing distance for trail users; use bulbouts along streets where there is parallel parking

- Add user-activated LED rapid-flash beacons* (with ADTs > 12,000 and < 18,000)
- Add a 12'-wide zebra-stripe crosswalk
- Add crossing islands where medians or center turn lanes exist; or add by removing on-street parking
- Add MUTCD designated W 11-1 bike signs
- Add "Bike Xing" pavement markings on approach
- Leave adequate sight distance
- Add advanced yield bars and advanced yield signs
- Consider rumble bars on approach

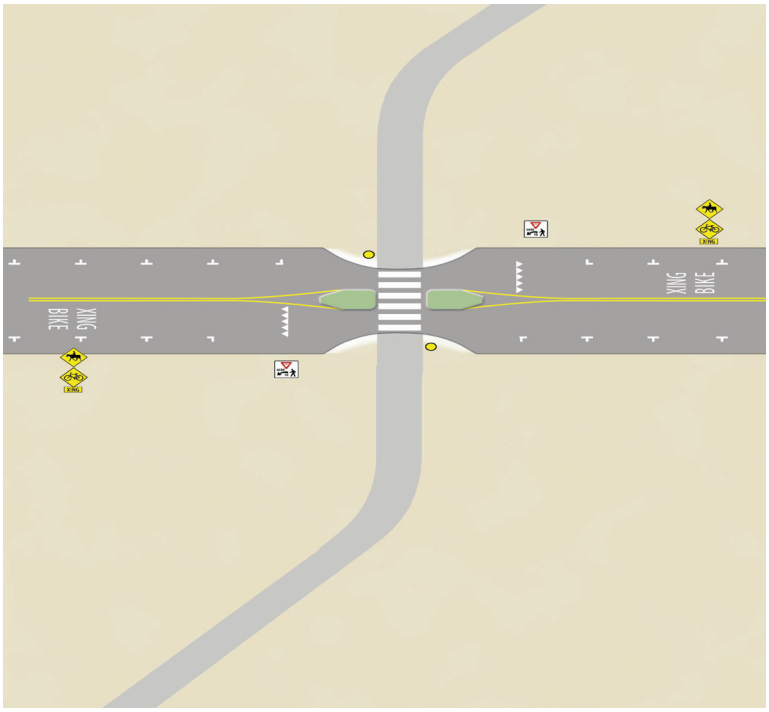

Figure 66: Uncontrolled Crossing, Two Lanes (Option 2)

Crossing at Intersection

- The unpaved trail segments will merge onto the paved trail a short distance before the crossing

- Design the trail to follow along side of the street to the intersection
- Direct users to use existing crosswalks
- Add crosswalk improvements and other appropriate crossing improvements to enhance the crossing
- Design the trail to follow along the other side of the street to the intersection, and back to the right-of-way alignment
- To be used where trail crossing is within approximately 300' of an intersection)

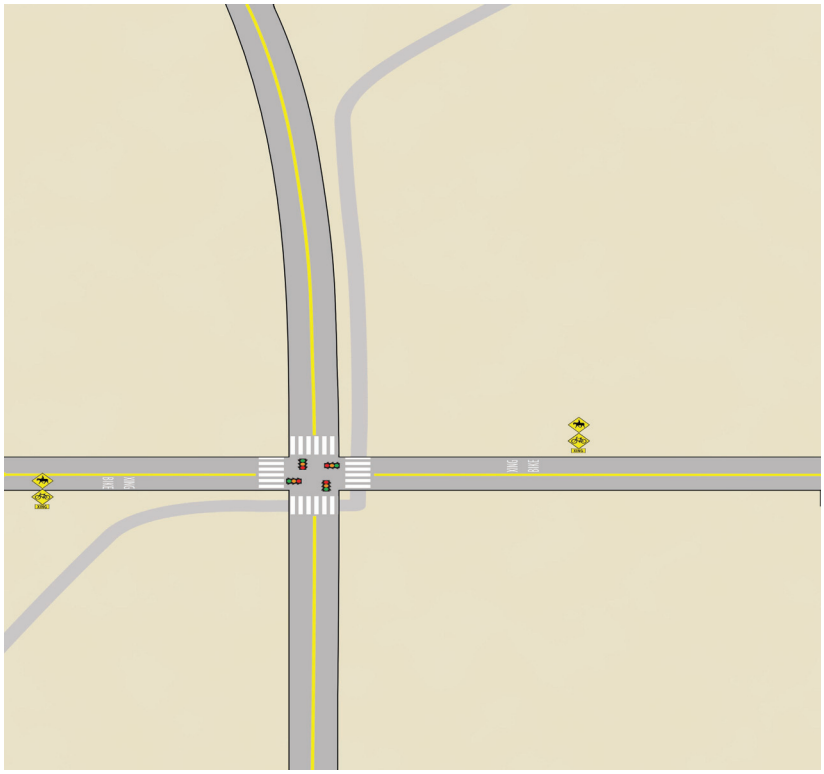

Figure 67: Crossing at Intersection

Underpass Crossings

An underpass would be appropriate at a location like the Bear Valley Road crossing of the Oro Grande River. It should follow all design standards for underpasses.

Overpass Crossings

The path and trail along the Oro Grande River will need an overpass to cross the I-15 Freeway. It should follow all design standards for overpasses.

Trailheads

Trailheads provide a place for trail users to park a car, trailer or bicycle to begin a hike or ride on a horse. Typical features include:

- Auto parking
- Equestrian trailer parking
- Bicycle parking
- Signs to the trail
- Maps
- Horse corral
- Drinking trough
- Restrooms
- Refuse receptacles
- Drinking fountains

Figure 68: Trailhead Features

Not all of these are needed at every trailhead. The features depend on the use of the trail, where it is, etc. Figure 69 depicts a full-feature trailhead.

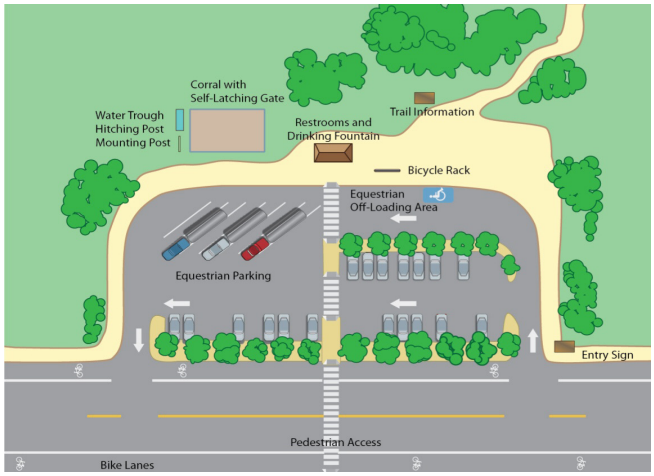

Figure 69: Trailhead with Full Amenities

Trail Amenities

Trail amenities enhance the user's experience. They provide conveniences that are sometimes necessary, and other times simply accommodating. Trail amenities attract users and enhance the overall experience. The following amenities can be added to trails where needed.

- Benches and rest areas
- Drinking fountains
- Maps
- Landscaping
- Lighting
- Fencing

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Figures 70 and 71: Trail Amenities

Signage

Trail signage provides critical information for users. Good signage is important to safe trail use, informed trail use and convenience. Signage performs the following tasks:

- Directs users to the trail
- Directs users to crossing trails
- Instructs users as to where trails go
- Provides distances of destinations along the trails
- Instructs users as to the type of use that is legal and what is not (hiking, horseback riding, mountain bicycling, walking dogs, etc.)
- Instructs users as to who has the right-of-way and who yields to whom
- Provides information about maintaining the environment, rules on protecting habitat, areas that are off limits, etc.
- Provides interpretive information about the geology, cultural history, etc.

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City of Victorville

Non-Motorized Transportation Plan
Compass Blueprint Demonstration Project

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

COMPASS BLUEPRINT
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