City of South Gate
Bicycle Transportation Plan
Adopted October 9, 2012

City of South Gate
Bicycle Transportation Plan

City of South Gate
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CALTRANS STREETS AND HIGHWAYS CODE 891.2

Approved	Streets and Highways Code 891.2 Bicycle Transportation Account Requirement	Page(s)
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	6-42
	(b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	3-1 to 3-4, 3-2
	(c) A map and description of existing and proposed bikeways.	6-33, 5-1,
	(d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	6-39, 5-6, 6-34 to 6-35
	(e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	6-39, 5-6, 6-38
	(f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	6-39, 5-6, 6-37
	(g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	6-40 to 6-42
	(h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	Chapter 2
	(i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	3-1
	(j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	8-6
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EXECUTIVE SUMMARY

The City of South Gate wishes to enable its citizens to feel safe and comfortable bicycling throughout the city. Many South Gate residents already ride bicycles as their primary form of transportation, and many more residents wish to do so. By increasing the numbers of people who feel safe bicycling, the city advances a number of policy goals. Residents will get more exercise, and access to transit will be improved. Further, bicycling enables people to travel without polluting the city's air, creating carbon emissions, or contributing to traffic congestion. Bicycling costs little to the bicyclist, and inflicts little wear-and-tear on the city's streets and other infrastructure.

This plan is the guiding document for all bicycle infrastructure, policies, and programs in the City of South Gate. It proposes an extensive network of streets designed to be safe and comfortable for bicyclists. Using this network, people in South Gate can reach schools, shopping, jobs, recreational activities, and more. The plan also proposes links to transit and end-of-trip facilities such as bicycle parking racks, bicycle lockers, and showers for commuters. Finally, the plan recommends non-infrastructure programs that educate road users, enforce the vehicle code, and encourage bicycling with promotional activities.

By following the roadmap outlined in this plan, the city can integrate bicycling not only into its transportation network but also into the fabric of daily life in South Gate.

Chapter 2: Public Outreach

Public input was an essential part of preparing this Plan. Comprehensive public outreach enabled the consultant team and city staff to learn about the bicycling environment in South Gate, to understand the community's needs and desires, and to set priorities. The outreach program included the following elements.

Technical Advisory Committee (TAC)

An inclusive group of stakeholders guided the development of the Plan and provided detailed feedback on its drafts. Members of the TAC included residents, business owners, and representatives from the following departments of the City: Community Development, Public Works, Police, Code Enforcement, and Parks and Recreation. Los Angeles County Unified School District and the South Gate Planning Commission were also represented. The TAC ensured that each of these various stakeholder groups understood and could influence the Plan.

South Gate Bicycle Transportation Plan Survey

Who is bicycling in South Gate? What kinds of trips do they take by bike? Where they would like to see improvements? The survey aimed to answer these questions and others. It was

available from May 16, 2011 to July 1, 2011. The City of South Gate's website provided a link to the survey, and the city emailed constituents about the survey using city listserves. Paper surveys were available at all the parks and community centers in South Gate.

The survey received 207 responses. The findings are organized into four subsections: (1) information about the survey respondents, (2) reasons for bicycling in South Gate, (3) barriers to bicycling in South Gate, and (4) suggestions for bikeways and bicycle parking locations.

Public Workshops

The city held three public workshops, each at a crucial juncture in the development of the Plan. The first public workshop presented the overall scope of the planning effort and the types of bikeways and other facilities that could be proposed. Attendees drew on maps where they would like to see bikeways and bike parking. The second workshop presented the draft bikeway network. Attendees engaged in a dot exercise to rank the proposed routes. The third workshop invited the public to comment on the draft plan.

Public Comments via e-mail, mail, and fax

The City invited the public to provide further input through email, fax, or mail.

All public comments were taken into consideration. Many of the recommendations and suggestions from the various public input media listed above have been incorporated into the Plan.

Chapter 3: Planning Context

Many plans, policies, and other documents influence the bicycling environment. The recommendations in this Plan must be coordinated with planned changes described in these documents. In order to understand the context of the Bicycle Transportation Plan, the consultant reviewed the following related documents and data.

- City of South Gate General Plan, especially the Mobility Element
- City of South Gate Parks and Recreation Master Plan
- South Gate Middle School Safe Routes to School Plan
- South Gate Municipal Code
- Planned Development of the East Los Angeles College Firestone Educational Center
- Site Plan for Los Angeles Unified School District High School No. 9
- Preliminary Project Descriptions for the I-710 Corridor Project
- Orangeline Development Authority Preliminary Plans

- Bicycle Plans in neighboring jurisdictions, including the Draft Lynwood Bicycle and Pedestrian Master Plan, the Los Angeles County Bicycle Master Plan, and the City of Los Angeles Bicycle Plan
- Metro Bicycle Transportation Account Compliance Document
- Metro Bicycle Transportation Strategic Plan
- Regional Transportation Programs, including the Southern California Association of Governments' 2008 Regional Transportation Plan and the Los Angeles County Congestion Management Program

Chapter 4: Goals, Policies, Actions

This chapter describes the intentions of the Plan and sets a philosophical framework for both the Plan and subsequent implementation. First, the City sets a number of goals for this Plan, as follows:

- Create an environment where people of all ages can circulate safely and easily on a bicycle.
- Increase the number of bicyclists by enticing more people to use their bicycles instead of driving.
- Promote public health and safety within our community.
- Enhance the economic viability of South Gate.
- Promote safety education for all users of our transportation infrastructure.

While the goals are broad statements of intention, the policies and actions describe concrete measures the city will take. The actions are very specific, while the policies are more general and often describe the cumulative effect of grouping a set of actions. The policies are as follows:

- The City will develop a complete bikeway network throughout South Gate.
- The City will actively accomodate and encourage safe and convenient bicycle utilitarian trips to schools, employment sites, stores, parks, and otheer destinations throughout South Gate.
- The City will take steps to enhance bicycle safety.
- The City will make bicycle parking available, secure, and convenient throughout South Gate.
- The City will work to implement existing safe routes to school (SRTS) plans, and create and implement plans where they do not exist in each South Gate school within the next 10 years.

- The City will ensure that new development is bikeable, walkable, and barrier-free.
- The City will mplement this Bicycle Transportation Plan by 2035.

Chapter 5: Existing Conditions

This chapter examines the existing conditions for people on bicycles in South Gate.

Facility Inventory

South Gate has a number of existing bikeways and bicycle parking facilities. There are bicycle paths on the Los Angeles River, the Rio Hondo, and the utility right-of-way adjacent to Southern Ave. There is also an existing bicycle lane on Southern Ave. The City has public bicycle parking at a number of the schools, in parks, and at the intersection of California Ave. and Tweedy Blvd.

There are no public showers or changing facilities in the city. Likewise, there are few intermodal facilities and links to transit. Bikes are allowed on board Metro buses, which run on various lines throughout the city.

Ridership Data

The best source of existing data on bicycle ridership in South Gate is the U.S. Census, which asks commuters what mode of transportation they use to get to work. The 2005-2009 American Community Survey estimate is that between 0.03% and 1% of workers in South Gate commute by bicycle. This rate is similar to bicycle commute rates in Los Angeles County and in the State of California. Because the Census only considers commutes, which comprise less than 20% of all trips, this Plan recommends bicycle counts to get a more comprehensive picture of how many people are bicycling.

Crash Data

Over a five-year period from January 2007 to December 2011, there were 96 bicycle-involved crashes resulting in injury or fatality. One of these resulted in a fatality. A map illustrates the locations of the crashes. About half of them took place on major streets.

Chapter 6: Proposed Bikeway Network

To better accommodate and encourage bicycling in South Gate, the City plans to add a network of bikeways. The proposed network consists of a variety of bikeway types, including bike paths, bike lanes, and bicycle boulevards. Bikeway types are described in further detail below. The City also plans to install bicycle parking, provide for end-of-trip amenities, and to enhance links to other transportation modes. Finally, the City also plans to provide

education programs and to promote bicycling.

Bikeway Types

The planned facilities are of the following types:

- Bike Paths: A fully separated right-of-way for two-way bicyclist travel, typically planned along waterways, rail rights-of-way, or utility corridors.
- Cycle Tracks: A physically separated right-of-way for bicycle travel located within a roadway.
- Bike Lanes: A striped lane for one-way bicycle travel on a street or highway.
- Bike Routes with Sharrows: A preferred travel route for bicyclists, on which a separate lane is either not preferable or not desirable.
- Bike Boulevards: A signed route that functions as a through street for bicyclists, but not for cars. Diverters, mini-circles, roundabouts, and other intersection treatments permit through movement for bicycles while either discouraging or prohibiting it for cars.

Altogether, the Plan proposes 9.8 miles of bike paths, 0.5 miles of cycle tracks, 23 miles of bike lanes (including colored and buffered bike lanes, some to be implemented with road diets), 5.9 miles of bike boulevards, 5.7 miles of bike routes with sharrows, and 3.6 miles of bike routes with Type B sharrows.

More detailed descriptions and accompanying photos of the bikeway types are on pages 6-1 through 6-3. The proposed bikeway type depends, among other factors, on the roadway width, adjacent land uses, and average daily traffic volumes and speeds.

The maps on page 6-33 show the proposed bikeway network. Each of the proposed facilities is described in detail in tables on pages 6-7 through 6-31. For bike lanes, the tables include existing roadway cross-sections and proposed cross-sections, with the width of the bike lane specified. Tables also specify related treatments such as road diets, wayfinding signage, and intersection treatments.

The proposed bikeway network also includes several new bicycle and pedestrian bridges over the I-710 and the Los Angeles River, and several access improvements to the bicycle path on the Los Angeles River.

Bicycle Parking, Amenities and Intermodal Links

South Gate plans to add bicycle parking racks throughout the city, especially along commercial corridors and transit corridors. The City will work with Los Angeles Unified School District and owners of large private developments to ensure that these have bicycle parking. Locations of proposed bicycle racks and lockers, along with proposed transit hubs,

are shown on Map 6-2 on page 6-39.

Education, Encouragement, and Promotional Campaigns

In addition to changes in the City's physical infrastructure, this plan proposes programs to encourage bicycling, educate citizens about bicycling, enforce bicycle-related laws, and evaluate the effects of bicycle-related initiatives.

Chapter 7: Funding

A variety of potential funding sources, including local, state, regional, and federal funding programs, may be used to construct bicycle, pedestrian and trail improvements or to institute programs. Most of the Federal and State programs are competitive, and involve the completion of extensive applications with clear documentation of the project needs, costs, and benefits. Local funding for projects can come from sources within jurisdictions that compete only with other projects in each jurisdiction's budget.

This chapter contains a detailed program-by-program explanation of available funding along with the latest relevant information.

Chapter 8: Implementation

This chapter describes the City's past expenditures on bikeways, and estimates the cost of the proposed facilities. The projects are then grouped into three categories by priority. The categories are short-term, medium-term, and long-term bikeway projects. The groupings take into consideration priorities expressed by the public, TAC, and City staff, as well as destinations served, links to transit, and other factors.

Because bridges and bicycle paths on railroad rights-of-way are subject to coordination with other agencies, costs for these projects are difficult to predict. As such, cost estimates for these projects are not included in total costs.

The total cost to build out the proposed bikeway network is estimated at $7,050,400.

Chapter 9: Design Guidelines

This chapter serves as general guidance for the City when constructing facilities identified in this plan. The City will need to follow standard manuals such as the California Manual of Uniform Traffic Control Devices. The City may have to amend its own street design guidelines in order to implement certain facilities. South Gate should take precaution and research the newest bikeway design guidelines and engineering treatments prior to constructing a facility.

This chapter provides design guidance on the following:

- Bike Paths
- Cycle Tracks
- Bike Lanes, including colored bike lanes and buffered bike lanes
- Bike Routes
- Sharrows and B-Type Sharrows
- Bicycle Boulevards
- Freeway On- and Off-Ramp Crossings
- Signage and Markings
- Bicycle Parking
- Road Diets
- Drainage Grates
- Loop Detectors

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CHAPTER 1
INTRODUCTION

The City of South Gate wishes to enable its citizens to feel safe and comfortable bicycling throughout the city. Many South Gate residents already ride bicycles as their primary form of transportation, and many more residents wish to do so. The recent update of the city's General Plan called for an integrated system of bikeways, bicycle parking, and bicycle-friendly policies and programs. This plan fulfills that call, and is the guiding document for all bicycle infrastructure, policies, and programs in the City of South Gate.

By increasing bicycling, the city advances a number of policy goals. First, bicycling contributes to a healthy and active city, where residents can get exercise as a part of their daily life. Second, the city seeks to create a multimodal transportation system, where bicycling is well-linked to transit. Further, bicycling enables people to travel without polluting the city's air, creating carbon emissions, or contributing to traffic congestion. Bicycling costs little to the bicyclist, and bicycling inflicts little wear-and-tear on the city's streets and other infrastructure.

The process of developing this Plan began in March 2011 with the selection of the consultant team. City staff from the Parks Department and the Public Works Department worked closely with the consultant to set a framework of goals, policies, and actions for the Plan. A Technical Advisory Commitee (TAC) formed of key stakeholders from the city and the community reviewed all work product closely. Based on the results of an initial community workshop and a citywide survey on bicycling, the consultant team developed a draft bikeway network, and vetted this network with city staff and the TAC. The consultant team then presented the network to the public in a community workshop, and received feedback about the routes. After revising the network accordingly, the consultant team produced a draft plan for city staff and the public to review, and made any necessary changes based on community feedback. This final plan is the product of a process that emphasized stakeholder participation and public feedback.

By implementing this plan, the City of South Gate can become a place where people of all ages and bicycling abilities can travel by bicycle. This plan proposes an extensive network of streets designed to be safe and comfortable for bicyclists. Using this network, people in South Gate can reach schools, shopping, jobs, recreational activities, and more.

CHAPTER 2
PUBLIC OUTREACH

Public input was an essential part of preparing this Plan. Comprehensive public outreach enabled the consultant team and city staff to learn about the bicycling environment in South Gate, to understand the community's needs and desires, and to set priorities. The outreach program included the following elements:

- Bicycle Transportation Plan Technical Advisory Committee
- South Gate Bicycle Transportation Plan Survey
- Public Workshops
- Ongoing Opportunities to Make Public Comment via e-mail, mail, and fax

2.1 TECHNICAL ADVISORY COMMITTEE

The Technical Advisory Committee (TAC) was comprised of representatives from:

- South Gate Community Development Department
- South Gate Public Works Department
- Hartzog & Crabill Inc., the City's Traffic Engineering Consultant
- South Gate Police Department
- Los Angeles Unified School District
- South Gate Code Enforcement
- South Gate Planning Commission
- South Gate Parks and Recreation Department
- Residents and local business owners

The committee also contained several avid bicyclists who either work or live in the City.

The Technical Advisory Committee was assembled to advise the project team of current concerns, and to provide guidance and input on the development of the Master Plan. The Committee held a total of 3 meetings.

The first meeting took place early in the planning process to discuss bicycling issues in the City of South Gate. During the second meeting, the TAC helped develop the Goals, Policies and Actions of this Plan. During the third meeting, the TAC reviewed draft bicycle routes, and each member of the TAC identified the bikeways he or she considers to be the most important in a dot prioritization exercise. The results are tallied below.

Table 2-1: Results of Prioritization Exercise Conducted by TAC

Street	From	To	Project Type	TAC Points
Tweedy Blvd.	Alameda St.	Los Angeles River	Bike Lanes, Bike Path, Access Improvements	16
Otis St.	Northern city limit	Southern city limit	Colored Bike Lanes	12
California Ave.	Northern city limit	Southern city limit	Colored Bike Lanes	9
Michigan Ave	Stanford Ave.	Wright Rd.	Bicycle Boulevard	8
Santa Fe Ave. / Truba Ave.	Ardmore Ave.	Southern Ave.	Buffered Cycletrack	7
Liberty Blvd.	Otis St.	Long Beach Blvd.	Bicycle Boulevard	7
Southern Ave.	Los Angeles River	Eastern city limit	Bridge, Bike Lanes	6
Missouri Ave.	Truba Ave.	South Gate Park	Bicycle Boulevard	6
Southern Ave.	Santa Fe Ave.	Burke Ave.	Bike Path Improvements, Bike Lane	6
Alexander Ave.	Firestone Blvd.	Southern city limit	Buffered Bike Lanes	5
Gardendale St.	Los Angeles River	Garfield Ave.	Bicycle Route with Sharrows, Buffered Bike Lanes	5
Stanford Ave.	Southern Ave.	Sequoia Dr.	Bike Route with Sharrows	5
Atlantic Ave. / Wright Rd.	Ardmore Ave.	Firestone Blvd.	Type B sharrows (Atlantic) and Buffered Bike Lanes (Wright)	4
State St.	Northern city limit	Southern city limit	Colored Bike Lanes	4
Garfield Ave.	Ardmore Ave.	Roosevelt Ave.	Bicycle Lanes / Type B Sharrows	4
Los Angeles River Bicycle Path	Ardmore Ave.	Century Blvd.	Access Improvements	3
Independence Ave., Ardmore Ave.	Long Beach Blvd.	Otis St.	Bike Lanes, Sharrows	3

Street	From	To	Project Type	TAC Points
UPRR Spur Line	Western city limit	Eastern city limit	Bike Path, Bridges	3
Monroe Ave.	Hollydale Park	Garfield Ave.	Bicycle Route with Sharrows	3
Southern Ave.	Burke Ave.	Los Angeles River	Widen Bike Lanes, Add Buffers to Bike Lanes	3
Century Blvd.	Los Angeles River	Industrial Ave.	Bicycle Route with Sharrows, Buffered Bike Lanes	3
Hildreth Ave.	Southern Ave.	Southern city limit	Bike Route with Sharrows	3
Existing Multiuse Paths in Hollydale Park			Signage and Maintenance Improvements	2
Main St.	Pennsylvania Ave.	Garfield Ave.	Bicycle Route with Sharrows, Bike Lanes	2
Rio Hondo	Ardmore Ave.	Los Angeles River	Wayfinding Signage Improvements	2
Firestone Blvd.	UPRR San Pedro Sub-division	Eastern city limit	Colored Bike Lanes	1
UPRR San Pedro Sub-Division	Ardmore Ave.	Century Blvd.	Bike Path, Bridges	1
Paramount Blvd.	Gardendale St.	Century Blvd.	Bike Lanes	1

2.2 SOUTH GATE BICYCLE MASTER PLAN SURVEY

Who is bicycling in South Gate? What kinds of trips do they take by bike? Where they would like to see improvements? The survey aimed to answer these questions and others. It was available from May 16, 2011 to July 1, 2011. The City of South Gate's website provided a link to the survey, and the city emailed constituents about the survey using city listserves. Paper surveys were available at all the parks and community centers in South Gate.

This section summarizes and analyzes the survey responses. The findings are organized into four subsections: (1) information about the survey respondents, (2) reasons for bicycling in South Gate, (3) barriers to bicycling in South Gate, and (4) suggestions for bikeways and bicycle parking locations.

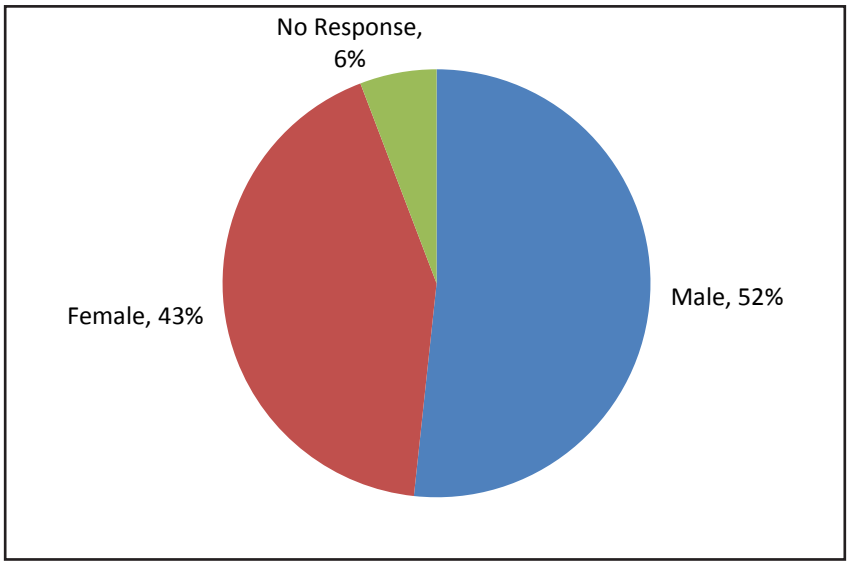
RESPONDENTS

The survey received 207 responses, ten in Spanish and 197 in English. The respondents were demographically diverse.

Gender

As Chart 2-1 shows, the gender split of the respondents was about even, with slightly more male respondents than female respondents.

CHART 2-1: GENDER OF SURVEY RESPONDENTS



Age

As Table 2-2 shows, respondents' ages ranged from 13 to 70, with a median age of 30, and a mean age of 32.

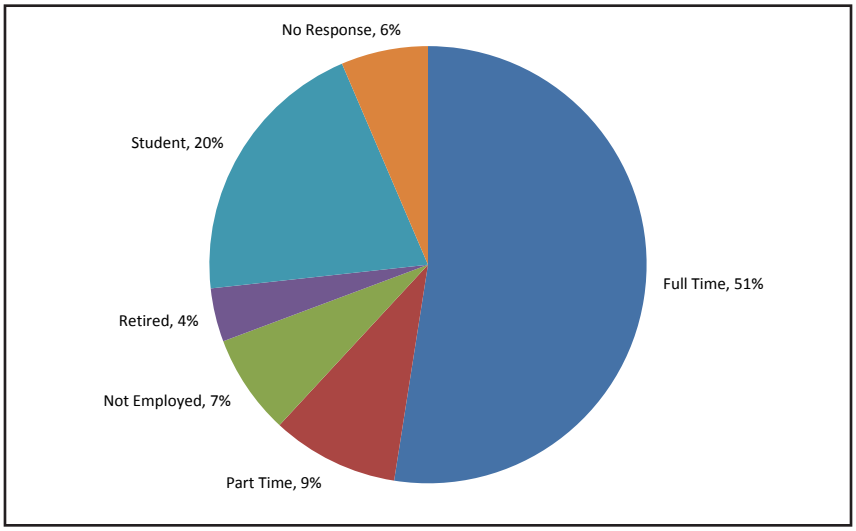
TABLE 2-2: AGE OF SURVEY RESPONDENTS (YEARS)

Minimum	13
Maximum	70
Median	30
Mean	32

Job Status

Chart 2-2 displays the job status of respondents. About half were employed full-time. The next most common job status, marked by 20% of survey respondents, was student.

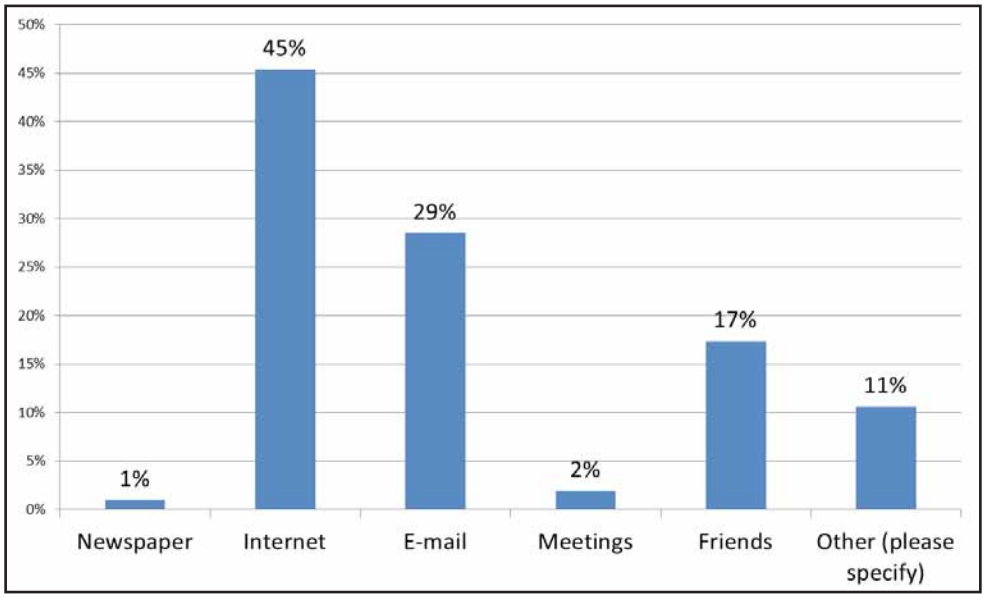
CHART 2-2: JOB STATUS OF RESPONDENTS



How Did You Hear About the Survey?

Chart 2-3 displays how respondents heard about the survey. 45% of respondents heard about it over the internet and 29% via email, which indicates that many respondents have internet access and are probably more affluent. The vast majority of the survey responses were received on the internet.

CHART 2-3: HOW DID YOU HEAR ABOUT THE SURVEY? CHECK ALL THAT APPLY.



Zip Code

The survey requested respondents' zip code to get a sense of where they live. All of the top responses were either in or near the City of South Gate. As Table 2-3 shows, the majority of respondents lived in zip code 90280. The boundaries that define this zip code are nearly identical to the City of South Gate's boundaries. A handful or respondents lived in nearby zip codes: 90255 and 90201 border South Gate to the north, and 90650 and 90250 lie about three miles away from the City, to the east and northeast respectively. Two respondents listed home zip codes outside of California.

Table 2-3: Respondents' Home Zip Codes

Zip Code	Frequency
90280 (South Gate)	**153**
90255 (Huntington Park)	4
90201 (Bell)	4
90650 (Norwalk)	3
90240 (Downey)	3
90262 (Lynwood)	2
90242 (Downey)	1
90241 (Downey)	1
92833 (Fullerton)	1
92805 (Anaheim)	1
92804 (Anaheim)	1
91107 (Pasadena)	1
90813 (Long Beach)	1
90802 (Long Beach)	1
90723 (Paramount)	1
90601(Whittier)	1
90222 (Compton)	1
90001(Florence-Graham)	1
48195 (Southgate, Michigan)	1
30280 (Morrow, Georgia)	1
90003 (Florence-Graham)	1
No Response	23

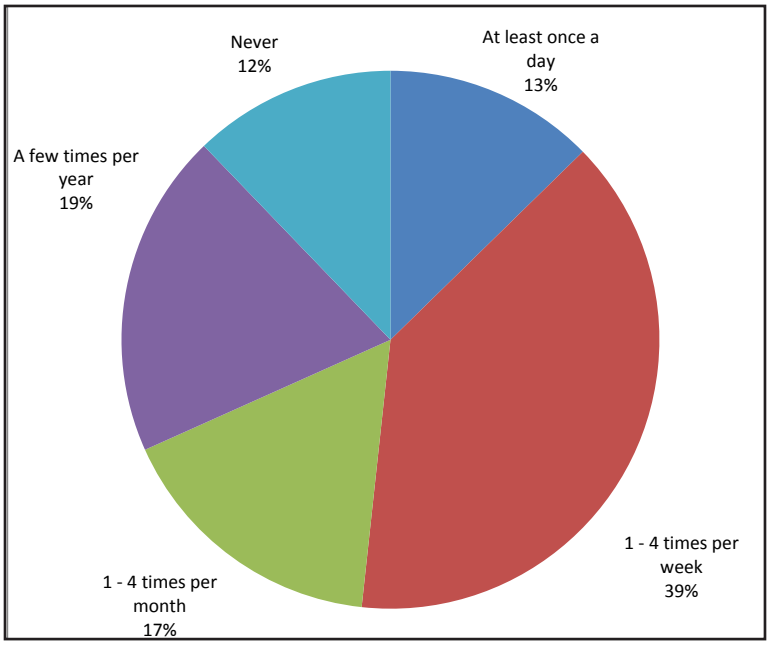
BICYCLING BEHAVIOR

The survey asked how often respondents ride as well as the purpose of their bicycle trips.

Frequency

Chart 2-4 displays how often respondents ride. A majority of the respondents are regular cyclists, riding either everyday (13%) or at least once a week (39%). About a third of respondents are occasional riders, riding either a few times a month (17%) or a few times a year (19%). The remaining 12% of respondents do not ride bicycles. As Chart 2-6 will show, 12% of respondents do not own a bicycle.

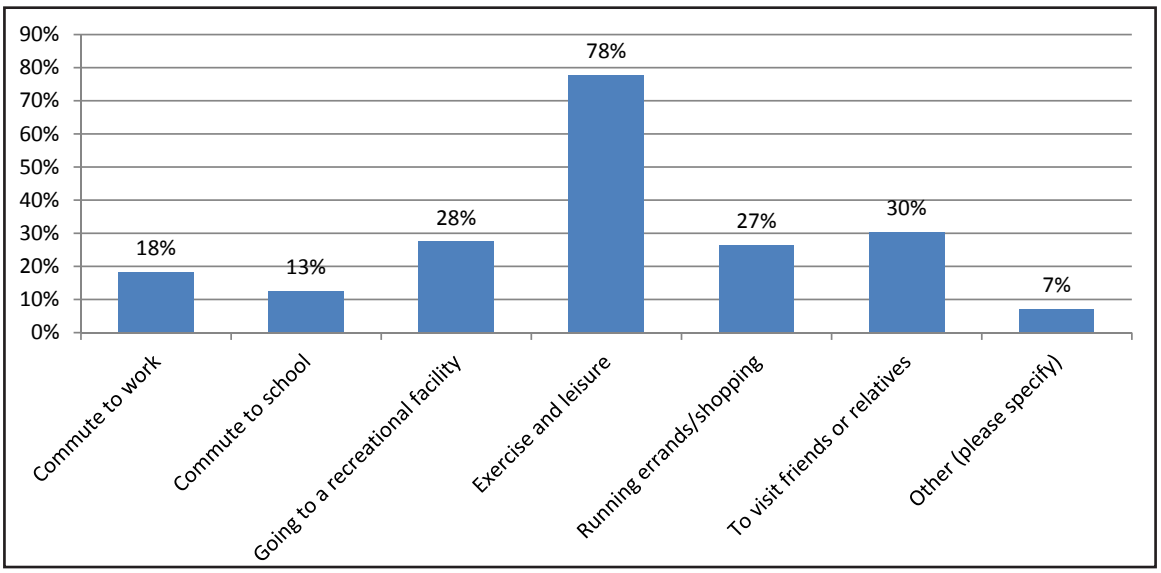
CHART 2-4: HOW OFTEN DO YOU RIDE A BICYCLE?



Trip Purpose

Chart 2-5 displays the purposes of bicyclists' trips in South Gate. Please note that since respondents could check more than one answer, the sum of the percentages in Chart 2-5 exceeds 100%. The majority of respondents checked multiple trip purposes. The most common trip purpose was for exercise and leisure. Nearly every respondent (78%) listed this as one of their trip purposes. About a third of respondents ride to run errands, visit friends, or travel to a recreational facility. Only a fifth of respondents said that they ride to commute to work or school.

CHART 2-5: PURPOSE OF TRIPS THAT RESPONDENTS MAKE BY BICYCLE



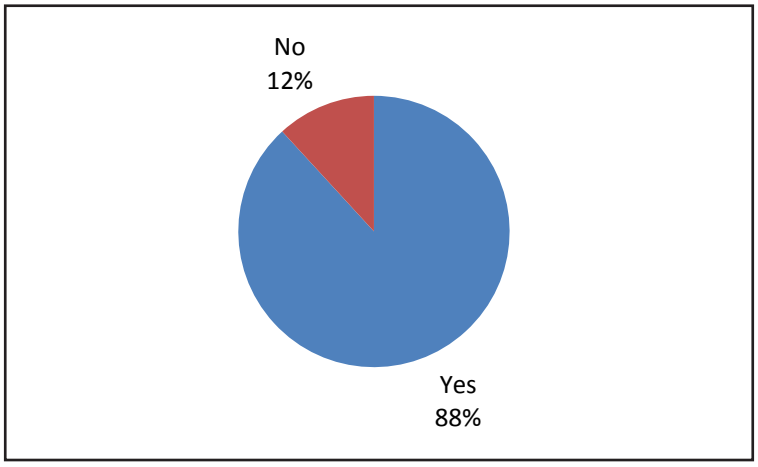
Barriers to Bicycling

The survey also explored some of the barriers to bicycling in South Gate.

Bicycle Ownership

First, bicycle ownership is a barrier, as Chart 2-6 shows. Twelve percent of respondents do not own a bicycle.

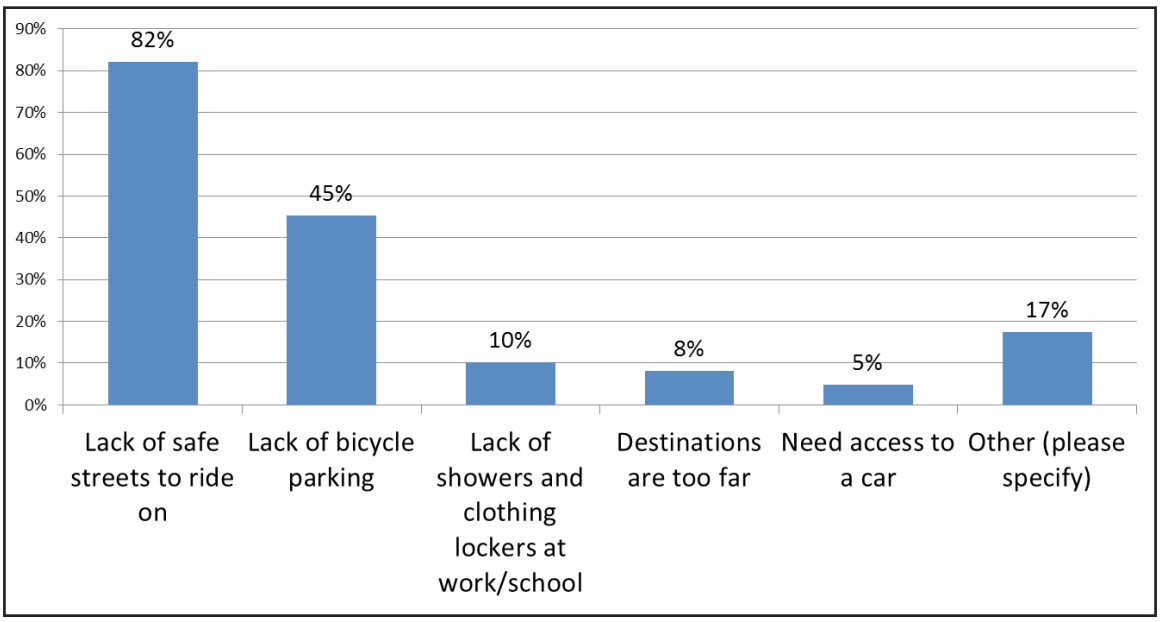
Chart 2-6: Do You Own a Bicycle?



Specific Barriers

Chart 2-7 indicates some of the specific barriers to bicycling in South Gate. By far the most common barrier is a lack of safe streets to ride on. The vast majority of respondents (82%) stated that this was a barrier. The next most common barrier was a lack of bicycle parking; nearly half of all respondents (45%) said this was a barrier to bicycling. Respondents who marked 'Other' stated a free response describing the barrier. Many of the free responses mentioned dangerous behavior on the part of drivers and a need for driver education. Another common free response was the lack of bicycle lanes and paths.

CHART 2-7: WHAT PREVENTS YOU FROM BICYCLING MORE IN SOUTH GATE (CHECK ALL THAT APPLY)



SUGGESTIONS FOR BIKEWAYS AND BICYCLE PARKING

The survey asked respondents to list up to three locations where they would like to see new or improved bikeways. It also asked for up to three locations where they would like to see new or improved bicycle parking. Because these questions allowed for free responses, people could write in a variety of types of locations, including streets (e.g. "Tweedy Blvd."), types of destinations (e.g. "Supermarkets"), or specific locations (e.g. "South Gate Park").

Bikeways

Table 2-4 lists the locations where respondents would like to see new or improved bikeways. Tweedy Boulevard and Firestone Boulevard received the most mentions. Each was recommended by about half of all respondents. Six respondents mentioned either schools in general, or stated a specific school. South Gate Middle School, San Miguel Elementary, and South Gate High were mentioned specifically.

Table 2-4: Where Respondents Would Like to See New or Improved Bicycle Facilities

Number of Mentions	Percentage of Respondents	Street or Location
112	54%	Tweedy Blvd.
90	43%	Firestone Blvd.
51	25%	"Park" or "South Gate Park"
42	20%	Southern Ave.
32	15%	Atlantic Ave.
20	10%	Otis St.
18	9%	California Ave.
15	7%	Long Beach Blvd.
9	4%	State St.
8	4%	Tweedy Mile
8	4%	Garfield Ave.
7	3%	Imperial Hwy.
6	3%	Schools
5	2%	Connections to the LA River
5	2%	Alameda St.

Bicycle Parking

Table 2-5 lists the locations where respondents would like to see new or improved bicycle parking. The parks, including South Gate Park and Cesar Chavez park, were mentioned the most frequently. About half of all respondents would like to see new or improved bicycle parking at parks in South Gate. After parks, the next most common destinations at which respondents would like to see better bicycle parking were shopping areas, schools, and supermarkets. The streets where the most respondents would like to see improved bicycle parking were Tweedy Boulevard, Firestone Boulevard, and Otis Street.

Table 2-5: Locations where Respondents Would Like to See New or Improved Bicycle Parking

Number of Mentions	Percentage of Respondents	Street or Location
96	46%	South Gate Park, Cesar Chavez Park, and other parks
66	32%	Tweedy Blvd.
27	13%	Firestone Blvd.
27	13%	Shopping areas, esp. Tweedy Mile Shopping Center
20	10%	Schools
14	7%	Supermarkets
9	4%	Otis St.
7	3%	Southern Bicycle Path
7	3%	El Paseo Shopping Center
7	3%	Atlantic Ave.
5	2%	Long Beach Blvd.
5	2%	Leland Weaver Library

The results of the survey are reflected in the proposed infrastructure and programs in Chapter 6.

2.3 PUBLIC WORKSHOPS

The City invited the general public to a series of three workshops to present the purpose and scope of the Bicycle Transportation Plan, understand the public's concerns, take comments and questions, and prioritize capital improvement projects. The public was notified about the meetings through the City of South Gate website, posters and flyers in City Hall, libraries, and parks, and an interested parties list that included many of the survey respondents. The purpose and outcomes of each workshop are explained further below.

Workshop 1: June 9, 2011

The first workshop took place on June 9, 2011 from 6:00 pm to 8:30 pm at the Girls Club

House in South Gate Park. Spanish translation was available. The consultant team presented the overall scope for the Bicycle Transportation Plan, the tentative schedule, and examples of recommendations they might find in the plan for bicycle facilities as well as bicycle parking, lockers, and showers. The workshop attendees included a Planning Commissioner, a TAC member, and city staff. Attendees commented and asked questions after the presentation. Attendee concerns and questions included:

- connections to the new East Los Angeles College Firestone Educational Center campus that will be at Firestone Blvd. and Santa Fe Ave.
- connections to schools and parks
- connections to other jurisdictions
- lack of bicycle parking throughout the city
- revitalization of Tweedy Mile
- crossing and design issues on bicycle path on Southern Ave.

The next part of the workshop featured a mapping exercise. Attendees drew desired bikeways and bicycle parking locations on large-scale maps of South Gate. This consultant team used this information when conducting fieldwork. A partial list of recommended bikeways is:

- Long Beach Boulevard
- Tweedy Boulevard
- Firestone Boulevard

Locations where respondents wanted to see additional bicycle parking included:

- City parks
- East LA College Firestone Educational Center
- Tweedy Mile

Workshop 2: January 21, 2012

The second workshop took place on Saturday, January 21, 2012, from 10:00 am to 12:30 pm. Spanish translation was available. The Consultant team gave a brief presentation about the planning effort to date and major findings. The team showed pictures illustrating the different bikeway types proposed in the plan. The team then presented a draft map of the bikeway network and explained the existing and proposed conditions on each facility. Attendees included a representative from CicLAvia, an interested community member from the City of Downey, project team staff, and interested residents and business owners.

After the presentation, the public was invited to ask questions and comment. Feedback included:

- desire for facilities on Imperial Boulevard
- desire for robust educational programs, especially for kids
- concern about traffic volumes during school hours and the proposed road diet on California Avenue
- ideas for further outreach efforts

After the question and answer session, attendees were asked to respond to the draft network of planned projects, and to prioritize the projects with sticker dots. Each participant was given three green dots and three yellow dots. Participants placed green dots next to their highest project priorities and yellow dots next to their second priority projects. To score these, the consultant team counted each green dot as two points, each yellow dot as one point, and summed. The results of the exercise are displayed in the following tables.

Table 2-6: Public Bikeway Priorities

Street	From	To	Project Type	Community Meeting Points
Alexander Ave.	Firestone Blvd.	Southern city limit	Buffered Bike Lanes	11
Tweedy Blvd.	Alameda St.	Los Angeles River	Bike Lanes, Bike Path, Access Improvements	10
Atlantic Ave. / Wright Rd.	Ardmore Ave.	Firestone Blvd.	Type B sharrows (Atlantic) and Buffered Bike Lanes (Wright)	9
Gardendale St.	Los Angeles River	Garfield Ave.	Bicycle Route with Sharrows, Buffered Bike Lanes	7
Los Angeles River Bicycle Path	Ardmore Ave.	Century Blvd.	Access Improvements	7
Otis St.	Northern city limit	Southern city limit	Colored Bike Lanes	6
Independence Ave., Ardmore Ave.	Long Beach Blvd.	Otis St.	Bike Lanes, Sharrows	6
Existing Multiuse Paths in Hollydale Park			Signage and Maintenance Improvements	5
Main St.	Pennsylvania Ave.	Garfield Ave.	Bicycle Route with Sharrows, Bike Lanes	5
Firestone Blvd.	UPRR San Pedro Sub-division	Eastern city limit	Colored Bike Lanes	5
Santa Fe Ave. / Truba Ave.	Ardmore Ave.	Southern Ave.	Buffered Cycletrack	4
Southern Ave.	Los Angeles River	Eastern city limit	Bridge, Bike Lanes	4
UPRR Spur Line	Western city limit	Eastern city limit	Bike Path, Bridges	4
Monroe Ave.	Hollydale Park	Garfield Ave.	Bicycle Route with Sharrows	4
UPRR San Pedro Sub-Division	Ardmore Ave.	Century Blvd.	Bike Path, Bridges	4
Firestone Blvd.	Western city limit	UPRR San Pedro Sub-division	Colored Bike Lanes	4
State St.	Northern city limit	Southern city limit	Colored Bike Lanes	3
Southern Ave.	Burke Ave.	Los Angeles River	Widen Bike Lanes, Add Buffers to Bike Lanes	3
California Ave.	Northern city limit	Southern city limit	Colored Bike Lanes	2
Liberty Blvd.	Otis St.	Long Beach Blvd.	Bicycle Boulevard	2
Missouri Ave.	Truba Ave.	South Gate Park	Bicycle Boulevard	2
Garfield Ave.	Ardmore Ave.	Roosevelt Ave.	Bicycle Lanes / Type B Sharrows	2

Street	From	To	Project Type	Community Meeting Points
Century Blvd.	Los Angeles River	Industrial Ave.	Bicycle Route with Sharrows, Buffered Bike Lanes	2
Michigan Ave	Stanford Ave.	Wright Rd.	Bicycle Boulevard	1
Southern Ave.	Santa Fe Ave.	Burke Ave.	Bike Path Improvements, Bike Lane	1
Paramount Blvd.	Gardendale St.	Century Blvd.	Bike Lanes	1
Stanford Ave.	Southern Ave.	Sequoia Dr.	Bike Route with Sharrows	0
Hildreth Ave.	Southern Ave.	Southern city limit	Bike Route with Sharrows	0
Rio Hondo	Ardmore Ave.	Los Angeles River	Wayfinding Signage Improvements	0

Workshop 3: July 28, 2012

The third workshop was held at the Senior Recreation Center in South Gate Park on July 28, 2012. The Consultant presented an overview of the Plan, the Plan process, the proposed routes and programs, project prioritization and design guidelines. Attendees included local residents, members of the Technical Advisory Committee and City staff.

Most people had questions about the different bikeway types and where they are planned. They were all very positive about the plan. There were two issues raised:

- The proposed 7'-wide truck parking lane on Otis Street may be too narrow and will result in trucks intruding into the bike lane.
- Otis Street may need four lanes north of Firestone Boulevard.

2.4 OTHER PUBLIC COMMENTS

The City invited the public to provide further input through e-mail, fax, or mail. The Los Angeles County Bicycle Coalition submitted a comment letter about the Draft Plan. Some of the ideas in the letter include:

- coordinating bicycle-related programming with the library
- partnering with hospitals and clinics to promote the health benefits of riding a bicycle
- being attentive to the maintenance of lights on bikeways
- adding bicycle parking at the intersection of Otis St. and Santa Ana St., on the border with the City of Huntington Park

All public comments and input were taken into consideration with the development of this Plan. Many of the improvements suggested at meetings and in the survey have been incorporated into the Bicycle Transportation Plan.

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CHAPTER 3
PLANNING CONTEXT

Many other plans, policies, and other documents influence the bicycling environment. These include transportation and land use elements of the South Gate General Plan, adjacent jurisdictions' bike plans, and regional air quality and energy plans. In order to understand the context of the Bicycle Transportation Plan, the consultant reviewed the related documents and data that are described below.

3.1 SOUTH GATE CITY PLANNING

Bicycle Transportation Plan

The City does not have any previous bicycle master plan or bicycle transportation plan.

General Plan 2035

Last updated in 2007, the City's General Plan contains the long-term comprehensive vision for the City of South Gate through 2035. Bicyclists, bikeways, and active transportation appear prominently in this vision. By incorporating bicycling into so many elements of the General Plan, the city recognizes that enabling bicycling not only contributes to mobility but also relates to land use, urban form, open space, health, and public facilities. The following elements of the General Plan describe issues related to bicycling and specify goals, objectives, and actions that will make the city a more bike-friendly place.

Community Design Element

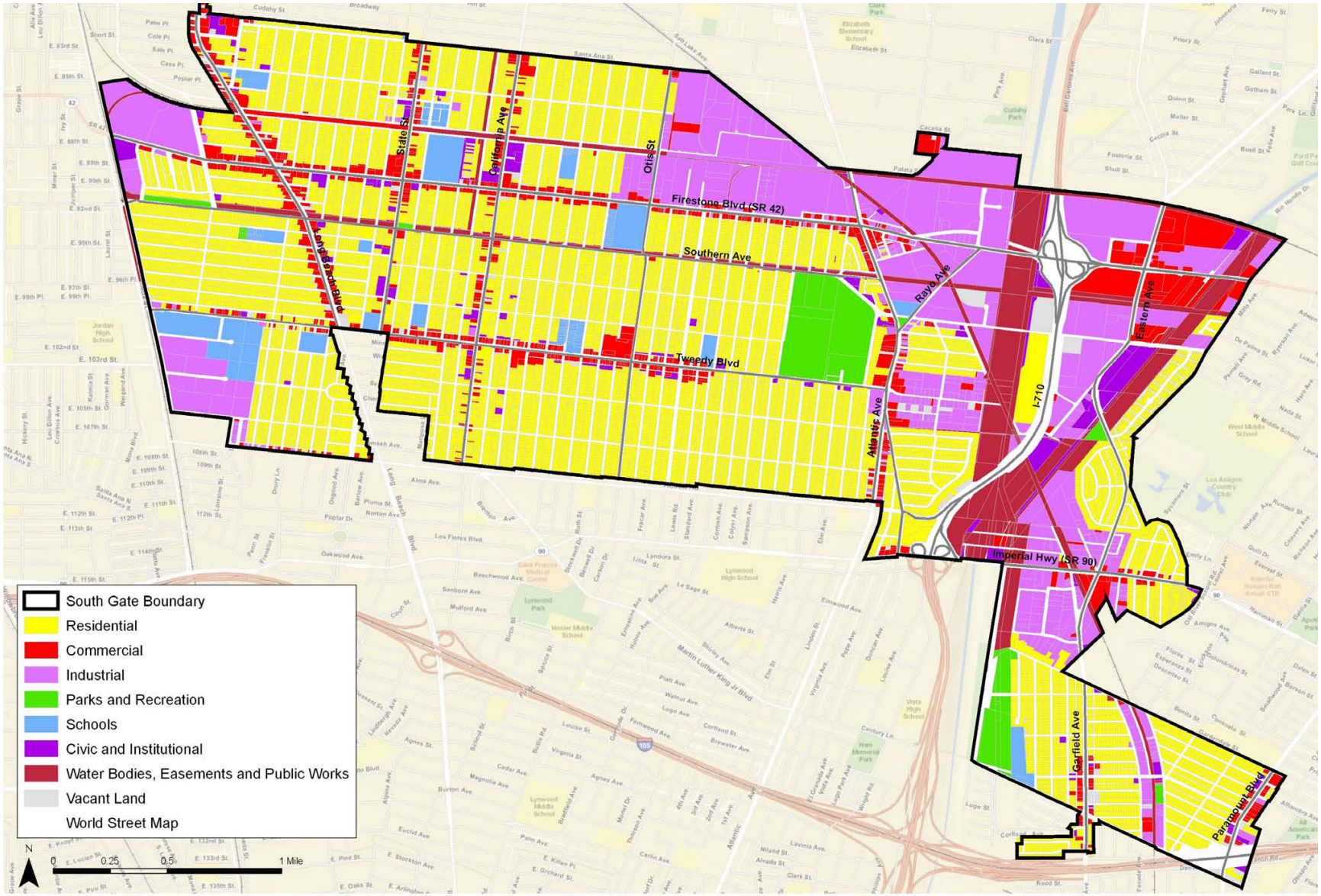
This element provides policy guidelines on the characteristics of the built environment. The element recognizes that transportation and land use affect one another, and calls for land use patterns that enable bicycling and walking. Goal CD 3 calls for integrated land use and transportation development that encourages the use of walking, biking, and public transportation.

Map 3-3 displays the existing land uses in South Gate. There is substantial acreage of industrial land in the northeast portion of the city, adjacent to the rail right-of-way and the Los Angeles River and Rio Hondo. Commercial uses are concentrated along major streets, such as Long Beach Boulevard, Firestone Boulevard, Tweedy Boulevard, and Atlantic Avenue There is a large school complex in the southwest corner of the city, home to Southeast High School and Southeast Middle School.

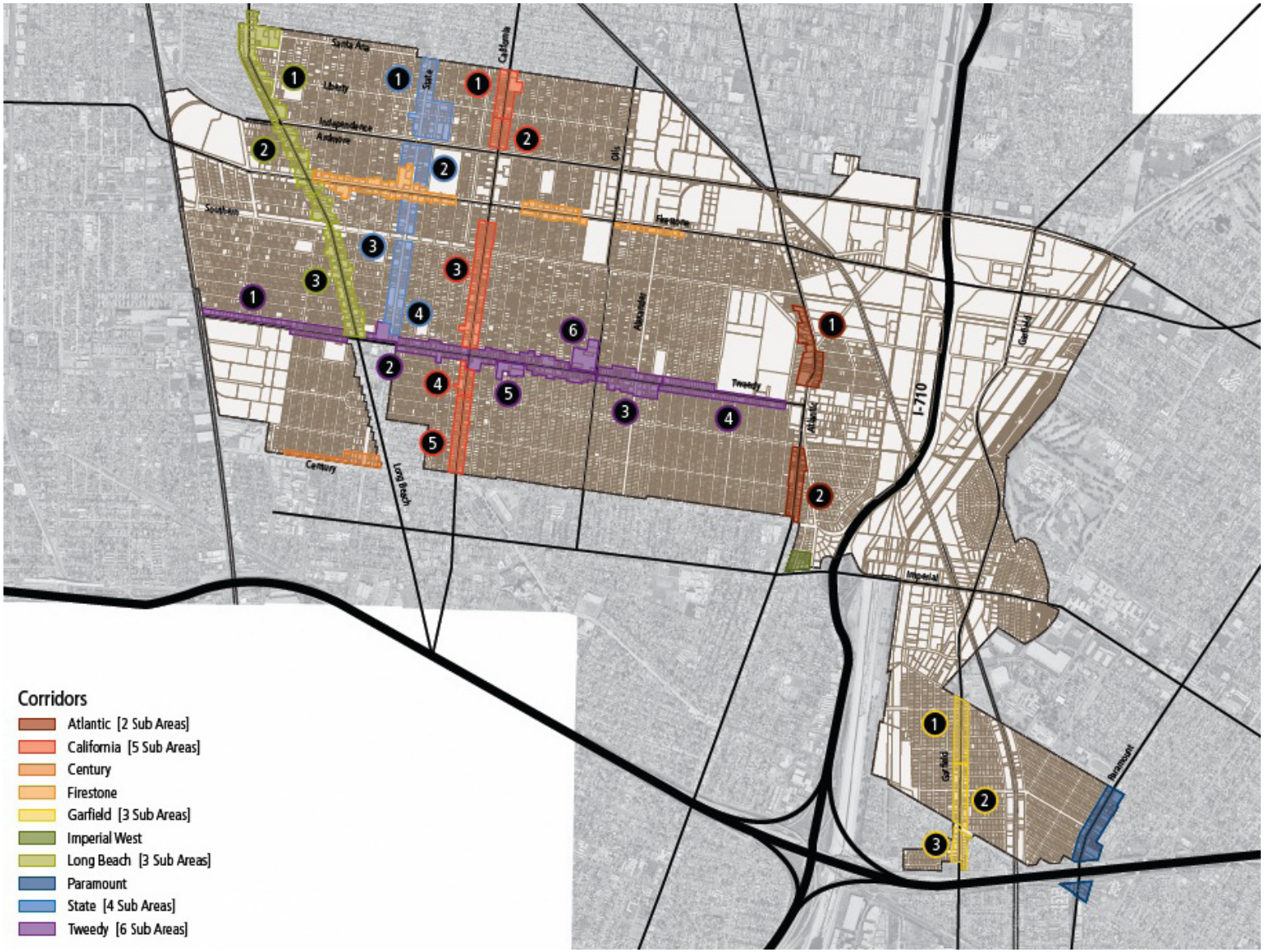
Mobility Element

This element calls for a South Gate that is bicycle-friendly, and it embraces a vision of a multimodal transportation system that "puts people first." This element provides background and motivation for the Bicycle Transportation Plan.

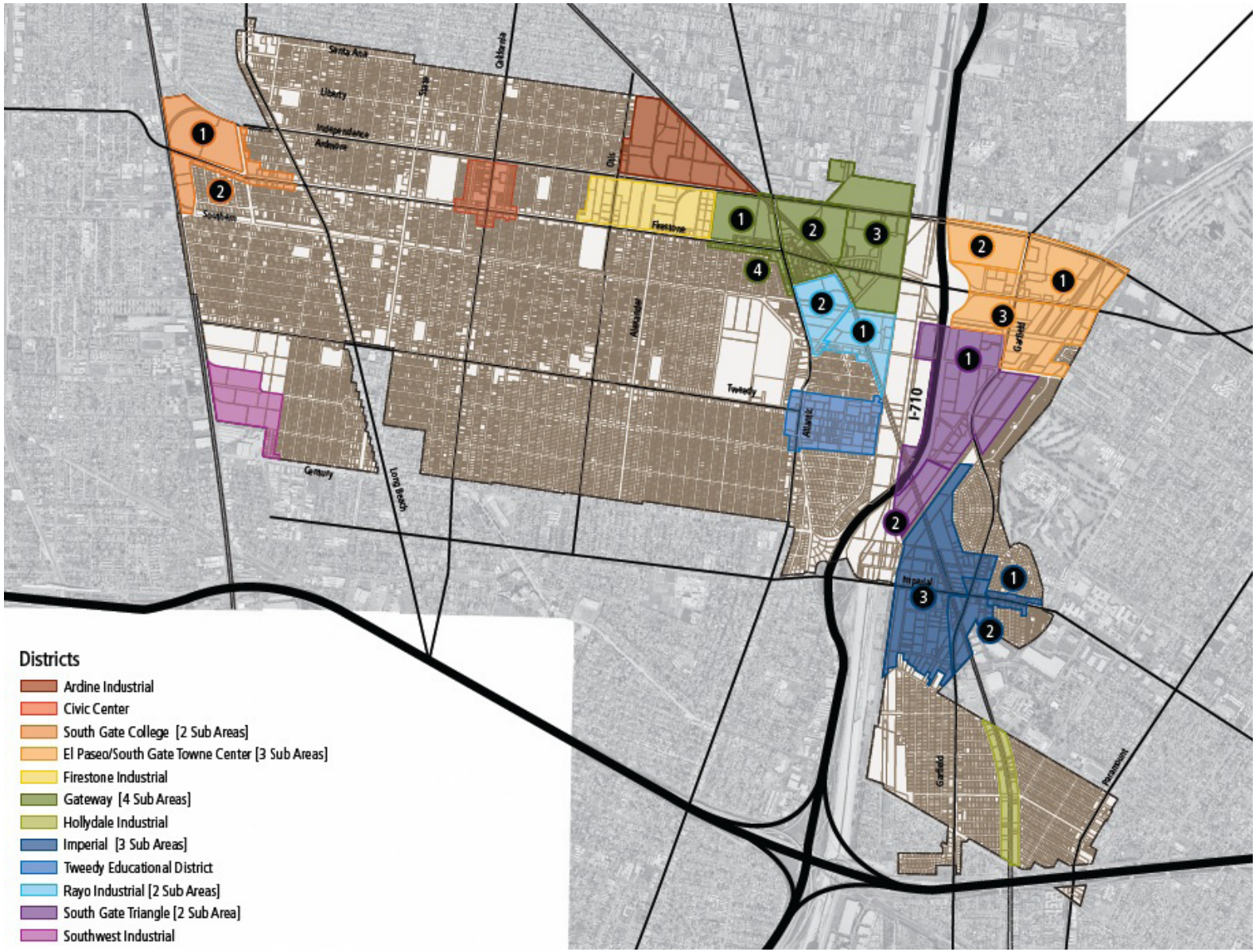
MAP 3-1: EXISTING LAND USES



MAP 3-2: CORRIDOR DESIGNATIONS, GENERAL PLAN 2035



MAP 3-3: DISTRICT DESIGNATIONS, GENERAL PLAN 2035



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The element describes the conditions of all the components of the city's transportation system: streets, rail lines, sidewalks, transit service, and bikeways. Two rail corridors cross the city, both owned by Union Pacific Railroad (UPRR). These are the Spur Line, which runs east-west and parallels Independence Avenue and Ardmore Avenue, and the San Pedro Subdivision, which runs northwest to southeast.

The lack of bicycle facilities is one of the key issues that the mobility element aims to address.

Mobility Element Bicycle Plan

The Mobility Element proposes a network of bikeways. Comprising the network of proposed bikeways is a Class I bicycle path on the Spur Line, Class II bicycle lanes on Alexander Avenue, Southern Avenue, Santa Fe Avenue, and Wilcox Avenue Extension, and a network of Class III bicycle routes. The consultant team conducted fieldwork on all of these proposed routes to determine how they could contribute to the proposed network in Chapter 6. The majority of the proposed routes from the General Plan have been carried over to the Bicycle Transportation Plan, and those that have not have been superceded by a route that will provide superior bicycle mobility.

The Element also proposes six "bicycle hubs" (p. 212). These are central locations that will provide bicycle lockers, racks, and connections to transit. They have been carried over to the proposed bicycle parking and amenities in Chapter 6.

The Mobility Element names many Objectives and Policies related to bicycling. These are:

- Objective ME 1.1 Balance the roadway system with the planned land uses in the City.
  - Policy P.4: The City should require that the cost of transportation mitigations and improvements necessitated by new development be borne by new development (including non-automobile solutions).
- Objective ME 2.1 Provide a connected, balanced, and integrated transportation system of bicycle and pedestrian networks that enable residents to walk and bike, as alternatives to the use of the car.
  - Policy P.1 The city should develop and maintain a citywide bicycle network of off-streeet bike paths, on-street bike lanes, and bike streets
  - Policy P.2 The city should establish a number of bike hubs (centralized locations with convenient bike parking for trip destinations or transfer to other transportation modes) at key transit nodes or commercial nodes.
  - Policy P.3 The city should provide bicycle facilities, such as bicycle lockers and secure bike parking, throughout the City.

- Policy P.7 The city should promote the use of bicycling and walking, through the publication of comprehensive maps and resource materials, and the development and implementation of marketing programs.
- Policy P.8 The City should coordinate the provision of the non-motorized networks (bicycle and pedestrian) with adjacent jurisdictions to maximize connectivity.
- Policy P.9 New or major renovations to office, industrial, institutional, and multi-family projects should provide secure off-street bicycle parking, and are encouraged to provide bicycle facilities such as showers and changing rooms

• Objective ME 2.3: Encourage walking, biking, and use of transit through a variety of supportive land use development and urban design measures.
  - Policy P.3 The city should require new and substantially renovated office, retail, industrial, and multi-family developments to include bicycle and pedestrian amenities in the vicinity of the development, to facilitate bicycling and walking, including on-site bike paths where appropriate, sidewalk improvements, benches, and pedestrian signal push-buttons at nearby signals.
  - Policy P.4 The city should require new developments to implement TDM programs.

The consultant team reviewed these objectives and policies. They are reflected in Chapter 4: Goals, Policies, Actions.

Green City Element

This element emphasizes the inherent, yet unfulfilled value of the Los Angeles River and the Rio Hondo as green space. A key strategy outlined in this element is to capitalize on these waterways as city resources. The element states that "the rivers can provide much needed open space, and new development near the rivers can improve their ecological functioning and provide increased access" (247).

In accordance with this key strategy, Chapter 6 proposes improvements to access and amenities on the existing bicycle paths on these two rivers.

Healthy Community Element

This element notes that unsafe and inactive transportation networks are responsible for two of the city's most pressing health issues: (1) traffic fatalities and injuries; and (2) obesity and the related problems of diabetes and stroke.

The element sets the goal of building an excellent bikeway network throughout the city and improving bicycle safety around schools specifically. Action HC 10 states that the city should analyze unsafe bicycle and pedestrian areas, and Action HC 11 states that the city should establish bicycle parking standards.

Public Facilities Element

Action PF3 of this element states that the City should pursue Safe Routes to School grant funding. Chapter 4 reiterates this goal.

Appendix C — Traffic Study

This Appendix contains the average daily traffic volumes on streets throughout South Gate. The consultant team reviewed these volumes in order to determine streets eligible for lane reductions in order to accomodate bike lanes (i.e. road diets).

Parks and Recreation Master Plan

The Parks and Recreation Master Plan concerns recreational facilities and programs in the City of South Gate. The Needs Assessment chapter of the plan states that during the community process, participants expressed their desire for a system of bikeways connecting to Cesar Chavez Park, Triangle Park, and the Los Angeles River. Participants suggested that bikeways be installed or improved on Long Beach Boulevard, Atlantic Avenue, Firestone Boulevard, Tweedy Boulevard, and Southern Avenue. This plan proposes bikeways on all of those streets.

South Gate Middle School Safe Routes to School Plan

The City of South Gate as well as the community of stakeholders at South Gate Middle School intend to increase the number of children walking and biking to school, and protect the safety of all kids who walk or bike to school. This comprehensive 5 E Plan provides a guide for the City and school to implement a SRTS program at South Gate Middle School. The SRTS Plan includes bikeway improvements on Southern Avenue and a road diet with a colored bicycle lane on Otis Street, both of which are recommended in Chapter 6.

Municipal Code

Local municipal code in South Gate covers riding single file, sidewalk riding, bicycle licensing, provision of bicycle parking, and display of bicycle-related information in large nonresidential developments. We list the relevant sections below.

Section 8.10.010 requires bicyclists to ride in single file, unless otherwise provided for by the California Vehicle Code. Section 8.10.020 prohibits sidewalk riding in select areas: business districts, adjacent to schools (when school is in session), and adjacent to recreation centers and churches, when they are being used. Section 8.10.020 also requires bicyclists who are riding on the sidewalk to yield to pedestrians, and to yield to motor vehicle traffic when entering the roadway.

Section 8.20.020-030 requires all bicycles to be licensed with the South Gate Police Department. This policy is not currently enforced.

Section 11.51.040 enumerates transportation demand and trip reduction measures that all new development must undertake to the city's satisfaction. Several of these measures encourage bicycling. 11.51.040 2A(i)(d) requires nonresidential development of 25,000 square feet or more to display bicycle route maps and bicycle safety information in a transportation information center. Developments of 50,000 square feet or more must also provide bicycle parking in the amount of 4 spaces for the first 50,000 sq. ft., and 1 space for each additional 50,000 square feet. Developments of 100,000 square feet or more must provide access routes connecting the on-site bicycle parking to the external circulation system.

Section 11.55.050 requires bicycle parking at amusement arcades in the amount of one space per amusement device, up to ten devices, and one space for each additional five devices. Section 7.49 requires helmets for anyone using a BMX bicycle in a designated area of a city park.

3.2 RELATED PLANS AND PROJECTS

East Los Angeles College Firestone Educational Center

The Los Angeles Community College District plans to construct a new full-service community college at the northwest corner of the intersection of Firestone Boulevard and Santa Fe Avenue. The proposed project will be implemented in two phases and includes the adaptive re-use of an existing industrial building, demolition of two buildings, and the construction of a new building. The campus will accommodate 12,000 students at the end of phase two, and 7,500 students at the end of phase one.

LAUSD H.S. No. 9 — Site Plan

The proposed LAUSD High School No. 9, currently under construction, will be located north of Tweedy Boulevard, east of Atlantic Avenue, and west of the LA River. As part of the project, the City of South Gate will vacate portions of Tweedy Boulevard, Adella Avenue and Chakemco Street. Tweedy Boulevard will end in a cul-de-sac east of Atlantic Avenue on the school site. LAUSD has agreed to connect Tweedy Boulevard to the river via a bicycle path. The proposed bikeway is included in Chapter 6.

I-710 Corridor Project

The Los Angeles County Metropolitan Transportation Authority (Metro), in partnership with several agencies including the Gateway Cities Council of Governments, is currently studying a range of alternatives to improve the I-710 corridor. The project aims to improve air quality, improve mobility, congestion, and safety, and to assess alternative and green goods movement strategies. At this time, the project includes options for extending Southern Avenue and Patata Street over the LA River and I-710 Freeway. There is also an option to vacate the southbound off-ramp at Wright Road in favor of new on- and off-ramps that will be constructed. The project may also affect Firestone Boulevard, which crosses the I-710.

Orangeline Development Authority

The Orangeline Development Authority (OLDA) is a joint powers agency formed to pursue development of a grade-separated, high-speed transit system in Southern California. Preliminary plans show several alignment options that pass through the City of South Gate, and several that include a station on Firestone Boulevard just east of Atlantic Avenue. The proposed bikeway network connects to this location.

3.3 BIKEWAYS AND TRAILS PLANS OF NEIGHBORING CITIES

Some of South Gate's neighboring jurisdictions have bicycle and trails plans that propose links with its facilities. This Plan will aim for a complete network by proposing connections to these existing and planned bikeways and trails.

Along the north, east, and southeast boundary of South Gate, are the cities of Huntington Park, Cudahy, Bell Gardens, Paramount and Downey, all of which have not proposed any bikeways. The **City of Lynwood** is in the process of preparing a bicycle plan, and the preliminary route network will connect to South Gate's network at State Street, Sequoia Drive, Otis Street, Alexander Avenue, Hildreth Avenue, and Wright Road.

To the west lie the **County of Los Angeles** and **City of Los Angeles**. In February 2012, the County passed their updated Bicycle Master Plan. The Plan proposes bikeways in county unincorporated communities. Adjacent to South Gate are the unincorporated communities of Walnut Park and the Florence/Firestone district. The Plan proposes a bicycle lane on Firestone Boulevard and a bike route on 92nd Street, which turns into Southern Avenue. The South Gate Bicycle Transportation Plan proposes connections to the bike route on 92nd Street and to the bike lane on Firestone Avenue.

The City of Los Angeles updated its Bicycle Plan in 2011. The plan proposes bicycle lanes on Century Boulevard and 92nd Street, and bicycle-friendly streets on 103rd Street and 107th Street. These proposed facilities are not directly adjacent to the City of South Gate, and are

separated by portions of the City of Lynwood and the Alameda Corridor. As such, this plan does not propose any connections to these facilities, but interjusidictional coordination may make some connections possible in the long term.

3.4 CONSISTENCY WITH REGIONAL PLANS

State Bicycle Transportation Account

California Streets and Highways Code 891.2 enumerates what a City must include in its bicycle plan in order to be eligible for State Bicycle Transportation Account funds. This plan has been prepared in compliance with these items, and they appear in the checklist on page v.

Metro Bicycle Transportation Strategic Plan

This Plan proposes bicycle transit hubs and gap closures in the regional bikeway network. One of the potential bike-transit hubs, Hub 1009, is located at the intersection of Firestone Boulevard and Atlantic Avenue in the City of South Gate. This hub received a score of 194 out of 359 possible points on a metric of future bicycling and walking activity. The intersection of Firestone Boulevard and Atlantic Avenue is also a proposed mobility hub in the City of South Gate's General Plan. The proposed bikeways and bicycle amenities in Chapter 6 of this plan reflect the importance of this central intersection by proposing Green Sharrows on Atlantic Avenue, colored bike lanes on Firestone Boulevard, and a new bicycle path on the San Pedro Sub-Division rail right-of-way.

The Bicycle Transportation Strategic Plan (BTSP) also includes policies supportive of bicycling. Policy II.2 is to expand the number of high quality end-of-trip bicycle facilities in the county-wide region and to create a network of bike-transit centers. Policy III.1 is to improve bicycle access to existing and future bike-transit hubs. This plan includes provisions to achieve those objectives, including the proposed bike-transit hubs shown in Map 6-2: Existing and Proposed Bicycle Parking, Amenities, and Intermodal Links on page 6-39. Other policies in the BTSP call for increased promotion and incentives for biking to work, and youth and adult bicycle education. These are reflected in the proposed programs in Chapter 6.

The Metro Bicycle Transportation Strategic Plan does not specify any regional bikeway gap closures in South Gate.

REGIONAL TRANSPORTATION PROGRAMS

This Bicycle Transportation Plan supports regional transportation goals, including those of the Southern California Association of Governments (SCAG) and Metro. The 2008 Regional Transportation Plan (RTP) put forth by SCAG calls for increased accomodation and planning for bicyclists. The Southern California Air Quality Management District (SCAQMD) delegates its transportation planning to SCAG through its RTP document, which identifies goals and objectives that promote bicycling and reduce air emissions. An emphasis on utilitarian bicycling, including supporting amenities and infrastructure, is an important aspect of meeting these goals.

The Los Angeles County Congestion Management Program (CMP) awards credits and debits toward funding eligibility for various transportation improvements. For example, implementation of bicycle facilities would give the City credits in the CMP. These credits can be used to offset debits for other transportation improvements elsewhere in the City.

By encouraging bicycling, the Bicycle Transportation Plan will also meet the goal of reduced energy consumption.

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CHAPTER 4

GOALS, POLICIES, ACTIONS

The City will use this Plan to create more complete streets providing safer travel for all users. The following goals are broad statements describing a desired condition; the policies and actions provide the method to achieving the goal.

4.1 GOALS

1. Create an environment where people of all ages can circulate safely and easily on a bicycle.
2. Increase the number of bicyclists by enticing more people to use their bicycles instead of driving.
3. Promote public health and safety within our community.
4. Enhance the economic viability of South Gate.
5. Promote safety education for all users of our transportation infrastructure.

4.2 POLICIES AND ACTIONS

POLICY 1: THE CITY WILL DEVELOP A COMPLETE BIKEWAY NETWORK THROUGHOUT SOUTH GATE.

Where appropriate and feasible, the City shall endeavor to:

Actions

1. Implement planned citywide network of bikeway improvements.
2. Ensure the maintenance of the bikeway and roadway system, and prioritize maintenance for bikeways.
3. Recognize that bicyclists ride on all streets and all streets should accommodate bicyclists.
4. Ensure that bicyclists can activate traffic signals at all vehicle-activated intersections.
5. Add destination and way-finding signage along bikeways.
6. Implement traffic calming techniques to create suitable bikeways.
7. Restripe appropriate multi-lane streets with road diets and/or narrower travel lane widths to create space for bicyclists.
8. Install roundabouts, mini-roundabouts, mini-traffic circles, and other treatments to reduce the need for bicycles to stop, and consider these options in place of stop signs and traffic signals.
9. Coordinate and link South Gate's bikeway network with proposed and existing bikeways in surrounding jurisdictions.
10. Conduct periodic bicycle counts at various locations using commonly accepted

methodologies to determine appropriate upgrades to the bicycle facilities.

11. Include bicycles as a factor when considering traffic calming measures.
12. Review and adopt applicable sections of the Model Design Manual for Living Streets.

POLICY 2: THE CITY WILL ACTIVELY ACCOMODATE AND ENCOURAGE SAFE AND CONVENIENT BICYCLE UTILITARIAN TRIPS TO SCHOOLS, EMPLOYMENT SITES, STORES, PARKS, AND OTHEER DESTINATIONS THROUGHOUT SOUTH GATE.

Where appropriate and feasible, the City shall endeavor to:

Actions

1. Ensure the bikeway network and facilities serve all users, including children, intermediate cyclists, experienced cyclists, and recreational cyclists.
2. Carry out promotional efforts to encourage bicycle use.
3. Initiate and support promotional rides, bike-to-work days, bike-to-school days, education events and other activities to encourage more people to ride bicycles.
4. Encourage existing employers and commercial landowners to provide bicycle parking, showers, and clothing lockers for commuters.
5. Assist employers with promotional campaigns to encourage bicycle commuting.
6. Conduct targeted promotional efforts to educate cyclists on how to use the bus bike racks.

POLICY 3: THE CITY WILL TAKE STEPS TO ENHANCE BICYCLE SAFETY.

Where appropriate and feasible, the City shall endeavor to:

Actions

1. Implement planned citywide network of bikeway improvements.
2. Improve bicycle safety with enhanced signage and striping.
3. Provide bicycle safety education in schools, at worksites, and at public venues. These programs should include comprehensive safety training.
4. Publish safe bicycle riding tips and bikeway maps.
5. Provide information on the City website regarding safe bicycle riding.

6. Ensure enforcement of traffic laws by South Gate Police Department as applicable to bicyclists, pedestrians, and motorists.
7. Ensure that the South Gate Police Department and other departments within the City understand proper and safe riding behaviors as well as proper crash reporting procedures.
8. Educate bicyclists and motorists about safe use of the streets.
9. Work with schools to implement Safe Routes to Schools programs.
10. Work with outside organizations and agencies to provide free helmets and lights to students and low-income cyclists.

Policy 4: The City will make bicycle parking available, secure, and convenient throughout South Gate.

Where appropriate and feasible, the City shall endeavor to:

Actions

1. Create design standards for bicycle parking regarding the device type, spacing, visibility, accessibility, etc.
2. Add safe, convenient, standardized bicycle parking at parks, schools, libraries, and other civic buildings where needed.
3. Encourage existing commercial property owners to install bicycle racks and/or bicycle lockers on their property. Initiate a bicycle parking program to create bicycle parking in existing shopping and neighborhood centers.
4. Require safe and convenient bicycle parking in new commercial and industrial developments. Permit reductions in auto parking or other accommodations where needed to allow for the placement of bicycle racks and lockers.
5. Work with Metro and Metrolink to provide and maintain bicycle lockers, racks, and other parking options at transit stations and stops.
6. Add bicycle racks to city-operated transit buses, as well as lockers, racks, and other parking options at key transit stops.
7. Conduct periodic surveys to determine where bicycle parking is needed, and maintain existing bicycle parking.

Policy 5: The City will work to implement existing Safe Routes to School (SRTS) plans, and create and implement plans where they do not exist in each South Gate school within the next 10 years.

Where appropriate and feasible, the City shall endeavor to:

Actions

1. Create a citywide SRTS coalition of key stakeholders.
2. Form SRTS coalitions of key stakeholders at each school.
3. Complete SRTS plans for each school that include all "5 Es": education, engineering, evaluation, enforcement, and encouragement.
4. Implement a complete network of bikeways that provides access to schools and enhance connectivity.
5. The citywide SRTS program will include all educational institutions, including but not limited to: South Gate K–12 public and private schools, adult schools, East Los Angeles College (South Gate campus), and other educational institutions.

Policy 6: The City will ensure that new development is bikeable, walkable, and barrier-free.

Where appropriate and feasible, the City shall endeavor to:

Actions

1. Enact general plan and zoning code that embodies smart growth principles.
2. Enact general plan and zoning code that yields compact and mixed-use development.
3. Work with the School District to maintain existing neighborhood schools.
4. Encourage large new development to be designed with small blocks that have interconnected street networks, both internally and with adjacent development.
5. Review and adopt applicable sections of the Model Design Manual for Living Streets.
6. Expand existing requirements and incentives for bicycle parking, showers, and clothing lockers citywide to cover a great number of developments.

Policy 7: The City will implement this Bicycle Transportation Plan by 2035.

Where appropriate and feasible, the City shall endeavor to:

Actions

1. Create a tiered priority project list based on immediate needs and available funds.
2. Aggressively pursue all federal, state, and local funding options; leverage funds to maximize matching opportunities.
3. Work with state and and federal representatives to continue and expand existing funding and policies that support bicycling.
4. Seek opportunities to incorporate bikeway projects into new development, road resurfacing, restriping, etc.
5. Prepare and present annual implementation progress reports to the City Council.
6. Seek cooperation with public and private entities related to utility corridors and waterways in the City.
7. Update the Bicycle Transportation Plan every five years.

CHAPTER 5
EXISTING CONDITIONS

South Gate has a number of existing bikeways and bicycle amenities. There are bicycle paths on the Los Angeles River, the Rio Hondo, and the utility right-of-way adjacent to Southern Avenue. There is also an existing bicycle lane on Southern Avenue. The City has public bicycle parking at a number of the schools, in parks, and at the intersection of California Avenue and Tweedy Boulevard. The following describes in detail existing conditions for bicyclists in South Gate.

5.1 BIKEWAYS

Caltrans designates three types of bikeways:

Class I: Referred to as a bike path, shared-use path, or multi-purpose trail. Provides for bicycle travel on a paved right-of-way completely separated from any street or highway. Other users may also be found on this type of facility.

Class II: Referred to as a bike lane. Provides a striped lane for one-way bicycle travel on a street or highway.

Class III: Referred to as a bike route. Provides for shared use with motor vehicle traffic.

Chapter 9 provides design guidelines for each of these types of bikeways, including other features that are described in the proposed projects.

The following table shows existing bikeways in South Gate. Currently, the City has 3.2 miles of Class 1 bike paths, 0.8 miles of Class II bike lanes, and 0 miles of Class III bike routes. A finer network of well designed bikeways will accommodate and encourage more bicycling.

Table 5-1: Existing Bikeways in South Gate

Street or Alignment	From	To	Facility Type	Mileage
Los Angeles River	North city boundary	South city boundary	Bike Path	1.6 mi
Rio Hondo	North city boundary	South city boundary	Bike Path	1.6 mi
Utility Right-of-Way parallel to Southern Ave.	West of Truba Ave.	Burke Ave.	Bike Path	2.3 mi
Southern Ave.	Burke Ave.	Los Angeles River	Bike Lane	0.8 mi

The Los Angeles River Bicycle Path runs throughout the City of South Gate. It extends about 3 miles north of South Gate, and about 12 miles south of South Gate to the City of Long Beach. North of Imperial Highway, the path runs on the west bank of the river, and south of Imperial Highway it runs on the east bank of the river. Between the confluence with the Rio Hondo and Imperial Highway, there are two paths, one on each side of the river. The path is paved, landscaped, and separated from the river in some sections by fencing. There are grade-separated undercrossings when the path crosses city streets, and has access points at major streets and parks, including Firestone Boulevard, Tweedy Boulevard, Imperial Highway, and Hollydale Park.

The Rio Hondo Bicycle Path runs from the northern boundary of the city to the confluence with the Los Angeles River. It extends about 15 miles north of the city boundary to the City of Arcadia. The path runs on the east bank of the river. There are access points at Firestone Boulevard, Southern Avenue, and Garfield Avenue.

The bicycle path on the Utility Right-of-Way parallel to and just north of Southern Avenue runs east-west through much of the City. It does not currently support utilitarian bicycling. Path crossings at signalized intersections are treated like pedestrian crossings. At unsignalized intersections, some of the crossings are treated like pedestrian crossings, and others are midblock crossings where bicyclists must yield to vehicles. The path curves throughout the right-of-way to avoid utility poles rather than following a straight line.

The bicycle lane on Southern Avenue connects the Los Angeles River to the bicycle path along Southern Avenue. It also serves South Gate Park.

Map 5-1 below shows the existing bikeways.

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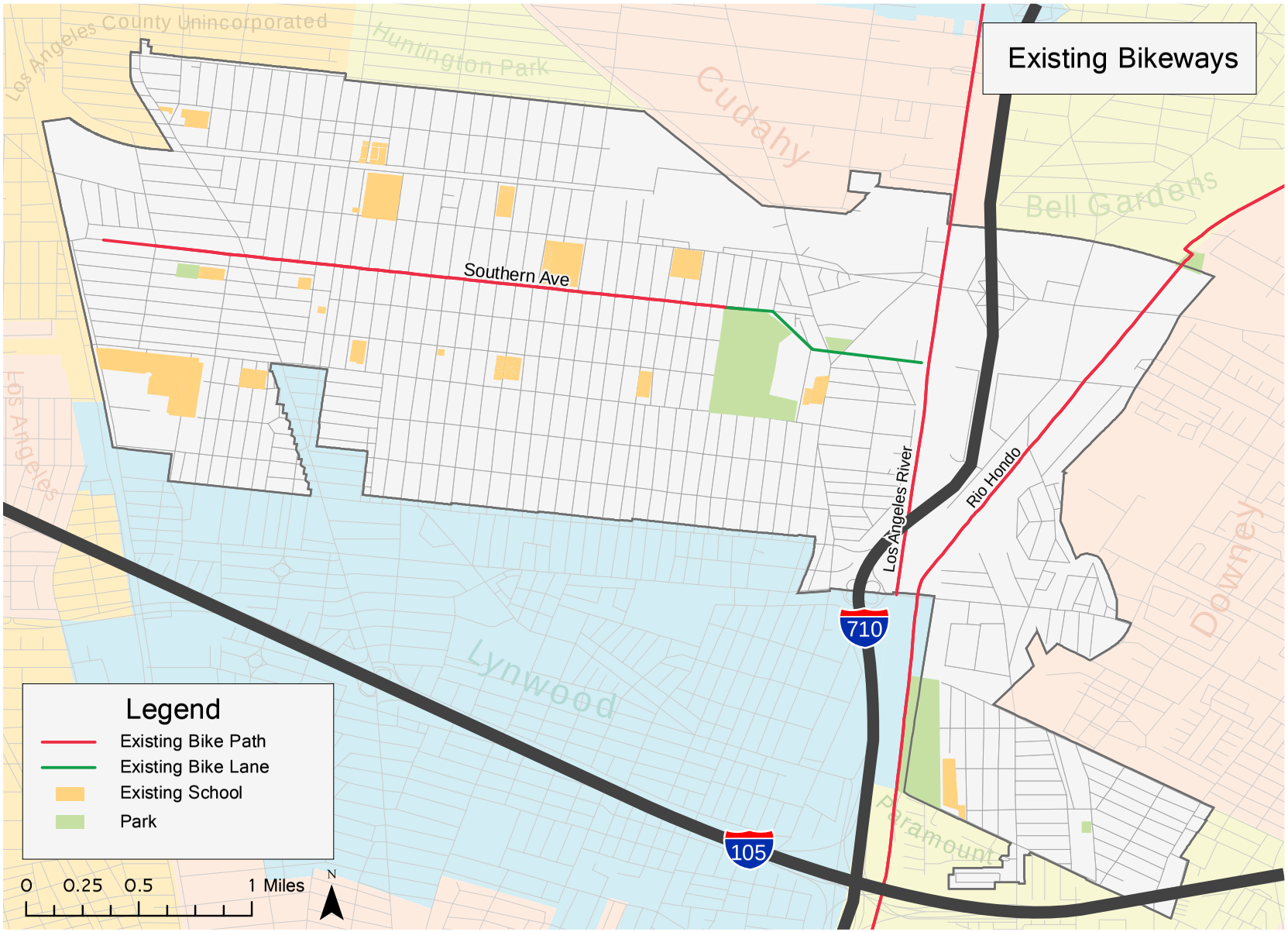
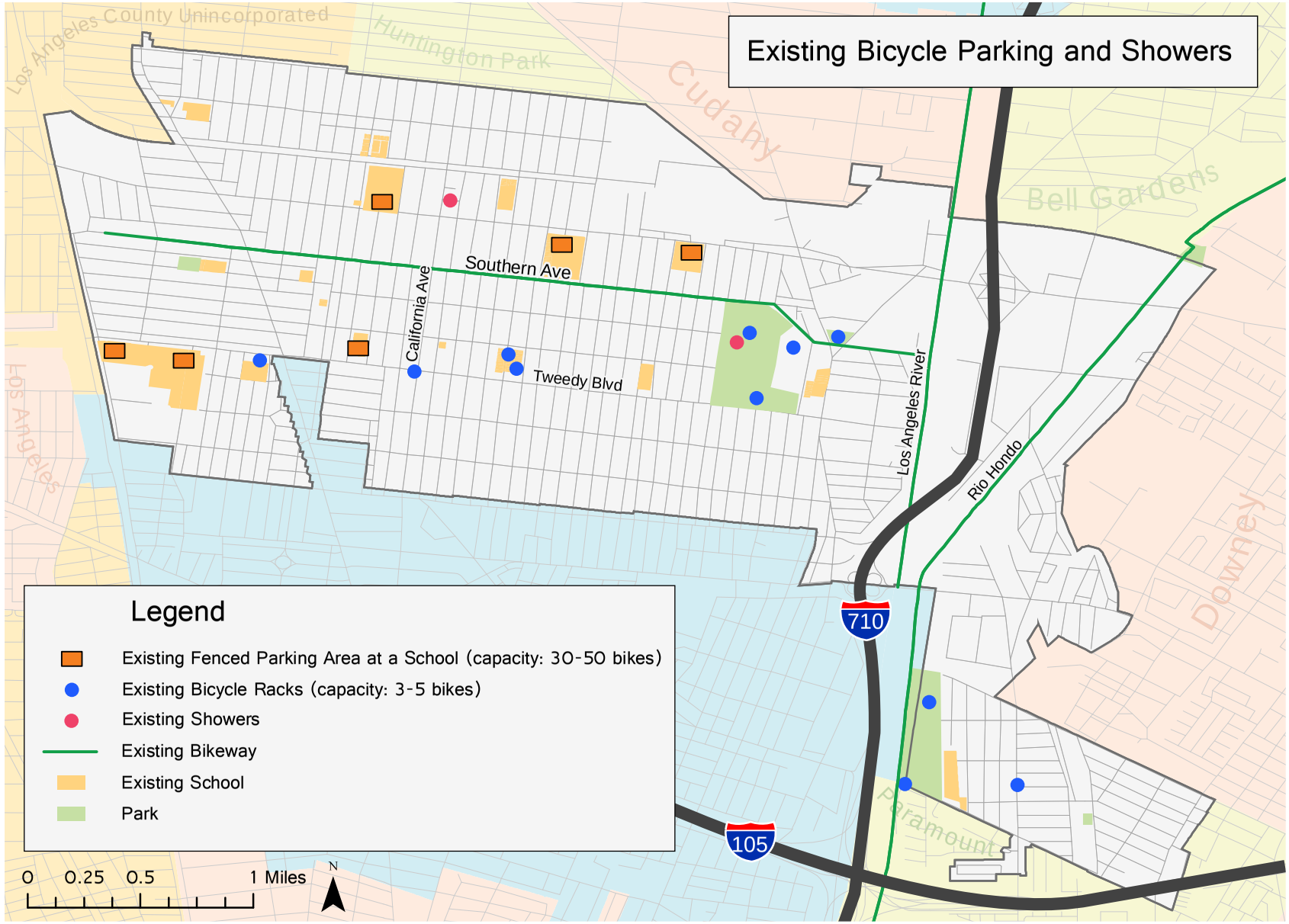
MAP 5-1: EXISTING BIKEWAYS



MAP 5-2: EXISTING BICYCLE PARKING AND SHOWERS



5.2 BICYCLE PARKING

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. The bicycle leans against the rack and the bicyclists use their own lock to secure the bicycle to the rack. Racks should be placed at dispersed locations to support 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, bike rooms, secured areas, attendant parking, or automated parking.

Bicycle racks are available in the City of South Gate at schools, parks, access points to the LA River, the intersection of California Avenue and Tweedy Boulevard, and on Garfield Avenue at Roosevelt Avenue in the southeast portion of the City. There are no bicycle lockers in the City. Fenced areas for parking bicycles are provided at several city schools. South Gate Municipal Code currently requires bicycle parking only at amusement arcades and developments larger than 50,000 square feet.

Existing Parking along the LA River

According to the City's survey (see Table 2-5 on page 2-12 of Chapter 2), South Gate's parks are the number one location in need of additional parking. Survey respondents also would like to see more bicycle parking along Tweedy Boulevard, especially in Tweedy Mile, as well as on Firestone Boulevard and near schools in South Gate.

The City currently does not have a bicycle parking program, or standard style of bicycle parking. Chapter 6 proposes bicycle parking at various locations throughout the City, and Chapter 9 provides guidance on rack design, lockers, and other forms of bicycle parking.

The location and type of existing parking is shown in in Map 5-2.

5.3 SHOWERS AND CHANGING FACILITIES

These facilities enable bicycle commuters to shower and change. The City of South Gate currently has showers and changing facilities in two locations: City Hall has showers and lockers available for City staff, and there are public shower and changing facilities in South Gate Park.

The location of existing showers and changing facilities, is shown in Map 5-2.

5.4 LINKS TO OTHER TRANSPORTATION MODES

The Los Angeles County Metropolitan Transportation Authority (Metro) provides local and rapid bus service throughout South Gate. These services connect South Gate to much of the greater Los Angeles region.

Four bus lines run at least every 15 minutes during the daytime:

- Rapid Bus 760 and Local Bus 60 run on Long Beach Boulevard and connect to the Metro Green Line to the south and downtown Los Angeles to the north.
- Local Bus 115 runs on Firestone Boulevard and connects to Downey, the Metro Blue Line, and the Metro Silver Line, among other destinations.
- Rapid Bus 762 and Local Bus 260 run on Atlantic Avenue, and connect to El Camino College to the south, and East LA Civic Center and Pasadena to the north.

Other bus lines in South Gate are:

- Local 117, which runs on Tweedy Boulevard
- Local 251, which runs on California Avenue
- Local 120, which runs on Imperial Highway
- Local 258, which runs on Garfield Avenue
- Circulator 612, which runs on Otis Street Abbott Road, and Imperial Highway

Three light-rail stations are located just outside the city limits.

- The Firestone Station of the Metro Blue Line, 0.8 miles west of the city boundary
- The Long Beach Station of the Metro Green Line, 0.9 miles south of the city boundary
- The Lakewood Station of the Metro Green Line, 1.1 miles southeast of the city boundary

Other than the bicycle racks at the intersection of California Avenue and Tweedy Boulevard, there are currently no bicycle parking facilities at transit stops.

Metro buses have standard storage for two bicycles at the front of each bus. Bicycles are allowed onboard at the discretion of the operator. Metro Rail cars have designated spaces to store bicycles.

The City of South Gate operates its own bus service, the Get Around Town Express (GATE). The GATE buses do not currently have racks for on-board storage of bicycles.

There are currently no major transit stations, park-and-ride facilities, or other intermodal links in the City of South Gate.

5.5 RIDERSHIP

According to the U.S. Census American Community Survey, between 2005 and 2009, 0.03% to 1.0% of South Gate residents commuted to work by bicycle. This rate is similar to bicycle commute rates in Los Angeles County and in the State of California. The Census only concerns the journey to work, which comprises less than 20% of all trips. Bicycling may be used for all trip purposes. To address this data gap, cities can conduct bicycle counts. South Gate does not currently conduct bicycle counts, but Chapter 6 includes a proposed bicycle count program to better understand the distribution and demographics of bicycling in the city.

5.6 CRASH ANALYSIS

South Gate Police Department Records show that between 2007 and 2011, a five year period, there have been 96 bicycle-involved crashes resulting in injuries and one bicycle-involved crash resulting in a fatality in the city of South Gate. The fatality occurred on Firestone Boulevard, just west of the intersection of Firestone Boulevard and Atlantic Avenue. There is no temporal trend in the number of crashes, as Chart 5-8 shows.

CHART 5-8: BICYCLIST INJURIES IN SOUTH GATE, 2007–2011

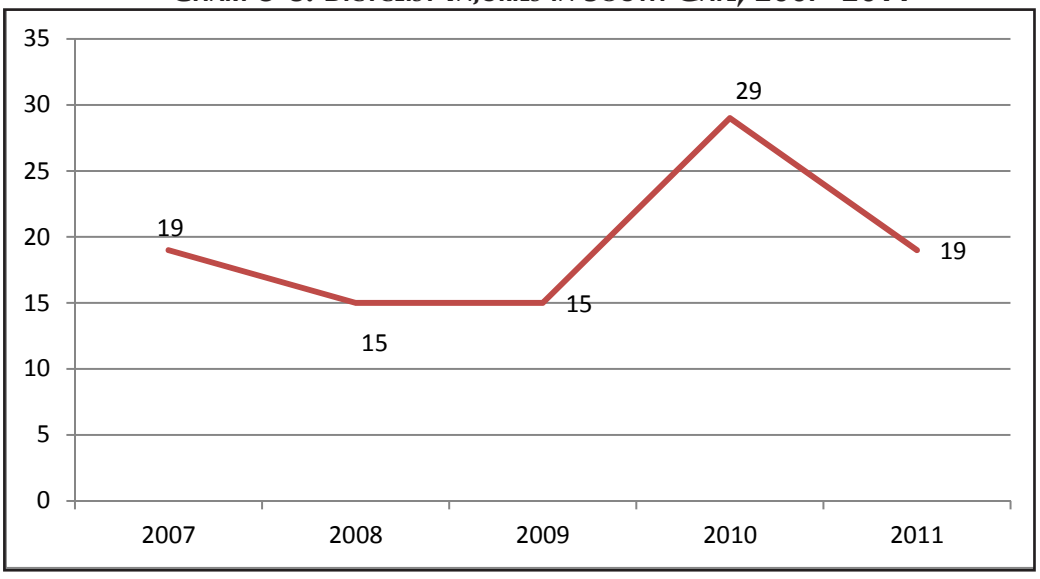


Table 5-2 compares the number of bicycle-involved crashes per 1000 people in South Gate with the rate in the State of California as a whole, using the three most recent years for which there is statewide data available.

Table 5-2: Comparison of Crash Rates, City of South Gate and State of California

	City of South Gate			State of California		
Year	Number of Crashes*	Population Estimate**	Crashes per 1000 People	Number of Crashes*	Population Estimate**	Crashes per 1000 People
2007	19	102,489	0.19	10,646	36,264,467	0.02
2008	15	97,446	0.15	11,814	36,418,499	0.01
2009	15	95,913	0.16	12,150	36,589,387	0.01

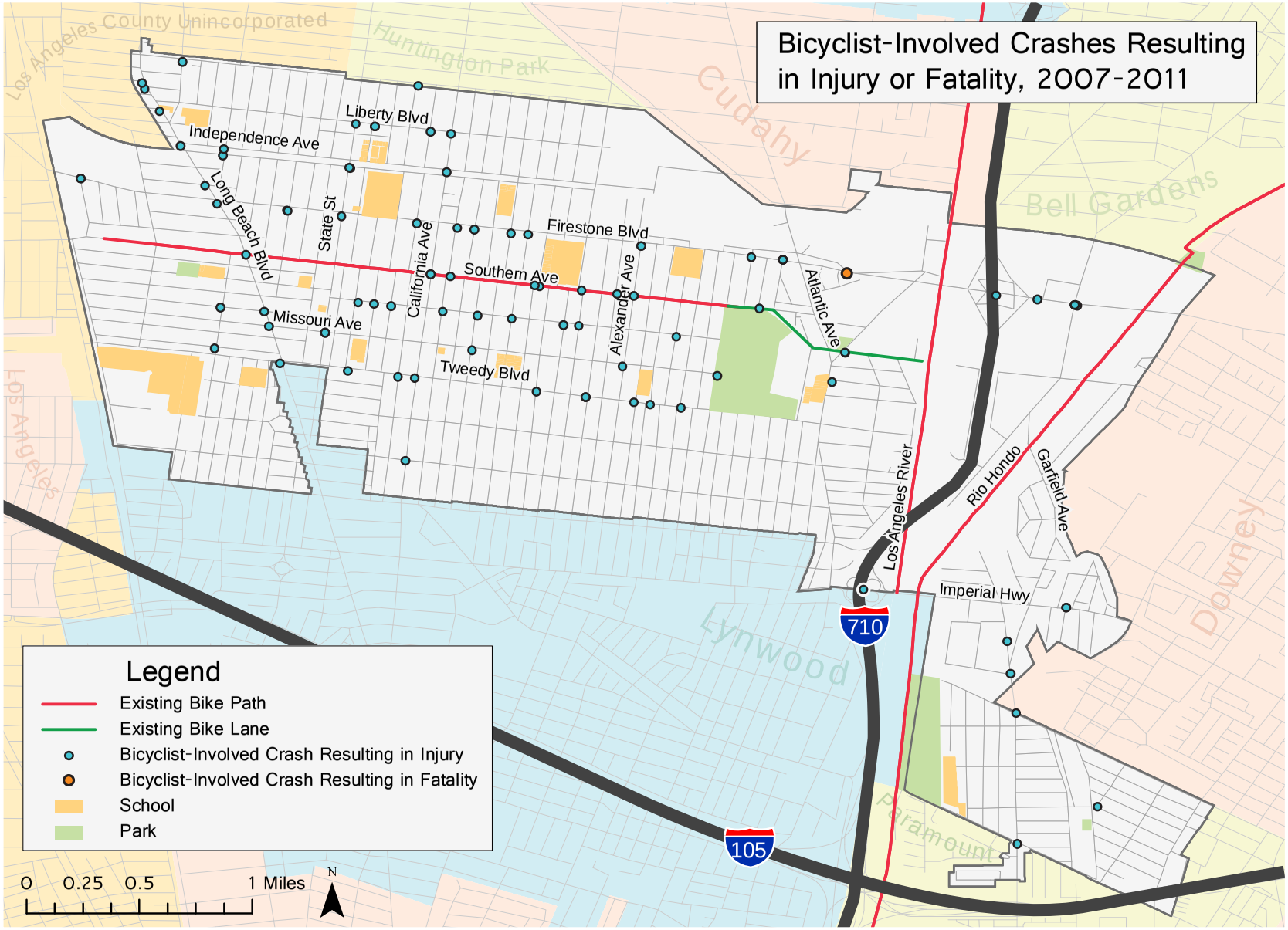
*Source: SWITRS

**Source: American Community Survey Three-Year Estimates

The crash rate in South Gate is larger than the per capita rate in the State of California by about an order of magnitude. Because we do not have direct data on bicycling activity, there are two possible explanations for this difference. One explanation is simply that more bicycling is happening in South Gate, and so more crashes are likely to happen. Another explanation is that bicycling is more dangerous in South Gate than it is in the State as a whole. The difference in crash rates may be caused by either of these explanations, or a combination of these two.

As Map 5-3 illustrates, bicyclist-involved crashes occurred in all areas of the city. About half of the crashes took place on streets with heavy vehicle traffic: Firestone Boulevard, Long Beach Boulevard, Southern Avenue, Imperial Highway, and Garfield Avenue. By constructing bicycle facilities on these streets, and on alternative routes with less vehicle traffic, the city will improve bicycle safety.

MAP 5-3: BICYCLE-INVOLVED CRASHES, 2007-2011



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5.7 EDUCATION PROGRAMS AND PROMOTIONAL CAMPAIGNS

The City of South Gate supports bicycling through a number of ongoing programmatic efforts.

Safe Routes to School

South Gate is developing a Safe Routes to School Plans for each elementary and middle school in the city, totalling 16 schools. In addition, each school will receive educational programming, and will participate in encouragement events. The effort is funded by a state/ federal grant and will begin in March of 2012.

Education

South Gate's Police Department hosts rodeos in South Gate Park twice a year. Children can learn how to bicycle safely in a controlled environment, and they learn about the rules of the road. There is not enough data to determine if these programs are affecting crash rates.

Promotional Campaigns

The City of South Gate does not currently have any promotional campaigns related to bicycling.

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CHAPTER 6
PROPOSED BICYCLE FACILITIES

To better accommodate and encourage bicycling in South Gate, the City plans 9.8 miles of bike paths, 0.5 miles of cycle tracks, 23 miles of bike lanes (including colored and buffered bike lanes, some to be implemented with road diets), 5.9 miles of bike boulevards, 5.7 miles of bike routes with sharrows, and 3.6 miles of bike routes with Type B sharrows.The City plans to install bicycle parking, provide for end-of-trip amenities, and to enhance links to other transportation modes. The City also plans to provide education programs and to promote bicycling.

6.1 BIKEWAY TYPES

The proposed network includes each of the following bikeway types.

Bicycle Path along the Los Angeles River

Bike Path

A bike path provides for bicycle travel on a paved right-of-way completely separated from a street or highway. Some also provide for the travel of pedestrians and/or other users, and these are referred to as multipurpose paths. Bike paths are often planned along uninterrupted linear rights-of-way, such as rivers and rail rights-of-way.

Cycle Track

A cycle track is a physically separated bicycle facility that runs within a roadway. They can allow bicyclists to travel in both directions on one side of the road. A physical barrier, such as planters, bollards, or a curbed and landscaped area, separates bicycle traffic from vehicle traffic. At intersections, a separate phase for bicyclists must be installed. Cycle tracks are not technically considered a traffic control device and so there is no restriction on their use in either the California or the Federal MUTCD. The California Traffic Control Devices Committee (CTCDC) is currently reviewing cycle tracks.

Cycle Track in Vancouver, BC

Bike Lanes

Bicycle lanes are a striped lane for one-way bicycle travel on a street or highway. They can be colored or buffered, as described below.

Colored Bike Lanes

Colored bike lanes are simply bike lanes with colored pavement underneath the standard bike lane markings as required by the California MUTCD. The primary goal of colored pavement is to enhance the bikeway by making it more visible. The colored pavement also narrows the feel of the street, having a traffic calming effect.

To date, the colored pavement marking is not a standard item per the California MUTCD. It is approved on an interim basis at the federal and the state level. In order to implement these colored bike lanes, the City will need to notify the CTCDC each time it uses the colored pavement.

Colored and Buffered Bike Lane in Los Angeles, CA

Buffered Bike Lanes

A painted buffer area, usually between the bike lane and the adjacent travel lane, provides some space between bicycles and motor vehicles. The buffer may also go between parked cars and the bike lane. Although it is somewhat unclear, California code appears to allow for up a painted buffer of 2 feet or less in width where there is on-street parking, with no width restrictions where there is no on-street parking. The CTCDC is currently reviewing this issue.

Road Diets with Bike Lanes

This plan recommends a series of "road diets." A road diet is the removal of at least one travel lane. Road diets are recommended in order to reallocate existing pavement and right-of-way to other uses including bikeways, sidewalks, landscaping, etc. The road diets recommended in this plan make it possible to accommodate bikeways. A traffic study will be required prior to implementation.

BIKE ROUTE

A bike route is a preferred travel route for bicyclists, on which a separate lane or path is either not feasible or not desirable. The rightmost lane of a bicycle route is shared by bicyclists and cars. The lane is marked with signs and sharrows.

Sharrows

A sharrow, or shared-lane arrow, is a marking used to indicate the preferred path of travel for bicyclists in a lane that bicyclists and motorists share. The sharrow reminds motorists that they may encounter people on bikes, and that people on bikes may occupy the full travel lane. The sharrow also encourages bicyclists to ride in the center of the lane, away from

opening car doors. The sharrow is an approved marking per the MUTCD.

Type B Sharrows

The "Type B" Sharrow is a more prominent way to implement the sharrow marking. There are several ways to do this. Long Beach, CA has painted a green swath underneath the sharrow, as shown in the photo. Brookline, MA uses large sharrows spaced close together with longitudinal lines flanking the path of bicycle travel. This is also referred to as a "lane within a lane" treatment.

Type B Sharrows in Long Beach, CA

Bicycle Boulevard

A bicycle boulevard is a signed bicycle route that functions as a through street for bicyclists, and not for motor vehicles. Every ½ mile to a mile, a diverter prevents motor vehicles from driving on these streets for long distances. This keeps traffic volumes low and the streets pleasant to ride on. The diverters can be physical features at intersections that require cars to turn right of left. They can also take the form of signal phasing and lane striping at intersections that requires cars to turn, while cyclists may continue traveling straight. Bike boulevards can also include features such as mini circles to replace 4-way stops, or 2-way stops that allow through bicycle traffic on the boulevard while stopping cross-traffic.

Bicycle Boulevard in Vancouver, BC

Choice of Treatment

The type of treatment depends on the street or right-of-way, width, adjacent land uses, traffic volumes, and traffic speeds. When exclusive right-of-way exists, bike paths are planned. Bike lanes are planned on streets that have enough width to accommodate them. Road diets are planned to create space for bike lanes on multi-lane streets where traffic volumes allow. Improvements to bike lanes are planned where enough space exists to widen bike lanes or to stripe buffers. Bike routes are planned on streets where network connectivity is needed, but insufficient space exists for bike lanes, or where traffic volumes do not call for bike lanes. Bicycle routes can be distinguished in multiple ways including the use of signage and pavement markings, such as sharrows. Bicycle boulevards are planned on residential streets with low traffic volumes that contribute to network connectivity.

6.2 GUIDING ASSUMPTIONS FOR BIKEWAYS

Several assumptions were followed when planning for bikeways. These guidelines can be incorporated into City policy and practice when rethinking a street's cross-section, especially in future development.

On major and secondary arterials, the City tried to achieve bicycle lanes. This is largely a matter of curb-to-curb width availability. Minimum lane widths then determine whether there is space left over for a bikeway. Additional pavement space can also be allocated to sidewalks and/or parkways.

This Plan is intended to provide bikeway facilities throughout the city in a timely fashion and will be updated every five years. Bikeways were proposed on top of the existing street network and lane configurations, and do not necessarily conform to the General Plan cross-sections.

Further assumptions for planning bikeways follow.

Lane Widths

- Assume a minimum travel lane width of 10′
- Assume preferred widths of 11′ for outside lanes and lanes adjacent to a median
- Assume an absolute and rarely used minimum width of 9′ for a center-turn lane, but prefer 10′, and predominantly use 10′
- Assume a minimum width of 7′ for parking lanes

Bikeway Type

- The minimum width of a bike lane is 5′, but prefer to use 6′ as the standard wherever possible
- If bike lanes fit with the existing roadway configuration using the assumed travel lane widths above, the road configuration will remain constant
- If road average daily traffic is under 20,000, recommend a road diet with bike lanes
- Recommend colored bike lanes on major boulevards where existing vehicle volumes are comparatively high, and in retail corridors
- Where bike lanes do not fit, but network connectivity is necessary, recommend Class III bike routes
- On roadways with on-street parking, recommend painted sharrows along with the Class III designation
- On busier roadways or in more urban areas where there is on-street parking on both sides, recommend more frequent and prominent "B-type" sharrows along with the Class III designation

- Bike paths may be recommended to create connections in the network across undeveloped land areas
- Bike paths are also recommended along other rights of way, such as rivers and rail rights-of-way

Bikeway Configuration

- Prefer 6′-wide bike lanes, but will recommend 7′ if space permits
- Where there is excess road space for at least one half-mile, we recommend the inclusion of a painted buffer with the bike lane

Road Diet Feasibility

- Assume that a road diet from 4 lanes to 2 lanes with center-turn lane could be implemented with minimal impact for a road with an ADT of 20,000 and under. However, a traffic study will be required.

Bikeways will be implemented according to the priority list identified in Chapter 8. The City will look for other opportunities to implement the recommendations below such as routine pavement resurfacing, new development, and other improvements which require re-striping. The recommendations below are "short-term," meaning that they take as fixed the existing curb-to-curb width and location of medians. If the City or new development adds sidewalks, parkways, medians, or any other curb and gutter, maintain at a minimum 6′ bike lanes on streets that have a recommended bike lane. On those streets that have bicycle routes, if new development creates enough room for bicycle lanes, the City should consider adding them.

6.3 PROPOSED BIKEWAYS

Proposed bikeways are detailed in a series of tables below. Each table shows the existing and proposed condition of the route. An example table follows.

STREET NAME	
FROM:	Start of street section
TO:	End of street section
EXISTING	PROPOSED
• Number of lanes and street configuration • Street width	• Bikeway designation including width of bikeway, special road treatment

The proposed recommendations detail not only the bikeway type (bike lane, bike route), but also any special treatments for that bikeway. This may include, for example, the addition of a buffer to a bike lane, the addition of colored bike lanes, or reducing the number of lanes to reallocate pavement space (road diet). Where a road diet is proposed, the table includes a graphic to illustrate the existing roadway cross-section and the proposed roadway cross-section. For some bikeways, graphics also illustrate unusual roadway configurations or special intersection treatments.

In several cases where road diets are proposed, the proposed bikeway table also includes the option to add Type B sharrows without doing the road diet. The road diet with bike lanes will be the preferred option, but the choice will depend on traffic volumes at the time of implementation. If traffic volumes are high, Type B sharrows will be implemented.

Cross-section illustrations are concept plans. Exact design, widths, and lane configuration will be subject to engineering judgement. The cross-sections shown here identify the preferred design and allocate widths to maximize bicyclist comfort and safety.

North-South Routes

(1) SANTA FE AVENUE / TRUBA AVENUE	
From:	Ardmore Ave.
To:	Southern Ave.

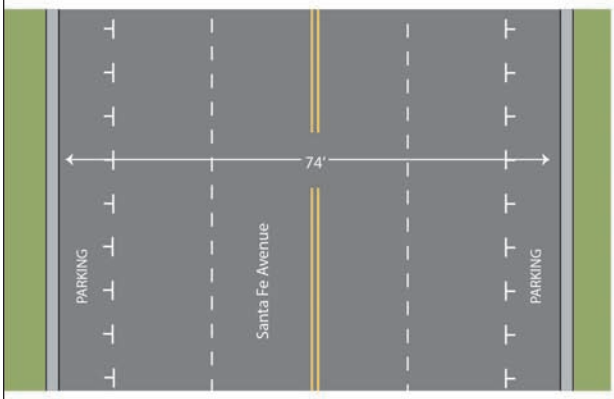
Existing	Proposed

• 4 lanes with on-street parking
• 74′ wide
	• Add cycle track on the west side of the street
	• Option 1: remove parking on the west side, add 15′ cycle track with buffer and 10′ median / center turn lane
	• Option 2: add 16′ cycle track with buffer
	• Option 3: road diet to 2 lanes with on-street parking
	  • North of Firestone, add 5′ parkways to sidewalks, 16′ cycle track with buffer, and 10′ median
	  • South of Firestone, add 18′ cycle track with buffer and 18′ median

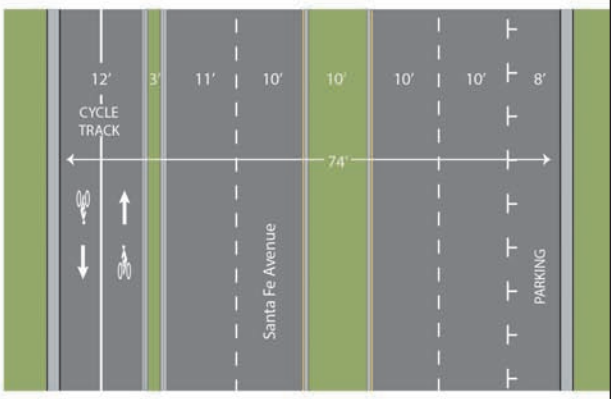
Note: A cycle track is planned on the west side of the street because of the planned development of the East Los Angeles College Firestone Educational Center at the northwest corner of the intersection of Firestone Boulevard and Santa Fe Avenue If the college is not built, the City can consider more conventional options on Santa Fe Avenue, such as buffered bike lanes.

(1) SANTA FE AVENUE / TRUBA AVENUE (CONT.)	
FROM:	Ardmore Ave.
TO:	Southern Ave.

Existing

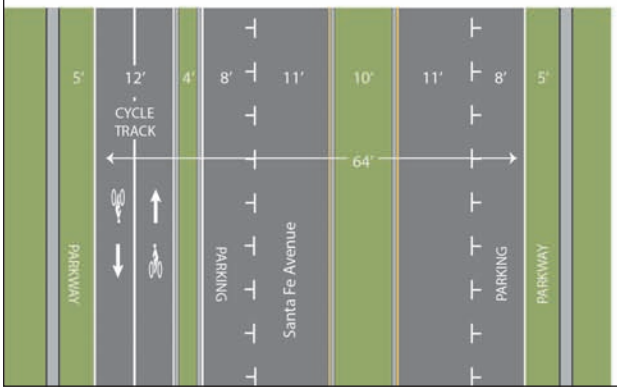


Option 1

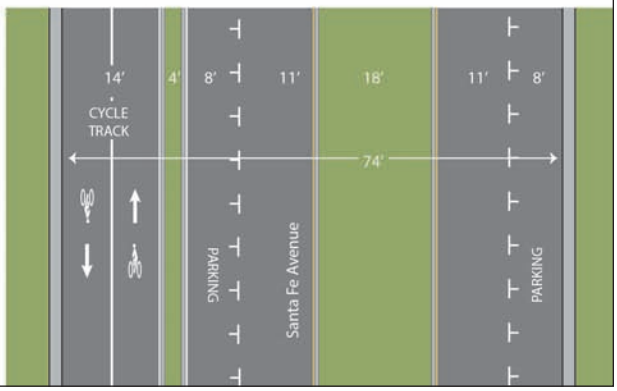


Option 2

Option 3 - North of Firestone



Option 3 - South of Firestone



(2) STANFORD AVENUE	
FROM:	Southern Ave.
TO:	Sequoia Dr.

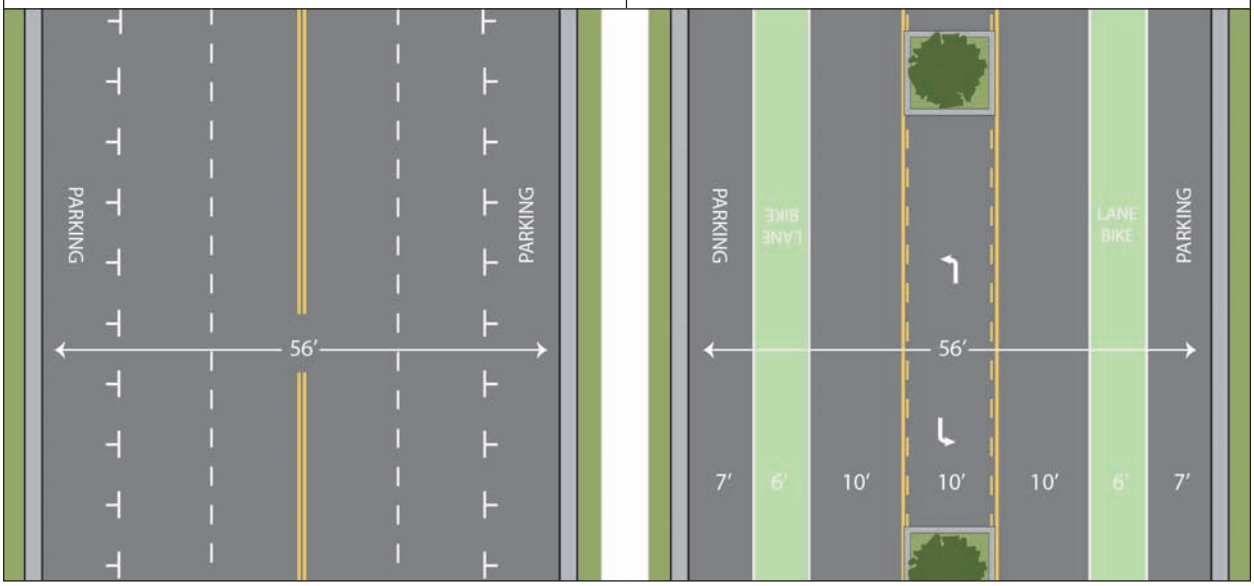
EXISTING	PROPOSED
• 2 lanes with on-street parking • 30′ wide	• Add bike route with sharrows • Coordinate with High School to create an entrance at the alley south of Tweedy Blvd.

(3) LONG BEACH BOULEVARD	
FROM:	Northern city limit
TO:	Tweedy Blvd.

EXISTING	PROPOSED
• 4 lanes with center-turn lane and on-street parking • 70′ wide	• Add Type B sharrows

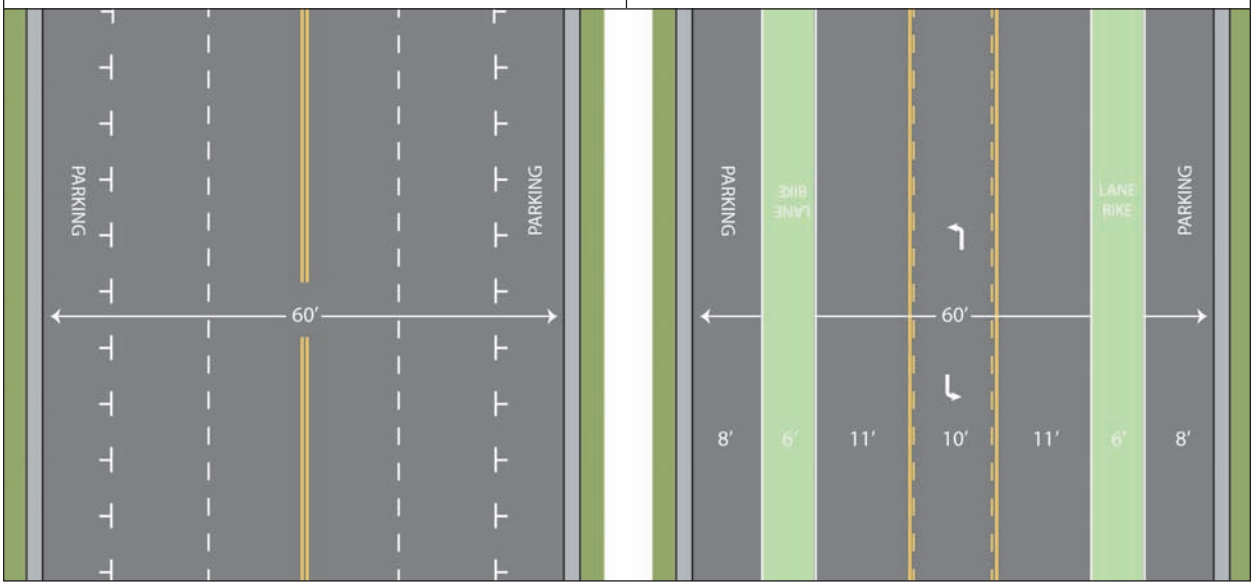
(4) STATE ST.	
From:	Northern city limit
To:	Southern city limit

Existing	Proposed
• 4 lanes with on-street parking • 56′ wide	• Road diet to two lanes with center-turn lane and on-street parking • Add 6′ colored bike lanes • Option: Type B sharrows

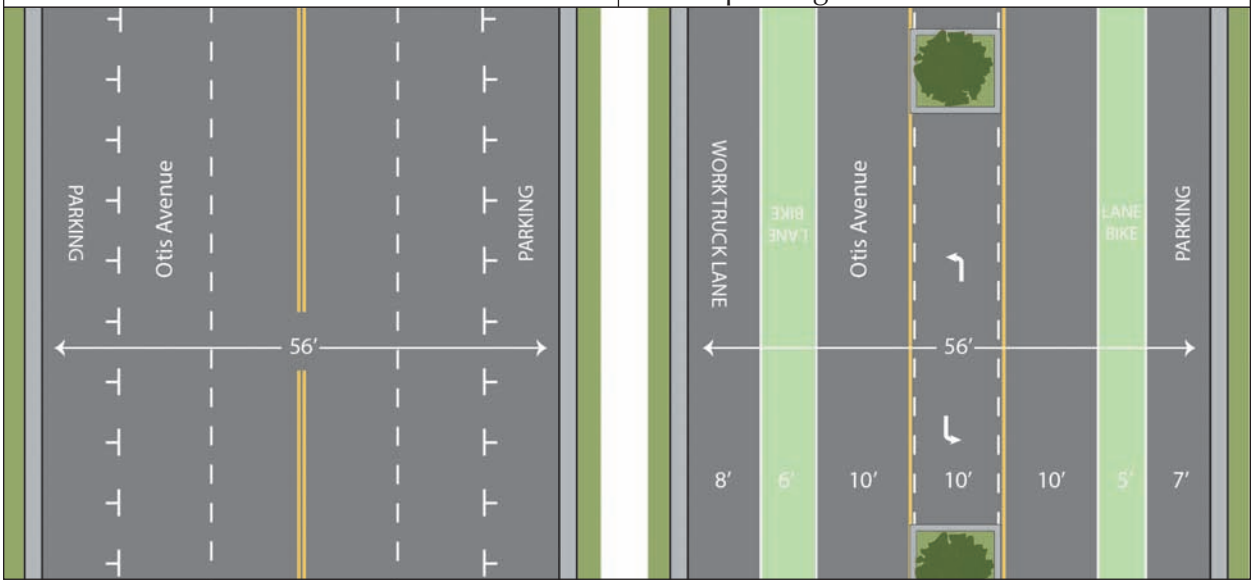


(5) CALIFORNIA AVENUE	
FROM:	Northern city limit
TO:	Southern city limit

EXISTING	PROPOSED
• 4 lanes with on-street parking • 60′ wide	• Road diet to 2 lanes with center-turn lane and on-street parking • Add 6′ wide colored bike lanes • Option: Type B sharrows

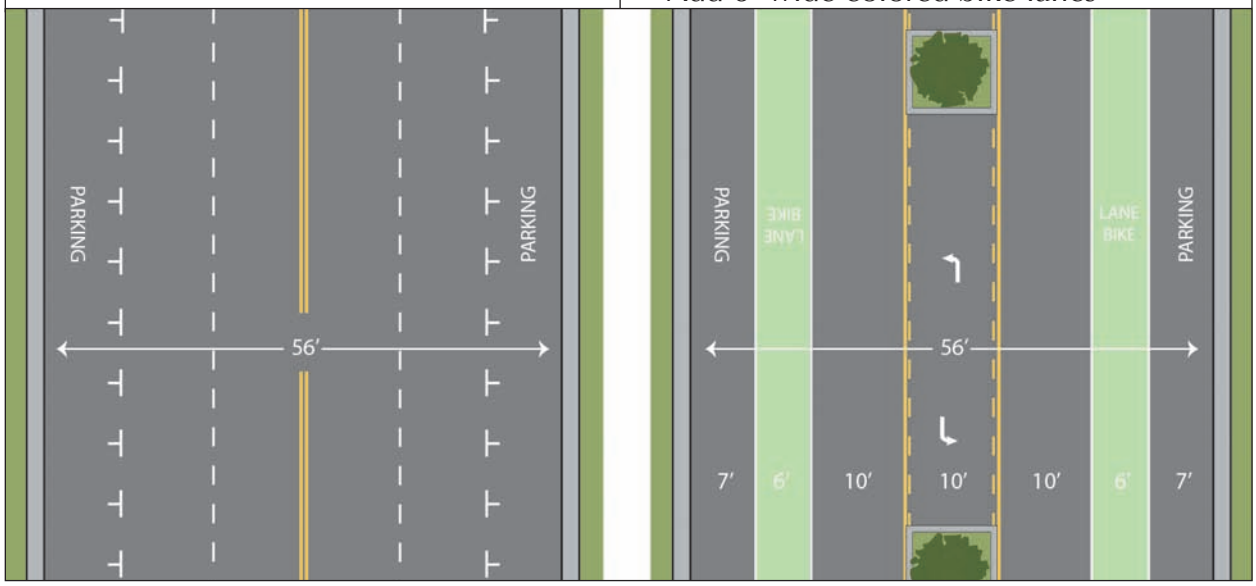


(6) OTIS STREET	
From:	Northern city limit
to:	Ardmore Ave.
Existing	**Proposed**
• 4 lanes with on-street parking • 56′ - 60′ wide	• Road diet to 2 lanes with center-turn lane and on-street parking • Add 6′ wide colored bike lanes
From:	Ardmore Ave.
to:	Firestone Blvd.
Existing	**Proposed**
• 4 lanes with on-street parking on the east side and industrial work truck lane on the west side • 56-60′ wide	• Road diet to 2 lanes southbound, 1 lane northbound (no center-turn lane) • Industrial work truck lane on the west side and parking on the east side



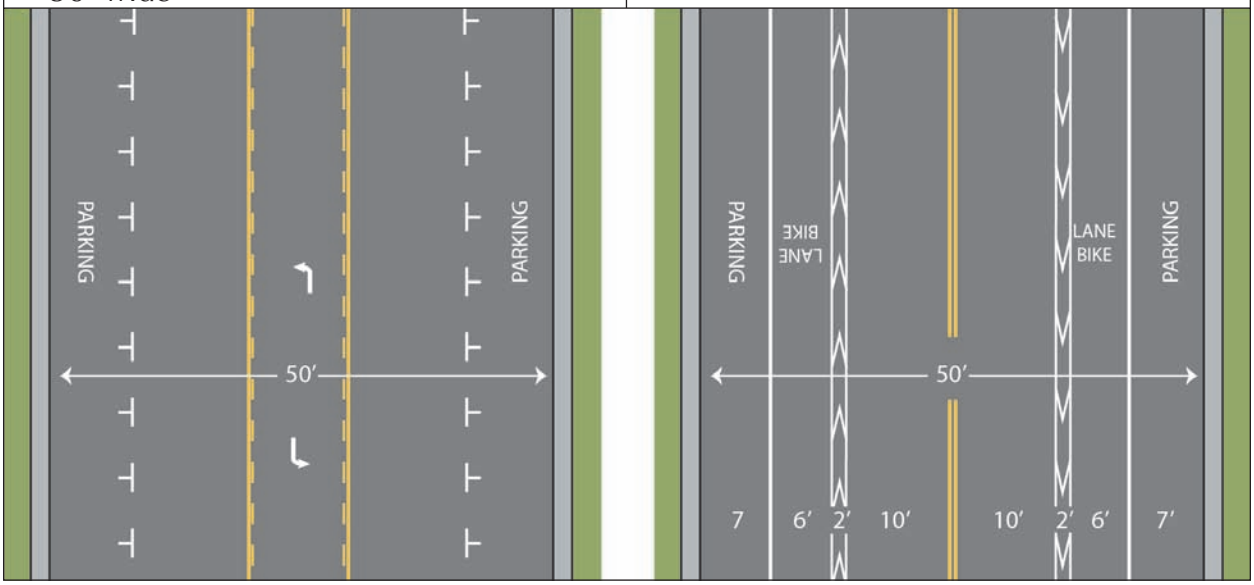
(6) OTIS STREET, CONT.	
FROM:	Firestone Blvd.
TO:	Southern city limit

EXISTING	PROPOSED
• 4 lanes with on-street parking • 56-60′ wide	• Road diet to 2 lanes with center-turn lane and on-street parking • Add 6′ wide colored bike lanes



(7) ALEXANDER AVENUE	
FROM:	Firestone Blvd.
TO:	Southern city limit

EXISTING	PROPOSED
• 2 lanes with center-turn lane and on-street parking • 50′ wide	• Remove center-turn lane and add buffered bike lanes



(8) HILDRETH AVENUE	
FROM:	Firestone Blvd.
TO:	Southern city limit

EXISTING	PROPOSED
• 2 lanes with on-street parking • ~30′ wide • On-street parking restricted bordering South Gate Park • Proposed shopping center on Firestone Blvd. includes traffic light at Hildreth Ave. / Firestone Blvd.	• Add bike route with sharrows

(9) ATLANTIC AVENUE	
From:	Ardmore Ave.
to:	Firestone Blvd.

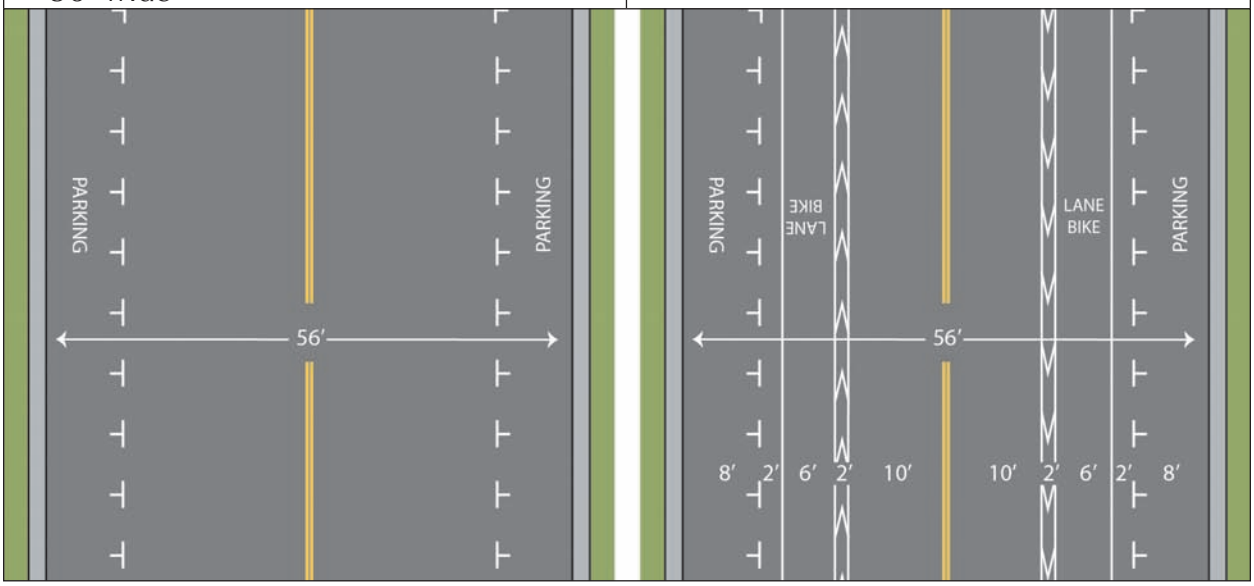
Existing	Proposed
• 5-6 lanes with no median • On-street parking on northbound side only • 70′ wide	• Add Type B sharrows

From:	Firestone Blvd.
to:	Southern city limit

Existing	Proposed
• 4 lanes with on-street parking and median / center-turn lane • 31′ wide on either side of the median	• Add Type B sharrows

(10) WRIGHT ROAD	
From:	Atlantic Ave.
to:	Imperial Hwy

Existing	Proposed
• 2 lanes with on-street parking / peak-hour lanes • 56′ wide	• Add buffered bike lanes



(11) UNION PACIFIC RAILROAD RIGHT-OF-WAY (SAN PEDRO SUB-DIVISION)	
From:	Ardmore Ave.
to:	Century Blvd

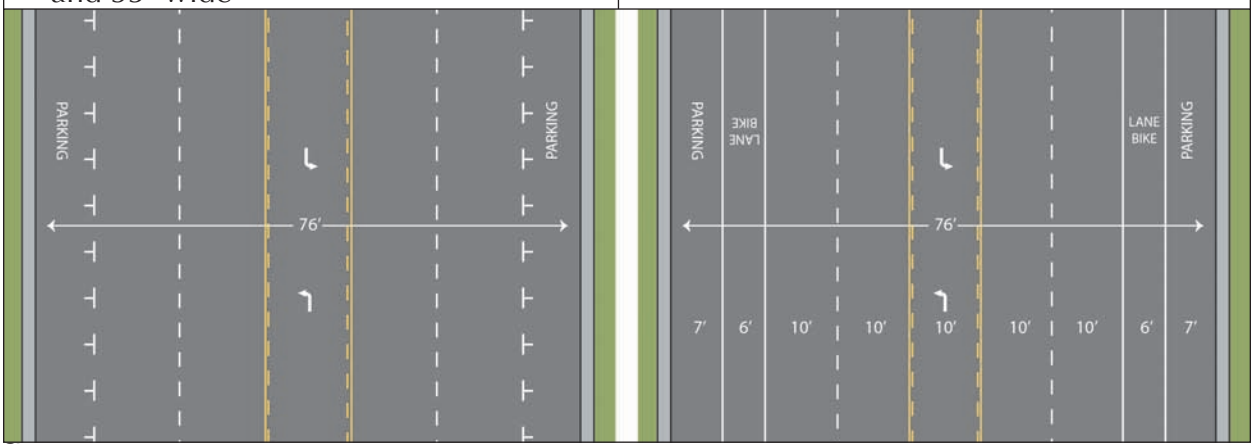
Existing	Proposed
• 18'-28' from tracks to SW edge of ROW. • North of Firestone Blvd., ~38' from tracks to NE edge of row • Existing bridges over I-710 Freeway, Los Angeles River, and 105 Freeway are too narrow to add bike path	• Add bidirectional bike path • Add bicycle and pedestrian bridges over Los Angeles River, I-710 Freeway, and I-105 Freeway • Requires coordination with City of Downey and Union Pacific Railroad

(12) LOS ANGELES RIVER BICYCLE PATH	
From:	Ardmore Ave.
to:	Century Blvd

Existing	Proposed
• From Ardmore Ave. to Imperial Hwy, bicycle path runs on West bank of river • From Imperial Hwy to Century Blvd., bicycle path runs on East bank of river	• Add curb ramps and wayfinding signage to access points at Firestone Blvd. (2), Tweedy Blvd. (1), and Imperial Hwy. (2) • Add graded, paved bike paths to 2 access points in Hollydale Park: one parallel to Gardendale St. and another parallel to Monroe St. • Add new access point with paving and grading at Century Blvd. • Maintain north end by removing graffiti and eradicating weeds

(13) GARFIELD AVENUE	
FROM:	Union Pacific Railroad Right-of-Way (Spur Line)
TO:	Roosevelt Ave.

EXISTING	PROPOSED
• 4 lanes with center-turn lane and on-street parking • 76′ wide • No parking on E side between Firestone and Rio Hondo • Bridge over Rio Hondo: 4 travel lanes and 53′ wide	• Add bicycle lanes • May require intersection treatments at Firestone Blvd.



FROM:	Roosevelt Ave
TO:	Southern city limit

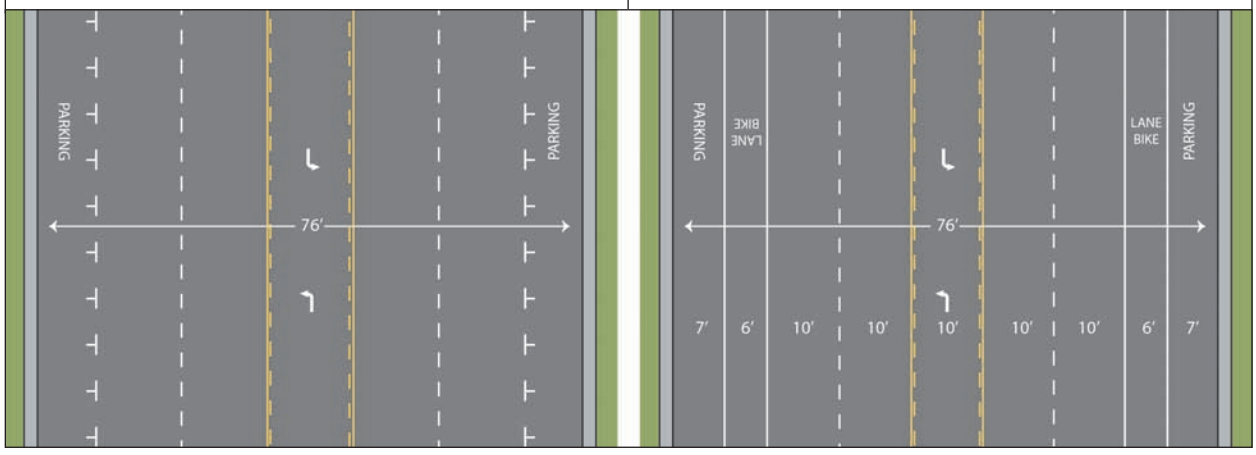
EXISTING	PROPOSED
• 4 lanes with on-street parking and median / center-turn lane • 31′ wide on either side of the median	• Add Type B sharrows

(14) RIO HONDO BICYCLE PATH	
FROM:	Union Pacific Railroad Right-of-Way (Spur Line)
TO:	Los Angeles River

EXISTING	PROPOSED
• Bicycle path runs on East bank of river	• Improve wayfinding signage at access points

(15) PARAMOUNT BOULEVARD	
FROM:	Gardendale St.
TO:	Century Blvd.

EXISTING	PROPOSED
• 4 lanes with on-street parking • 76′ wide	• Add 6′ bike lanes



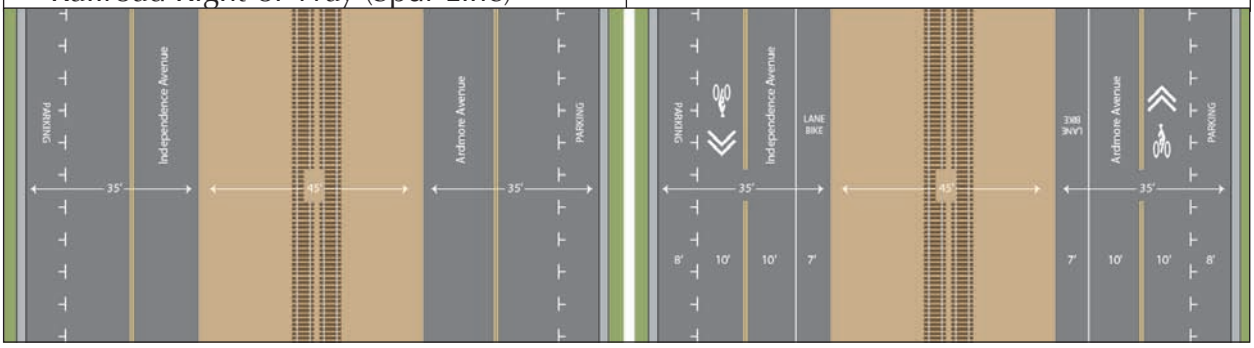
East-West Routes

(16) LIBERTY BOULEVARD	
From:	Otis St.
to:	Long Beach Blvd.

Existing	Proposed
• 2 lanes with on-street parking • 36′ wide	• Bicycle boulevard • Add a bicycle signal at Long Beach Blvd to aid crossing

(17) INDEPENDENCE AVENUE	
From:	Long Beach Blvd.
to:	Otis St.

Existing	Proposed
• 2 lanes with on-street parking on the north side only • 35′ wide • Existing lighting on one side of the street only • The Independence Ave. - Ardmore Ave. couplet parallels the Union Pacific Railroad Right-of-Way (Spur Line)	• Add bike lanes in the eastbound direction • Add sharrows in the westbound direction • Install street lighting on the side of the street that currently lacks it

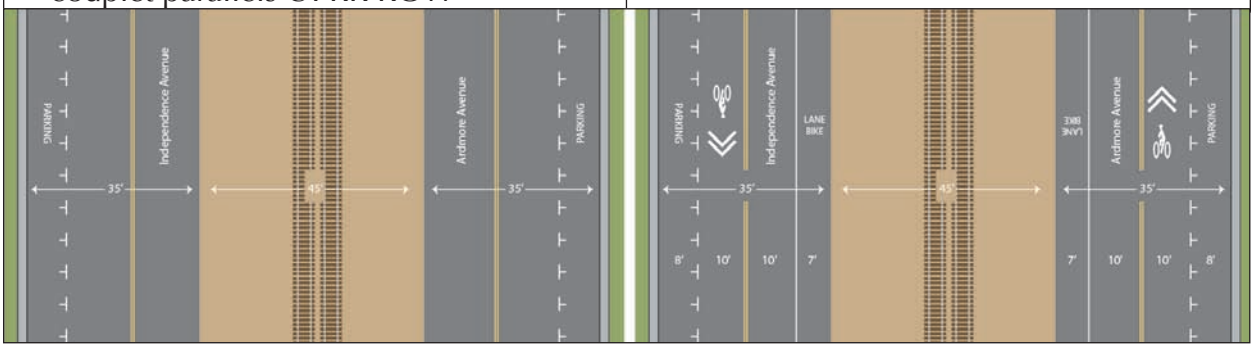


(18) UNION PACIFIC RAILROAD RIGHT-OF-WAY (SPUR LINE)	
FROM:	Western city limit
TO:	Eastern city limit

EXISTING	PROPOSED
• 45′ wide north of tracks • 45′ wide south of tracks • Parking lot on the south side of the tracks between California Ave. and San Juan Ave. • Parking lot on both sides of the tracks between San Juan Ave. and Otis St.	• Add Bi-directional bike path • Add crossing treatments to street intersections • Add bridges over the Los Angeles River, I-710 freeway and Rio Hondo River • Coordinate with Los Angeles Community College District to add access to the campus

(19) ARDMORE AVE.	
FROM:	Long Beach Blvd.
TO:	Otis St.

EXISTING	PROPOSED
• 2 lanes with on-street parking on the south side only • 35′ wide • Existing lighting on one side of the street only • The Independence Ave. – Ardmore Ave. couplet parallels UPRR ROW	• Add bike lanes in the westbound direction • Add sharrows in the eastbound direction • Install street lighting on the side of the street that currently lacks it.



(20) FIRESTONE BOULEVARD	
FROM:	Western City Limit
TO:	Union Pacific Railroad Right-of-Way (San Pedro Sub-division)
EXISTING	PROPOSED
• 4 lanes with center-turn lane and on-street parking • Approximately 72′ wide	• Add bicycle lanes if Firestone Blvd. is widened, or if traffic volumes change
FROM:	Union Pacific Railroad Right-of-Way (San Pedro Sub-division)
TO:	Los Angeles River
EXISTING	PROPOSED
• 6 lanes with center-turn lane • 84′ wide • Access gate to Los Angeles River on both N and S sides of street	• Add 5′ colored bike lanes • Move guard rail blocking access gate to Los Angeles River on South side • Improve wayfinding signage and add curb ramps to Los Angeles River access on both sides
FROM:	Los Angeles River
TO:	Eastern City Limit
EXISTING	PROPOSED
• 4 lanes with center-turn lane and on-street parking. Irregular cross section with many channelized turning lanes • 74′ – 84′ wide	• Add colored bike lanes where feasible • Freeway access area needs special design • Follow best practices for bikeways at freeway crossings, for example: eliminating free and optional rights, painting conflict areas

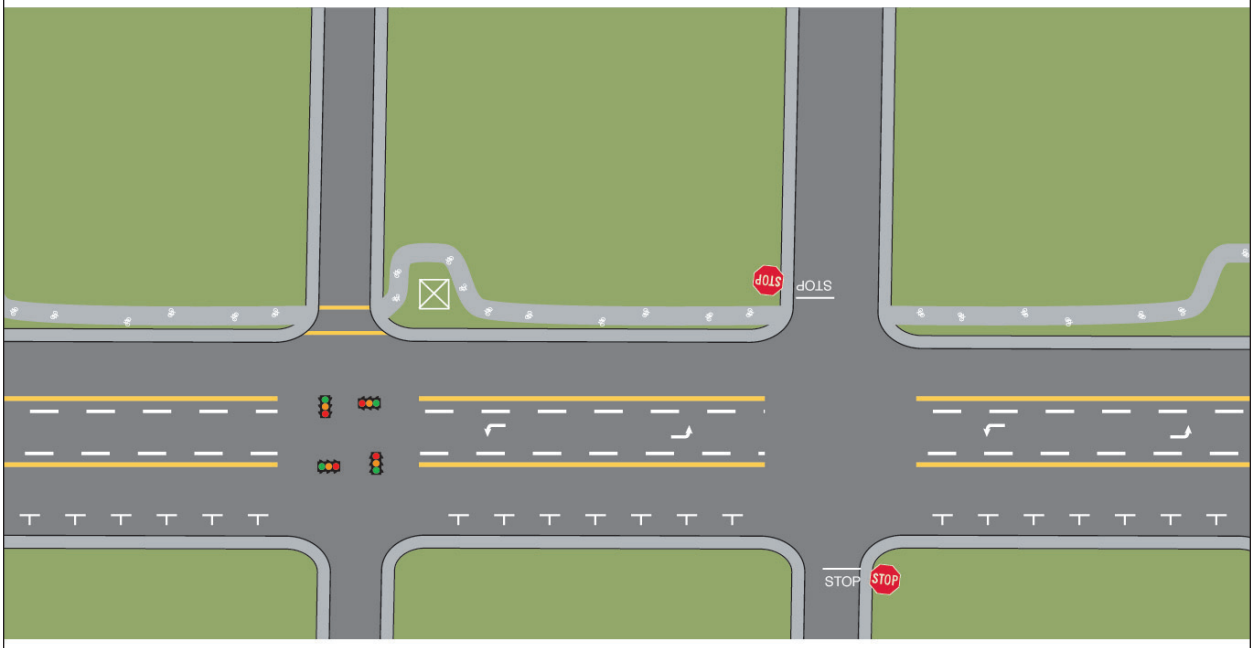
(21) SOUTHERN AVENUE	
From:	Santa Fe Ave.
to:	Burke Ave.

Existing	Proposed

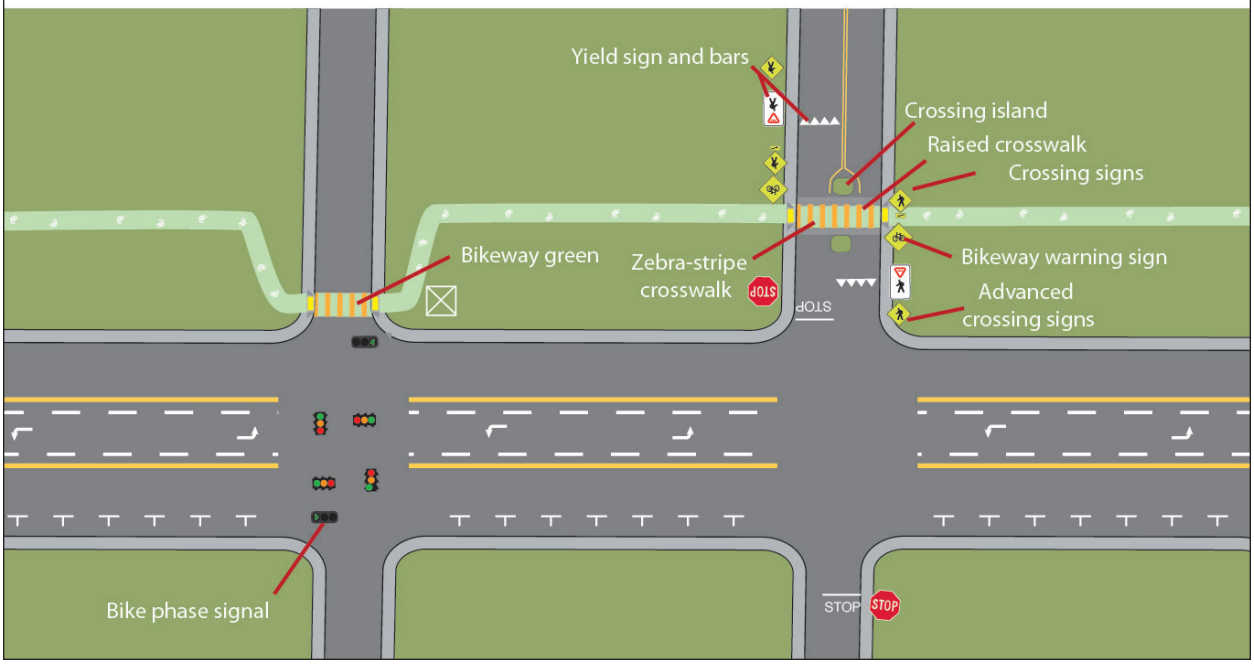
Bicycle Path on utility right-of-way:
 	
• Bike path curves around utility poles and crosses the street at intersections
• Three types of crossings:
  • 4-way stop with bikes crossing in crosswalk and "Bikes crossing" signage directed at motorists
  • Midblock crossing, with "Yield" sign directed at bicyclists and "Bikes crossing" directed at motorists.
  • Signalized intersection with bikes crossing in crosswalk
	Bicycle Path:
	
	• At signalized intersections add a bicycle phase to the signal that prevents cars from turning while cyclists are traveling, and add new bikeway green color to crosswalk
	• Unsignalized crossings will require further analysis and may include raised crosswalks with crossing islands, bikeway green, advanced yield bars, advanced yield signs, and bikeway warning signs
	• Keep crossings at the intersections where signalized; pave new bike path away from the intersections at the back of the right-of-way where there are no signalized intersections

(21) SOUTHERN AVENUE (CONT.)	
FROM:	Santa Fe Ave.
TO:	Burke Ave.

Existing



Proposed

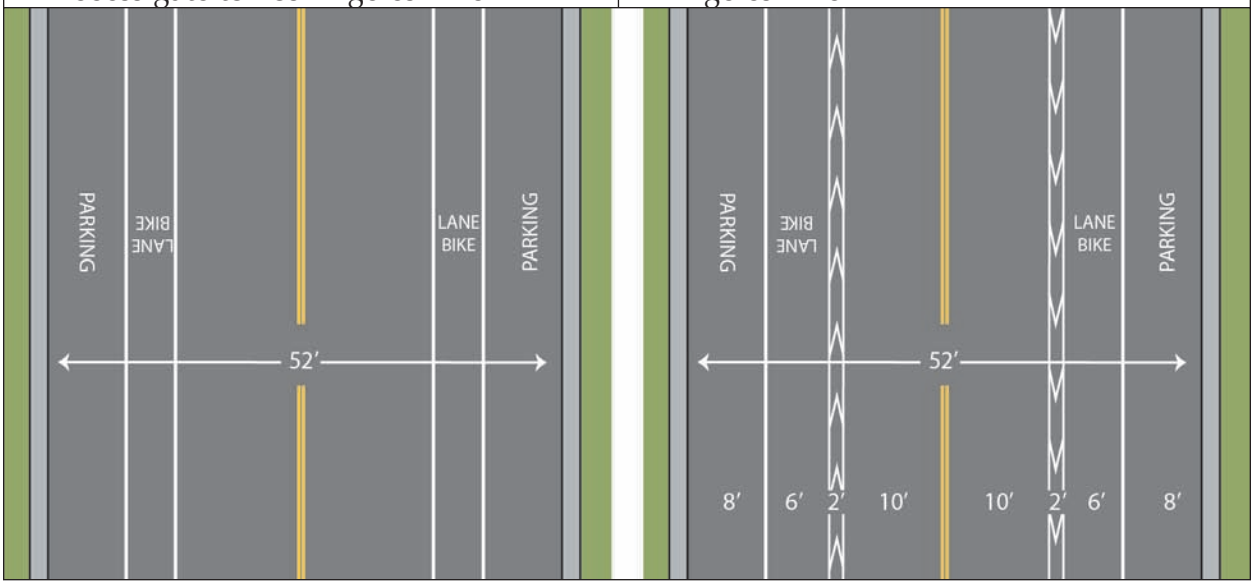


(21) SOUTHERN AVENUE (CONT.)	
FROM:	Burke Ave.
TO:	Atlantic Ave.

EXISTING	PROPOSED
• 2 lanes with on-street parking and center-turn lane, bicycle lanes • 56′ wide	• Add parking stripe to bike lanes • Widen bike lanes to 6′

FROM:	Atlantic Ave.
TO:	Los Angeles River

EXISTING	PROPOSED
• 2 lanes with on-street parking and bicycle lanes • 52′ wide • Access gate to Los Angeles River	• Add painted buffers to bike lanes • Widen bike lanes to 6′ • Improve wayfinding signage to Los Angeles River



FROM:	Los Angeles River
TO:	Eastern city limit

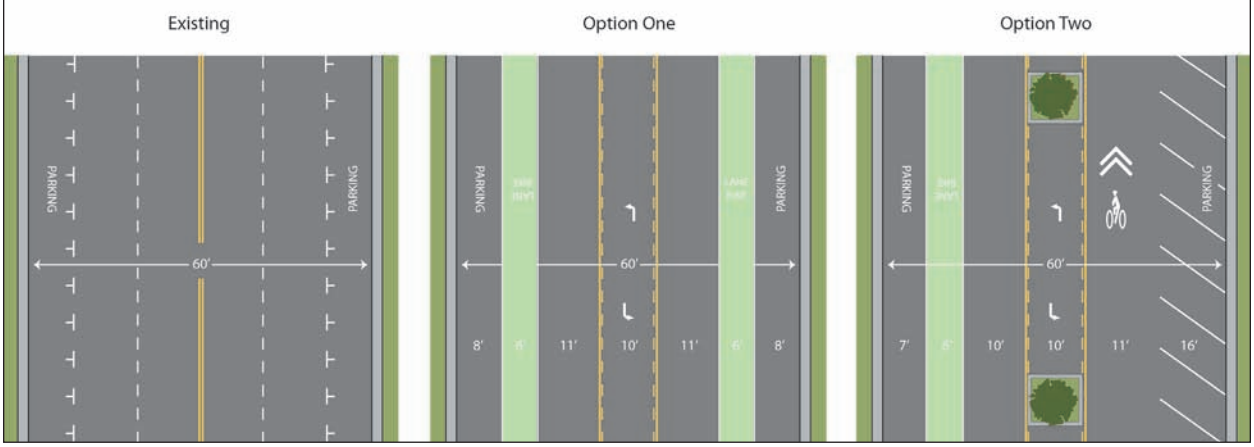
EXISTING	PROPOSED
• 2-4 lanes with center-turn lane • 64′ wide • Access to Rio Hondo on N and S side of street	• Add bridge over I-710 Freeway and Los Angeles River • Add bike lanes from the Los Angeles River to the eastern city limit

(22) MISSOURI AVENUE	
FROM:	Truba Ave.
TO:	South Gate Park

EXISTING	PROPOSED
• 2 lanes with on-street parking • 31′ wide	• Bicycle Boulevard • Reconfigure selected two-way stops so they halt traffic on cross-streets rather than traffic on Missouri Ave. • Add bike signal or crossing improvements at Long Beach Blvd., State St., California Ave., Otis St., and Alexander Ave. • Convert some 2-way and 4-way stops to mini circles

(23) TWEEDY BOULEVARD	
FROM:	Alameda St.
TO:	Atlantic Ave.

EXISTING	PROPOSED
• 4 lanes with on-street parking • 60′ wide • Angled parking between Alexander Ave. and Hunt Ave.	Option One: • Road diet to 2 lanes with center-turn lane and on-street parking • Add 6′ wide colored bike lanes • Restripe angled parking between Alexander Ave. and Hunt Ave. to back-in angled parking Option Two: • Road diet to 2 lanes with center-turn lane and on-street parking, with reverse-in angled parking on one side • Add 6′ colored bike lanes in one direction, and sharrows in the other direction



(24) MICHIGAN AVENUE-ELIZABETH AVENUE-SEQUOIA DRIVE	
FROM:	Stanford Ave.
TO:	Wright Rd.

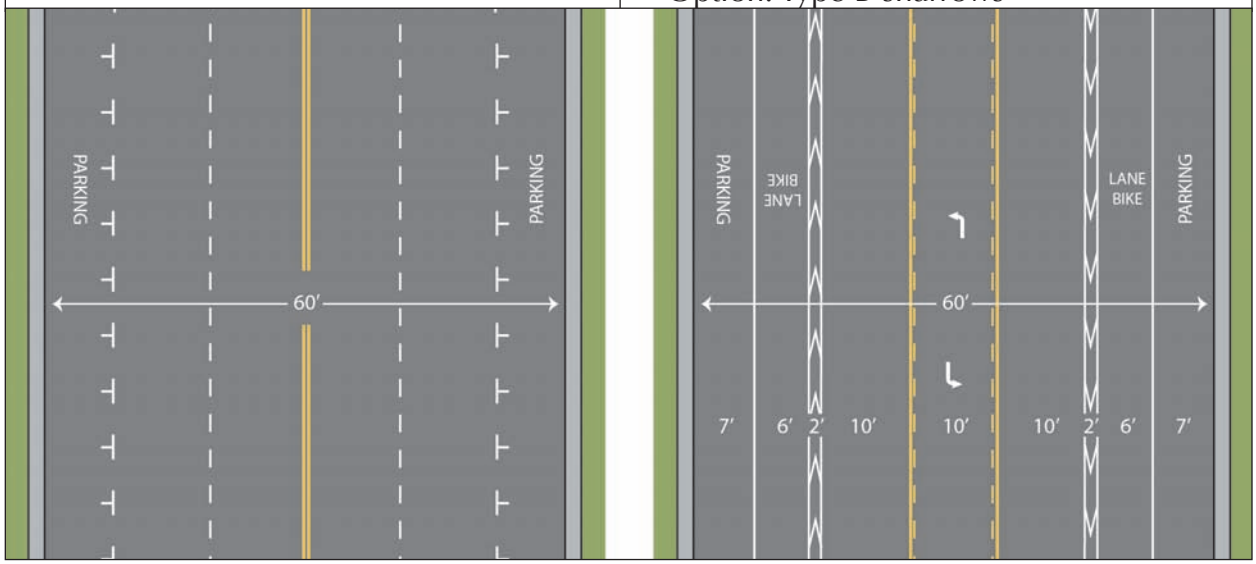
EXISTING	PROPOSED
• 2 lanes with on-street parking • 30'-37' wide	• Bicycle boulevard • Intersections at Long Beach Blvd, State St, California Ave., and Otis St. need treatment. • Reconfigure selected two-way stops so they halt traffic on cross-streets rather than traffic on Michigan Ave. or Sequoia Dr., or replace with circles • Will require coordination with City of Lynwood.

(25) GARDENDALE STREET	
FROM:	Los Angeles River
TO:	Garfield Ave.

EXISTING	PROPOSED
• 2 lanes with on-street parking • 35′ wide • Open access to Los Angeles River	• Add signed bicycle route with sharrows • Add paved, graded bicycle path connecting to Los Angeles River Access (650 linear feet) • Will require coordination with City of Downey

FROM:	Garfield Ave.
TO:	Paramount Blvd.

EXISTING	PROPOSED
• 4 lanes with on-street parking • 60′ wide	• Road diet to two lanes with center-turn lane, on-street parking, and 8′ buffered bike lanes • Option: Type B sharrows



(26) MONROE AVENUE	
FROM:	Hollydale Park
TO:	Garfield Ave.

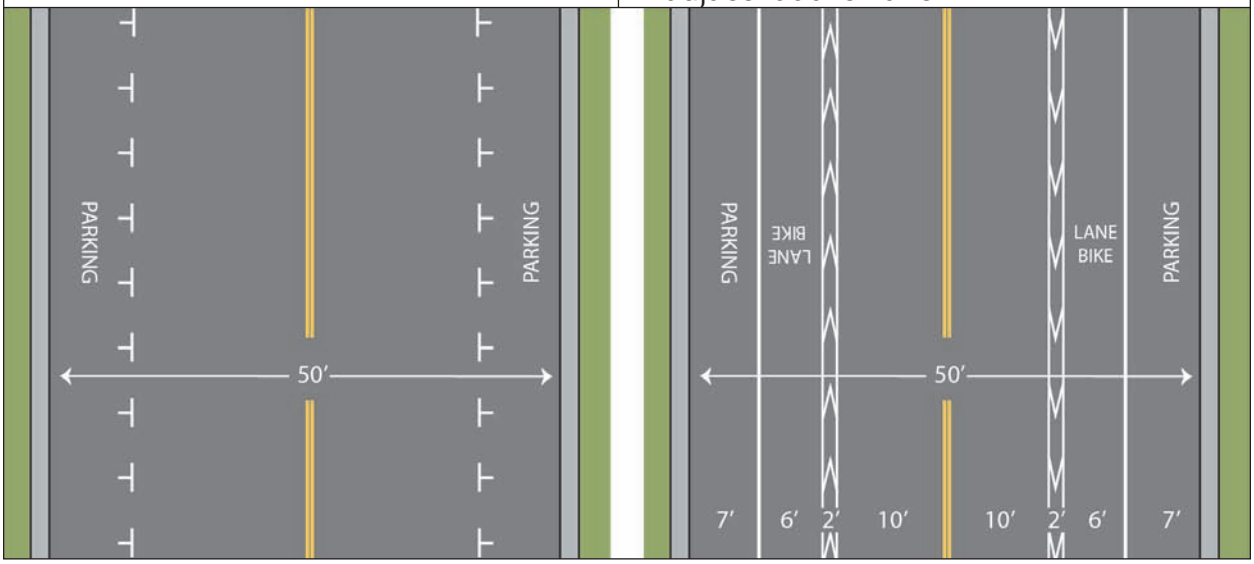
EXISTING	PROPOSED
• 2 lanes with on-street parking • 30′ wide	• Add bicycle route with sharrows

(27) MAIN STREET	
FROM:	Pennsylvania Ave.
TO:	Garfield Ave.

EXISTING	PROPOSED
• 2 lanes with on-street parking • 36′ wide	• Add signed bicycle route with sharrows

FROM:	Garfield Ave.
TO:	Paramount Blvd.

EXISTING	PROPOSED
• 2 lanes with on-street parking • 50′ wide	• Add 6′ bike lanes with 2′ buffer • Option: buffer between bike lane and parking area • Option: buffer between bike lane and adjacent travel lane

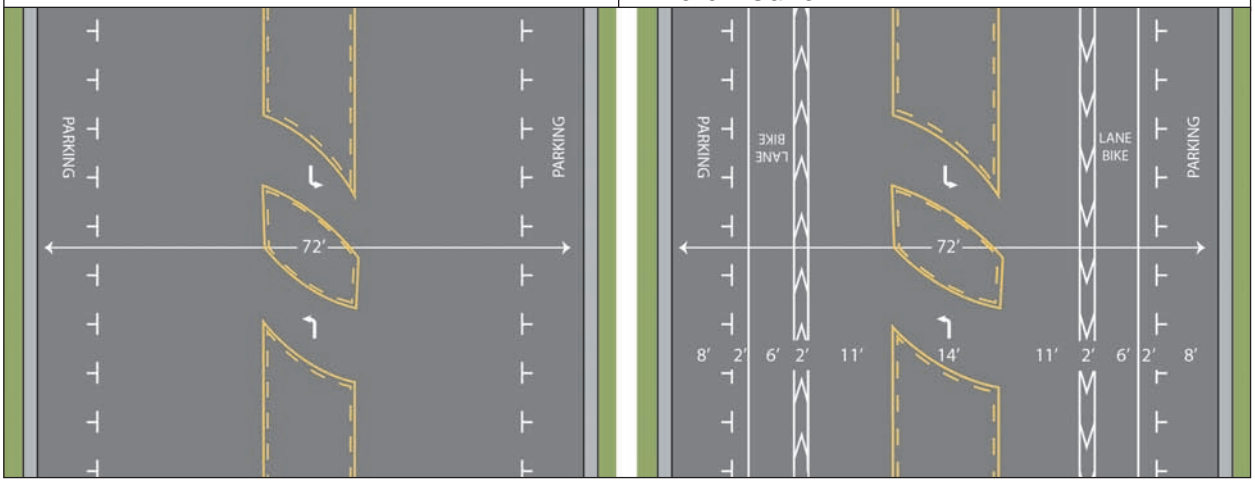


(28) CENTURY BOULEVARD	
FROM:	Los Angeles River
TO:	Pennsylvania Ave.

EXISTING	PROPOSED
• 2 lanes with on-street parking • 42′ wide	• Add signed bicycle route with sharrows

FROM:	Pennsylvania Ave.
TO:	Industrial Ave.

EXISTING	PROPOSED
• 2 lanes with on-street parking • 72′ wide • East of Garfield Ave., median marked with large raised domes	• Add 10′ buffered bicycle lanes • Open pedestrian bridge over I-105 at Industrial Ave. • Will require coordination with City of Paramount



Bikeways in Parks, on School Sites, and on Interstate Rights-of-way

(29) HOLLYDALE PARK	
Existing	Proposed
• Multiuse paths and access roads throughout park	• Add bicycle path designation and signage to all paved park paths

Existing Multiuse Path in Hollydale Park

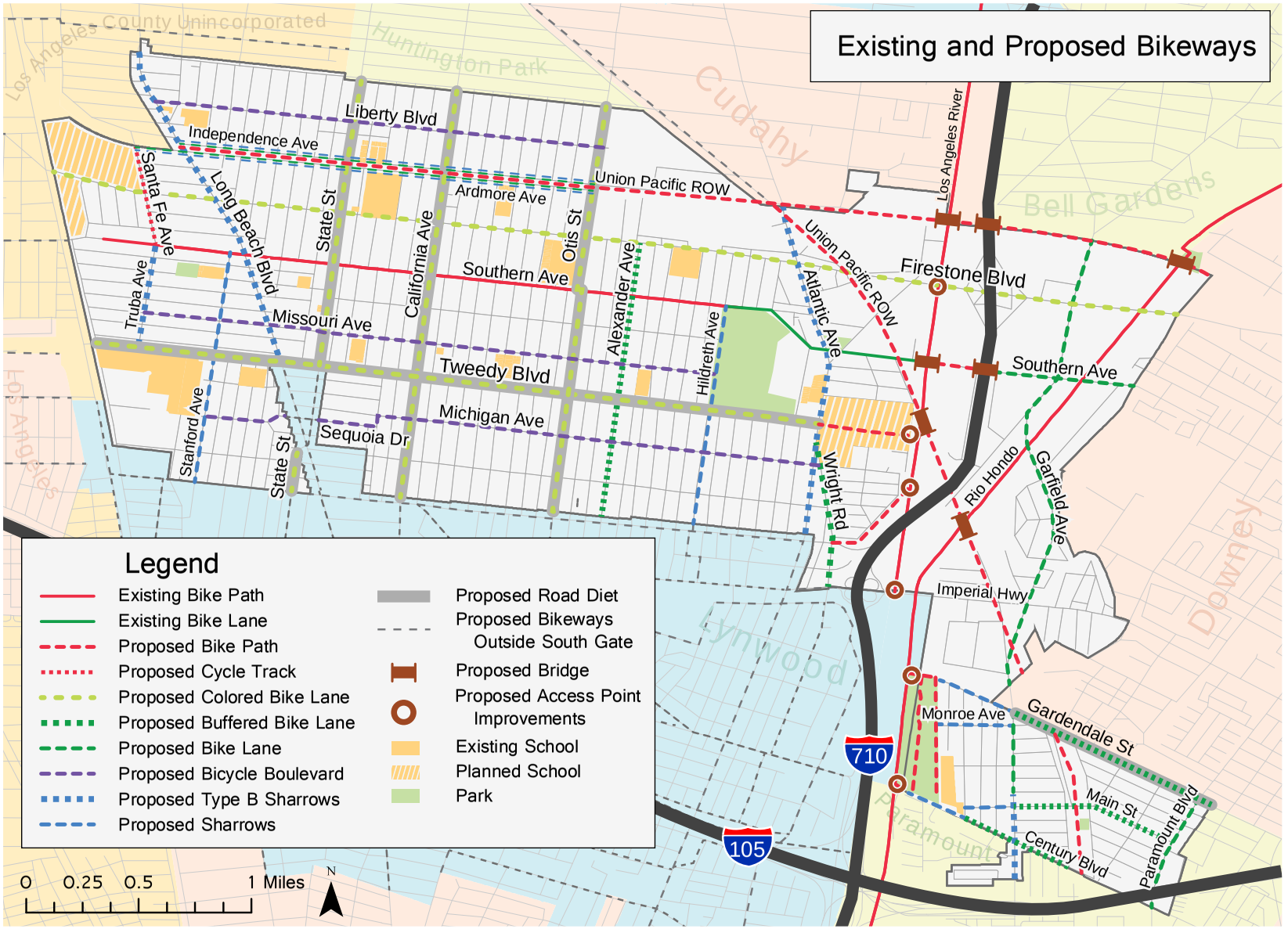
(30) TWEEDY BOULEVARD RIGHT-OF-WAY	
From:	Atlantic Ave.
to:	Los Angeles River

Existing	Proposed
• City plans to vacate Tweedy Blvd. for the construction of Los Angeles Unified School District High School No. 9 • School site plans allow a bicycle path easement running alongside planned turf fields • Access point to Los Angeles River	• 12′ bicycle path on school site • Improve signage, pavement, and grading at access point to the Los Angeles River

(31) WRIGHT ROAD OFF-RAMP, I-710 SOUTHBOUND	
From:	Wright Rd.
to:	Los Angeles River

Existing	Proposed
• I-710 Project includes plans to vacate this off-ramp • Continuous right-of-way from Wright Rd. to the Los Angeles River • Right-of-way is narrowest at Wright Rd., and wider near the river • Off-ramp connects to proposed road diet with bike lanes on Abbott Rd. in Lynwood • River access at Imperial Hwy. involves negotiating merge lanes, which is difficult for many people on bicycles	• 12′ bicycle path on or along off-ramp right-of-way • Improve signage, pavement, and grading at access point to the Los Angeles River • Option: If the off-ramp is not vacated, the City could look for opportunities to acquire a parcel on Blumont Rd. adjacent to the river, and pave an access path through the parcel

MAP 6-1: EXISTING AND PROPOSED BIKEWAYS



6.4 BICYCLE PARKING

The City will seek funds for an ongoing bicycle parking program so it can add parking as needed. This will fund planned parking, requested parking, or parking in locations where bicycles are regularly seen locked to trees, parking meters, or other fixtures. The City can also replace old racks as needed.

The City will continue to maintain all existing bicycle parking as identified by Map 5-2: Existing Bicycle Parking and Showers.

Proposed Parking

The City will work to expand parking along transit lines, in commercial areas, and in parks. Inverted U-racks are appropriate for these short-term destinations. Gated inverted U-rack parking is appropriate for schools and the planned community college. A combination of bike lockers and U-racks for use by employees and visitors will work best at City Hall and at large commercial developments. The City will need an estimated 200 inverted U-racks to place in public rights-of-way in these various locations. The City will add more racks as needed.

South Gate will work with the Los Angeles Unified School District and private schools to ensure that there is sufficient and secure bicycle parking available to all students in K–12 schools, with a special focus on those in middle and high schools. Initially, high schools and middle schools should have parking for at least 30 bicycles; elementary schools should have parking for at least 20 bicycles. The City will need about 130 inverted U-racks for schools. As demand increases, the City can add more racks as needed. The proposed Firestone Education Center should have parking for at least 5% of the student population, which will be 7,500 students in Phase I and 12,000 students in Phase II.

South Gate will work with merchants and owners of private developments to provide bicycle parking at the various shopping centers and areas of interest throughout the City. These include:

- South Gate Stadium 20 and IMAX Theatres
- Sam's Club
- Target
- Commercial corridor along State St.
- Commercial corridor along California Ave.
- Commercial corridor along Tweedy Blvd.
- Commercial corridor along Main St.

More frequent placement of inverted U-racks is needed at bus stops to enable riders to bike to transit. Streets that host bus routes include:

- Long Beach Boulevard
- Firestone Boulevard
- Atlantic Avenue
- Imperial Highway

Bicycle parking is proposed on commercial corridors, such as State Street, Tweedy Boulevard, and Garfield Avenue. in the southeast portion of the City. When sufficient demand exists, bicycle parking in these corridors can be implemented as bicycle corrals, which are bicycle racks placed in an on-street parking space.

Map 6-2 shows existing and proposed bicycle parking.

The City requires bicycle parking for new developments over 50,000 square feet in size and for amusement arcades. The City will consider requiring bicycle parking for other land uses. New development of work sites should be required to provide parking for commuters. Similarly, new retail developments need bicycle parking for both visitors and shoppers, and new multi-family residential developments need bicycle parking for guests and residents. To encourage developers to install bicycle parking, and to offset the cost of such a requirement, the City will consider allowing developers to substitute bicycle parking for automobile parking.

Although the City cannot require schools to provide parking, it will work with schools to fund bicycle parking on school grounds. Similarly, the City can subsidize racks for existing buildings and work with building owners to install them.

The following provides guidance for bicycle parking requirements:

- All land uses shall have a minimum of short term parking for four bicycles, and a minimum of long term parking for two bicycles.
- **General office**
  - 10 percent of auto parking requirement
  - At least 80 percent of the required bicycle parking shall be long term parking
  - At least 5 percent of the required bicycle parking shall be short term parking.
- **Banks and commercial savings and loan institutions:**
  - 15 percent of required auto parking requirement
  - At least 30 percent of the required bicycle parking shall be long term parking
  - At least 30 percent of the required bicyole parking shall be short term parking.
- **Hospitals and medical centers:**
  - 10 percent of auto parking requirements

  - At least 80 percent of the required bicycle parking shall be long term parking
  - At least 5 percent of the required bicycle parking shall be short term parking.
- **Retail:**
  - 10 percent of auto parking requirements
  - In retail centers larger than 25,000 square feet, at least 20 percent must be long term parking for commuters
  - At least 50 percent of the required bicycle parking shall be short term parking.
- **Manufacturing and warehousing:**
  - 10 percent of auto parking requirement
  - At least 80 percent of the required bicycle parking must be long term parking.
- **Restaurant:**
  - 10 percent of auto parking requirement
  - At least 40 percent of the required bicycle parking shall be long term parking
  - At least 40 percent of the required bicycle parking shall be short term parking.
- **Hotels, motels:**
  - 5 percent of auto parking requirement
  - At least 50 percent of the required bicycle parking shall be long term parking.
- **Multi-family residential:**
  - 1 space per unit.
- **Child care, preschools, senior citizen centers:**
  - 10 percent of auto parking requirement.
- **Private schools, private colleges, trade schools:**
  - 20 percent of auto parking requirement
  - At least 50 percent of the required bicycle parking shall be long term parking.
- **Libraries, auditoriums, museums, galleries, stadiums, theaters:**
  - 5 percent of auto parking requirement.

If the City reduces its auto parking requirements, these bicycle parking requirements need not also reduce. They can be converted to proportions of the floor area, or any other unit on which the car parking requirement is based.

The City could consider passing a "bicycles in buildings" ordinance, such as New York's 2009 "Bicycle Access to Office Buildings" law (Local Law No. 52 for 2009). Bicycling is a great way to get to work, but often barriers exist at the work place, including the lack of a safe, secure place for bicyclists to store their bicycles, as well as not being allowed to bring a bicycle into the building. The City should determine appropriate parameters for South Gate.

6.5 BICYCLE AMENITIES

The City does not currently require developments to provide showers, changing facilities, bike lockers, clothes lockers, or any other type of bicycle commuter amenity.

Shopping centers or other commercial centers could provide showers and lockers at a rate proportional to the gross square footage of the center. The center may also consolidate the showers in a common facility within the center rather than providing them for each individual business.

In order to encourage more bicycling and bicycle commuting, the City will consider an ordinance or other developer mandates to require showers and clothing lockers in new work sites and retail establishments 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.

Map 6-2 shows existing and proposed bicycle amenities.

6.6 LINKS TO OTHER TRANSPORTATION MODES

The City will prioritize the installation of bicycle racks near bus stops. Important bus routes that need more bike parking include Long Beach Boulevard, Firestone Boulevard, Imperial Highway, and Atlantic Avenue.

South Gate will work to add on-board bicycle storage to the GATE buses.

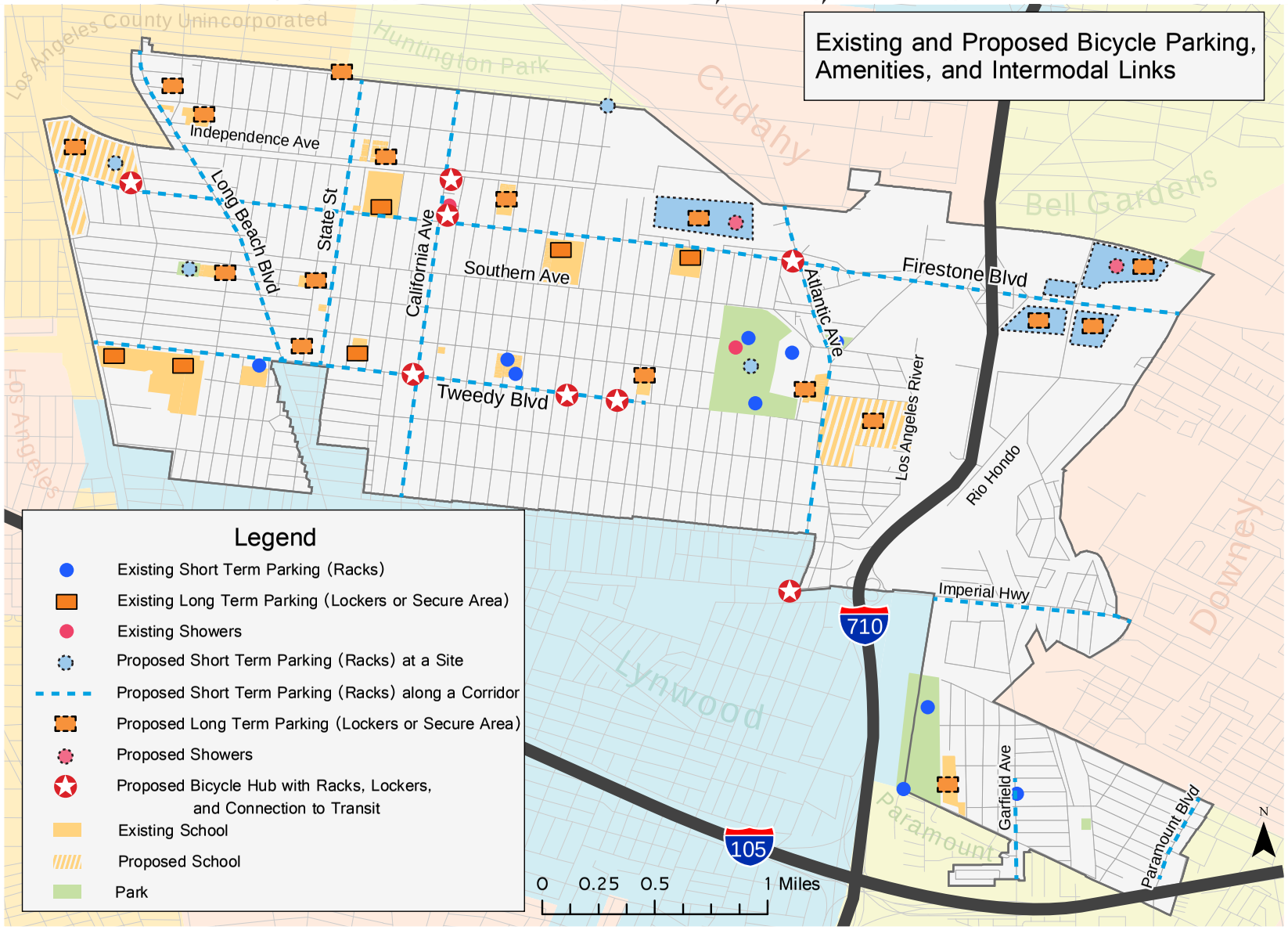
There are no major transit stations or park-and-ride facilities in the City of South Gate, but there are several proposed bicycle hubs with connections to transit. Hubs are planned at the following locations:

- site of proposed East LA College Firestone Educational Center, just northwest of the intersection of Firestone Boulevard and Santa Fe Avenue.
- City Hall complex just northeast of the intersection of California Avenue and Firestone Boulevard
- intersection of California Avenue and Ardmore Avenue
- interesction of Tweedy Boulevard and California Avenue
- interesction of Tweedy Boulevard and Otis St.
- interesction of Tweedy Boulevard and Alexander Avenue
- intersection of Imperial Highway and Atlantic Avenue
- intersection of Firestone Boulevard and Atlantic Avenue

The proposed bikeway network plans direct connections to all of these hubs. The connections include colored bike lanes on Firestone Boulevard, California Avenue, and Tweedy Boulevard, and Type B Sharrows on Atlantic Avenue.

Map 6-2 shows proposed transit hubs and the proposed bicycle parking and amenities at these hubs.

MAP 6-2: EXISTING AND PROPOSED BICYCLE PARKING, AMENITIES, AND INTERMODAL LINKS



6.7 EDUCATION, ENCOURAGEMENT, AND PROMOTIONAL CAMPAIGNS

In addition to changes in the City's physical infrastructure, this plan proposes programs to encourage bicycling, educate citizens about bicycling, enforce bicycle-related laws, and evaluate the effects of bicycle-related initiatives. The City will seek funding to continue its existing programs and education campaigns, and to augment them with the following programs.

EDUCATION

As part of the citywide Plan implementation, the City will establish a bicycle education program. The City will provide education to many elementary and middle school students through the Safe Routes to School program.

The City will continue to fund and seek additional funding to institute a bicycle safety education program to teach bicycle safety to children, adults, and other groups that encounter bicyclists. The curriculum for cyclists will focus on teaching safe riding behavior, such as how to ride in traffic, how to make left turns, where to ride in the lane, and so forth. The City will look to partner with the South Gate Library to promote and distribute educational materials.

The City will continue its existing educational programs, and expand with the availability of funds programming for the following groups:

- **Children**. All children in public schools should go through a bicycle safety program before they graduate. This will start at the second- or third-grade level and receive age-appropriate safety education program that trains them to ride in city streets as they get older.
- **Adults**. A bicycle safety education component should also be available to adults at employment sites, and on selected weekends for the general public. The City will work with local organizations to offer cycling skills workshops.
- **Employers**. The City will work with Rideshare Coordinators at major employers to offer educational programs. The City should provide contacts for curriculum, as well as safety brochures. The City should encourage employers to offer programming such as the "bike buddy" system where experienced cyclists can pair with less experienced cyclists to ride to work. The City should advertise and promote these programs on its website.
- **Motorists**. The safety curriculum should educate motorists as to how to interact with bicyclists. The City will work with the South Gate Police Department to ensure motorists that violate bicyclists' rights are educated and, if appropriate, cited. The City will make the information available on the City's webpage as well as the Police Department webpage. The City should launch a public awareness campaign to

educate motorists of the rights of bicyclists, and how to interact with them.

- **Other groups**. Safety education should be taught to others who come in to contact with bicyclists, such as GATE bus drivers and the South Gate Police.
- **City staff**. Bicycle safety education can be incorporated into existing training and orientations. There can be a special training about bicycling, and how bicycling is incorporated into many City staff's everyday jobs during an event on "bike-to-work" day.
- **Bike shops**. The City should work with local bike shops to sponsor fairs and clinics to teach safe cycling. These activities can take place during the City's bicycle month.
- **Bike Skills Park / Pump Track**. The City should work with to start a local skills course, and explore further educational opportunities.
- **Safe Routes to School**. The City will continue to support and seek funding for educational programs through Safe Routes to School.

Encouragement

The City will seek funding to carry out the following encouragement programs:

- **Bicycle webpage**. The City will update a designated webpage as a clearinghouse for all bicycle-related information including upcoming events, safety brochures, flyers, news, etc.
- **Bike map**. The City will create and publish an attractive and user-friendly bike map. The map will include key destinations (schools, parks, shopping centers, City Hall, Tweedy Mile, and others), designated bikeways, and pertinent phone numbers and City contact information. The map will be available on the City's webpage, with a limited number of hardcopies at City Hall.
- **Ciclovia**. The City will consider initiating a "ciclovia" where streets are closed to cars for bicycles and pedestrians during set times. This event has been very popular in Los Angeles and serves as a time for users of all ages and abilities to experience bicycling and walking in the street. Skills courses can also be taught during ciclovia.
- **System identification**. The City will develop its own identifying logo and name that is shown on bikeway and parking signs throughout the City. Directional signage (i.e., downtown, City Hall) placed at strategic locations will help first time users in the area find their destinations.
- **Equipment**. The City should work with outside organizations and agencies to provide free helmets and lights to students and low-income cyclists. The City will work with the South Gate Police Department to identify abandoned bicycles and donate them to community organizations or bike shops to fix and give away to cyclists in need.
- **Employer incentives**. South Gate will work with major employers to encourage bicycle commuting by their employees by coordinating promotional events and encouraging the provision of bicycle lockers and access to shower facilities. The City will work with employers to offer incentives, such as prizes, financial incentives, or

giving regular commuters new bicycles. Bike-to-Work Day and Bike Month will be advertised and promoted to employees.

- **Safe Routes to School**. The City will continue to support and fund international Walk-to-School Day and create a Bike-to-School Day as well. The City will purchase prizes and other incentive items to give to students who bicycle to school regularly.
- **Partnership with Hospitals and Health Clinics**. The City will look to partner with health organizations to promote the health benefits of riding a bicycle.

ENFORCEMENT

Various City Departments will coordinate to ensure a mutual understanding of laws that affect bicycles. The South Gate Police Department will continue to enforce the helmet law for minors, prevent wrong-way riding, monitor motorists' yield rate to bicycles at intersections and in bicycle lanes, and to otherwise enforce the law as it pertains to bicyclists.

South Gate Police Officers will go through continuing education programs and training on how to ride a bicycle, especially targeted toward police officers on bicycles. The program will emphasize how to conduct police work on a bicycle, how to ride safely, and what motorist and bicyclist behavior to enforce.

EVALUATION

The City should continue the annual bicyclist and pedestrian counts with the assistance of outside organizations and agencies. The City will also analyze crash data to see whether programs and new infrastructure helps decrease crashes per mile ridden.

6.8 ESTIMATED NUMBER OF EXISTING BIKE COMMUTERS AND ESTIMATED INCREASE

According to the U.S. Census American Community Survey, between 2005 and 2009, 0.03% to 1.0% of South Gate residents commuted to work by bicycle. Multiplying by the 2010 Census population of 94,396 gives 280–940 bike commuters. This rate is similar to bicycle commute rates in Los Angeles County and in the State of California.

The City sets a goal of 5 percent of all commute trips to be made by bicycle when the Plan is fully implemented 20 years from now. Multiplying the 5% goal by the 2010 Census population of gives 4,700 bike commuters. We believe this is achievable based on what other cities have done with ambitious bicycle plans. It will be a very significant increase, but we believe our Plan is strong enough to meet this, because other cities have accomplished similar mode shifts with roughly similar efforts.

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CHAPTER 7
FUNDING

A variety of potential funding sources, including local, state, regional, and federal funding programs, may be used to construct bicycle, pedestrian and trail improvements or to institute programs. Most of the Federal and State programs are competitive, and involve the completion of extensive applications with clear documentation of the project needs, 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.

7.1 FEDERAL FUNDING PROGRAMS

MAP-21

The Moving Ahead for Progress in the 21st Century Act (MAP-21), passed in June 2012, sets the framework for spending federal transportation revenue. Provisions of the previous transportation bill, the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), will be in force until October 2012, at which time the new law will go into effect.

MAP-21 consolidates the three main programs that contained dedicated funding for biking and walking under SAFETEA-LU. These were Transportation Enhancements, Safe Routes to School, and Recreational Trails. Theyare now a single category, Transportation Alternatives.

Under MAP-21, bicycling and walking projects are eligible for the following core programs: National Highway Performance Program (NHPP), Surface Transportation Program (STP), Highway Safety Improvement Program (HSIP), Congestion Mitigation and Air Quality Improvement (CMAQ), Metropolitan Planning, and Transportation Alternatives. MAP-21's Transportation Alternatives combines the following SAFETEA-LU programs: Transportation Enhancements (now known under MAP-21 as Transportation Alternatives, a project category within the Transportation Alternatives *program*), Safe Routes to School, and Recreational Trails. Transportation Alternatives program funds are drawn from NHPP, STP, CMAQ, and Metropolitan Planning, and are dedicated funds by and large for bicycling, walking, and safety for all users. Biking, walking, and trails projects are also eligible for a handful of other programs such as Scenic Byways funds, Transportation, Community, and System Preservation Program (TCSP), and Tribal High Priority Projects.

The Cardin-Cochran amendment to MAP-21 requires 50% of all program funding to be distributed by population directly to local metropolitan planning organizations. The rest of the funding is administered by the States. Thus, MAP-21 funding is administered by the California Department of Transportation (Caltrans) and the local metropolitan planning organization (MPO). In the past, this has been the Los Angeles Metropolitan Transportation Authority (Metro), but the law may be interpreted such that the Southern California Association of Governments will play the role of local MPO.

MAP-21's approach to distribution of funds among the states is based upon the amount of funds each state received under SAFETEA-LU's core programs. A primary difference from SAFETEA-LU is that states have the ability to transfer 50% of any apportionment to another formula program, except no transfers are permitted of Metropolitan Planning funds or funds suballocated to areas based upon population.

Generally, Caltrans distributes funding through each district's Local Assistance Program. Previously, Los Angeles County Metro was responsible for allocating all discretionary federal, state and local transportation funds to improve all modes of transportation for Los Angeles County, though that may change under MAP-21. Metro has done so primarily through the Call for Projects (CFP) program. The CFP is a competitive process by which these discretionary funds are distributed to regionally significant projects every other year. There are seven categories in which projects are competitively ranked, including categories for bikeways improvements and pedestrian improvements. The CFP process is part of the larger Los Angeles County Transportation Improvement Program.

Each state has its own method for distributing federal funds. The funding allocation process employed by Caltrans for core programs under SAFETEA-LU typically combined some form of state programming with some distribution of funds to regions or local MPOs. Neither Caltrans nor Metro yet knows how funds from the various programs of MAP-21 will be distributed.

More information can be found at:
http://www.fhwa.dot.gov/map21/summaryinfo.cfm

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is reauthorized under MAP-21, and received a substantial increase in funding relative to SAFETEA-LU. It aims to achieve a significant reduction in traffic fatalities and serious accidents through the implementation of infrastructure-related highway safety improvements. These improvements may be on any public road or publicly owned bicycle and pedestrian pathway or trail, and can include the use of devices such as traffic signals, curb extensions, and crosswalks. In 2009, $1.296 billion in funds was available nationwide.

MAP-21 allows each state to use HSIP funds for education and enforcement activities, as long as those activities are consistent with the state's Strategic Highway Safety Plan (SHSP). California completed its SHSP in September 2006, and created an Implementation Plan in April 2008. MAP-21 also requires states to focus funds on improvements for pedestrians and the elderly if crashes among these groups are not below a threshold level.

Applications are submitted electronically, and must demonstrate that the proposed engineering improvments will increase the safety of the proposed project area. These are calculated in the application program using Crash Reduction Factors with accompanying financial values. Project areas which have a prior history of injuries or fatalities are more likely to be funded.

More information can be found at:
http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm
http://safety.fhwa.dot.gov/safetealu/fact_sheets/ftsht1401.cfm
http://www.bikeleague.org/resources/reports/pdfs/highway_safety_improvement_program.pdf

Recreational Trails Program

The Recreational Trails Program is reauthorized under MAP-21. The California State Parks and Recreation Department administered Recreational Trails Program (RTP) funds under SAFETEA-LU, and will likely continue to administer the state's half of the funds under MAP-21. RTP annually funds recreational trails, including bicycle and pedestrian paths. Cities, counties, districts, state agencies, federal agencies and non-profit organizations may apply. A 12 percent match is required. Federal, state, local and private funds may be used to match the grant. There is no limit to the grant request; however, there are different requirements within the grant application depending on whether the project requires more or fewer than $100,000.
More information can be found at:
Tel. (916) 653-7423
localservices@parks.ca.gov
http://www.parks.ca.gov/?Page_id=24324
http://www.fhwa.dot.gov/environment/rectrails/

Transportation, Community, and System Preservation Program (TCSP)

This program is reauthorized under MAP-21. It provides federal funding for projects that improve the efficiency of the transportation system, reduce the impact on the environment, and generally investigate the relationships between transportation, community and system preservation. Eligible projects include improving conditions for bicycling and walking, better and safer operations of existing roads, new signals, and development of new programs. States, MPOs and local jurisdictions are eligible to apply for the discretionary grants. Grantees must annually report on the status of the project and the degree to which the project is attaining the stated goals. The report must include quantitative and qualitative assessments. The Federal Highway Administration administers the program, and distributed approximately $29 million nationwide in FY 2012. The FHWA solicits a call for grant applications annually.

More information can be found at:
http://www.fhwa.dot.gov/tcsp/index.html

Land and Water Conservation Fund (LWCF)

The Land and Water Conversation Fund is reauthorized under MAP-21. 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. The State then receives, scores, and ranks applications according to certain 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. Bike paths and recreational trails are eligible uses of this money. Cities, counties, recreation and park districts, and any other entity that has the authority to develop or maintain a public park is eligible to apply. This program is a reimbursement program, and the applicant is expected to initially finance the entire project. A one for one match is required, and federal funds cannot be used as a match, except Community Development Block Grants. The California State Parks Department administered the state funds under SAFETEA-LU.

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

Community Development Block Grants (CDBG)

The CDBG entitlement program allocates annual grants to larger cities and urban counties to develop viable communities by providing decent housing, a suitable living environment, and opportunities to expand economic opportunities, principally for low- and moderate-income persons. Every year the local governments receive federal money for a wide variety of community improvements in the form of CDBG funds. Bicycle and pedestrian facilities are eligible uses of these funds. CDBG funds only pay for projects in areas of economic need. No match is required.

More information can be found at:
http://www.hud.gov/offices/cpd/communitydevelopment/programs/

Rivers, Trails, and Conservation Assistance Program (RTCA)

The Rivers, Trails, and Conservation Assistance Program is the community assistance arm of the National Park Service. RTCA provides technical assistance to communities in order to preserve open space and develop trails. The assistance that RTCA provides is not for infrastructure, but rather building plans, engaging public participation, and identifying other sources of funding for conservation and outdoor recreation projects.

More information can be found at:
http://www.nps.gov/ncrc/programs/rtca/index.htm
http://www.nps.gov/ncrc/programs/rtca/contactus/cu_apply.html

7.2 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 Los Angeles County for single-time planning, and annual construction of bicycle and pedestrian facilities. Each city in Los Angeles County receives TDA Article 3 funds from Metro according to population.

TDA Article 3 funds may be used for the following 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

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. The Non-motorized Transportation Plan establishes a regional network from which local plans can build upon for local-serving bicycle and pedestrian routes. Once a jurisdiction has an approved bicycle plan that meets the requirements of the Street and Highways Code 891.2, they may apply for the Caltrans grant.

More information can be found at:
http://www.dot.ca.gov/hq/MassTrans/State-TDA.html
http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm

Safe Routes to School (SR2S)

The Safe Routes to School (SR2S) program is separate from the federal Safe Routes to School Program. 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 approximately $24.25 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 safety programs are eligible programs for OTS start-up funds. City and county agencies are eligible to apply, as well as COGs. There is no set maximum for grants, and no match is required; however, contributions of other funds may make projects more competitive.

More information can be found at:
http://www.dot.ca.gov/hq/traffops/saferesr/

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. Every year $10 million dollars is available with individual grants limited to $350,000. Cities, counties, COGs, state agencies and non-profit organizations may apply. No match is required; however, additional points will be given for matching funds. The State Resources Agency administers the funds.

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

AB 2766 Subvention Program

AB 2766 Clean Air Funds are generated by a surcharge on automobile registration. The South Coast Air Quality Management District (AQMD) allocates 40 percent of these funds to cities according to their proportion of the South Coast's population for projects that improve air quality. The projects are up to the discretion of the city and may be used for bicycle or pedestrian projects that could encourage people to bicycle or walk in lieu of driving. The other 60 percent is allocated through a competitive grant program that has specific guidelines for projects that improve air quality. The guidelines vary and funds are often eligible for a variety of bicycle, NEV and pedestrian projects. The Mobile Source Review Committee administers the discretionary funds.

More information can be found at:
http://www.aqmd.gov/localgovt/AB2766.htm
http://www.aqmd.gov/trans/ab2766.html

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 projects, 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. They may be used for bike paths and trails. This grant is given to local governments based on their population. Some cities have used up their full allocation, while others have not. Regional parks and open space districts also receive these funds. COGs are not eligible to receive Per Capita Grant funds. The California State Parks Department administers the grant funds.

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

Bike paths and recreational trails are eligible uses of this money. Cities, counties and recreation and parks districts may apply for these funds, but not COGs. The maximum grant request is $250,000 per project, and no match is required. The California State Parks Department administers the funds.

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

Proposition 84 - Statewide Park Program

The Statewide Park Act awards 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, and 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:
http://www.resources.ca.gov/bonds_prop84_urbangreening.html
http://sgc.ca.gov/urban_greening_grants.html

Wildlife Conservation Board Public Access Program

The Wildlife Conservation Board (WCB) provides grants for the development of facilities for public access to hunting, fishing, or other wildlife-oriented recreation. These monies can be used for trail head development, boardwalks, among others. Support facilities such as restrooms and parking areas are also eligible for funding. A 50% match is the preferred amount for the funds. The program typically has $1 million for local assistance grants available annually.

More information can be found at:
http://www.wcb.ca.gov/Access/index.html

Transportation Planning Grant Program

The Transportation Planning Grant Program has two grant programs which can aide the planning and development of bicycle and pedestrian facilities. The Environmental Justice: Context Sensitive Planning Grant is to promote the involvement of low-income and minority groups in the planning of transportation projects. The program requires a local match of 10% with a 5% in-kind contribution maximum. The Community Based Transportation Planning program funds coordinated transportation and land use planning projects that encourage community involvement and partnerships. These projects must support livable and sustainable community concepts. The Office of Community Planning, part of Caltrans' Division of Transportation Planning, is responsible for managing the program and receives approximately $3 million annually for each program. Grants are available up to $300,000 for the Community Based Transportation Planning grant, and $250,000 for the Environmental Justice Context Sensitive Planning Grant. MPOs, Regional Transportation Planning Agencies, cities, counties, and transit agencies are all eligible to apply for funding.

More information can be found at:
http://www.dot.ca.gov/hq/tpp/grants.html
For EJ CTS - Tel. (916) 651-6889
For CBTP - Tel. (916) 651-6886

7.3 LOCAL FUNDING

Proposition C Local Return

County-wide, 20 percent of Proposition C funds, Los Angeles County 1/2 cent sales tax revenue, returns to the cities according to population. The money may be spent on a variety of transportation projects, including bicycle projects. The City is eligible for bicycle facilities, but currently all local funds are allocated for transit services. Some of the Proposition C funding is programmed through the Metro Call for Projects (see SAFETEA-LU section above).

Measure R Local Return

A portion of this Los Angeles County 1/2 cent sales tax revenue returns to the cities according to population. The money may be spent on a variety of transportation projects, including bicycle projects. Of the $40 billion, which will be collected over the 30 years from Measure R's passage in 2008, $5.91 billion (approximately 15%) will be returned to local jurisdictions for improvements such as street resurfacing, rehabilitation and reconstructions, bikeways, pedestrian improvements, and streetscapes. Cities may spend this money as they choose from these categories. The distribution of funds varies by year.

More information can be found at:
http://www.metro.net/projects/measurer/

Resurfacing and Repaving

Local jurisdictions should take advantage of opportunities to add bicycle lanes and other markings upon resurfacing and repaving of streets. While other lanes are re-striped, the bike facilities can be painted as well. This requires close coordination with the Planning or Community Services Department and Public Works so that low cost bicycle upgrades are not left out of street maintenance projects.

New Construction

Future road widening and construction projects are one means of providing bike lanes, pedestrian improvements and trails. To ensure that roadway construction projects provide appropriate measures where needed, it is important that an effective review process or ordinance is in place to ensure that new roads meet the standards and guidelines presented in this 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, bicycle lanes, bicycle 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 regional benefit. Sidewalks, trails, intersection crossings and other pedestrian improvements can also be funded through benefit assessments.

Property Taxes and Bonds

Cities and counties can sell bonds to pay for bikeways and pedestrian facilities, as well as any amenities related to these facilities. A supermajority of two-thirds of voters in that jurisdiction must vote to levy property taxes to repay the bonds.

Business Improvement Districts

Bicycle and pedestrian 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, sidewalk improvements and pedestrian crossing enhancements.

User Fees

Bicycle lockers and automated bicycle parking could be paid for with a user fee. Since the amount of revenue the user fee would generate is unknown, this funding source would require an alternative backup source.

Parking Meter Revenues

Cities can fund various improvements through parking meter revenues. South Gate does not currently have any parking meters. Should the City install them in the future, it should consider using the revenues to fund bicycle improvements. The ordinance that governs the revenues specifies eligible uses for the funds. Cities have the option to pass ordinances that specify bicycle or pedestrian facilities as eligible expenditures.

Adopt-a-Path Program

Maintenance of bicycle paths and recreational trails could be paid for from private funds in exchange for recognition, such as signs along the path saying "Maintained by [name]". In order for this to work consistently, a special account could be set up for donors to pay into.

General Funds

Cities and counties may spend general funds as they see fit. Any bicycle, pedestrian, or trails project could be funded through general funds and then matched with other funds.

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CHAPTER 8
IMPLEMENTATION

The implementation of this plan will take years, and will be dependent upon numerous factors including the general economy, budget, and the state of development and redevelopment. Although this chapter categorizes the projects into three priority tiers, the City will take advantage of opportunities to implement bikeways through scheduled street resurfacings and restripings. In this manner, bikeways can be built for little cost. Bikeway implementation may also occur through developer mitigations. Additionally, before new facilities are implemented, the City will budget to maintain the new facilities.

8.1 FINANCING

Past Expenditures

The City has successfully attracted grants to fund bicycle facilities. A $440,600 grant from Cycle 9 of the State SR2S program will fund bicycle lanes on Alexander Avenue between Firestone Boulevard and Abbott Road, and improvements on the bicycle path on Southern Avenue between Vossler Avenue and Pinehurst Avenue.

Future Financial Needs

Altogether, the City seeks funds for 9.8 miles of bike paths, 0.5 miles of cycle tracks, 23 miles of bike lanes (including colored and buffered bike lanes, some to be implemented with road diets), 5.9 miles of bike boulevards, 5.7 miles of bike routes with sharrows, and 3.6 miles of bike routes with Type B sharrows. To connect these facilities in a citywide network, the City also seeks funds for five bicycle and pedestrian bridges and access and intersection improvements along existing bikeways. The total estimated cost for South Gate's bicycle network, excluding the cost-variable projects described below, is $7,390,400.

Cost Variable Projects

It is difficult to predict the costs of the proposed bridges and the proposed bicycle paths along railroad rights-of-way. Costs for these will depend on various factors, including coordination with other agencies. For example, preliminary alternatives for the I-710 Corridor Project, described on page 3-10, include the construction of a new bridge on Southern Avenue. Incorporating bicycle lanes into this bridge could cost the city very little. However, if the I-710 Corridor Project does not construct the bridge, the cost for the City to build a bicycle and pedestrian bridge would be about $4 Million. Similarly, the I-710 Corridor Project contains the option to vacate the I-710 Southbound off-ramp at Wright Road, which would make the proposed bike path easy to implement.

Costs of bicycle paths along railroad rights-of-way depend in a similar fashion upon whether or not the railroad keeps the rail line active. For these reasons, these projects' estimated costs are separated from the total. Estimates shown below are meant to give a sense of the magnitude of the cost, but exact costs will depend on the project context.

Detailed cost estimates are shown below.

Table 8-1: Cost Estimates for Bridges and Bike Paths along Railroad and Caltrans Rights-of-way

Bikeway Name	From	To	Project Type	Miles or Number	Cost
UPRR San Pedro Sub-Division	Ardmore Ave.	Eastern City Limit.	Bike Path	2.3	$2,300,000
UPRR San Pedro Sub-Division	Gardendale St.	Century Blvd.	Bike Path	0.6	$620,000
UPRR San Pedro Sub-Division			Two Bridges	2.0	$8,000,000
UPRR Spur Line	Western city limit	Eastern city limit	Bike path	3.9	$3,900,000
UPRR Spur Line			Three bridges	3.0	$12,000,000
Southern Ave.			Two Bridges	2.0	$8,000,000
Wright Rd. Off-Ramp, I-710 Southbound	Wright Rd.	Los Angeles River	Bike path	0.3	$340,000
TOTAL					**~$35 Million**

Table 8-2: Cost Estimates for All Other Proposed Bikeways

No.	Bikeway Name	Street	From	To	Project Type	Mileage	Cost
1	Santa Fe Ave. / Truba Ave.	Santa Fe Ave.	Ardmore Ave.	Southern Ave.	Cycletrack	0.5	$45,000
1	Santa Fe Ave. / Truba Ave.	Truba Ave.	Southern Ave.	Tweedy Blvd.	Type B sharrows	0.5	$22,500
2	Stanford Ave.	Stanford Ave.	Southern Ave.	Sequoia Dr.	Bike Route with Sharrows	0.7	$14,600
3	Long Beach Blvd.	Long Beach Blvd.	Northern city limit	Tweedy Blvd.	Type B sharrows	1.3	$65,500
4	State St.	State St.	Northern city limit	Tweedy Blvd.	Colored Bike Lanes with Road Diet	1.3	$256,000
4	State St.	State St.	Tenaya Ave.	Southern city limit	Colored Bike Lanes with Road Diet	0.2	$38,000
5	California Ave.	California Ave.	Northern city limit	Southern city limit	Colored Bike Lanes with road diet	1.8	$366,000
6	Otis St.	Otis St.	Northern city limit	Southern city limit	Colored Bike Lanes with road diet	1.8	$364,000
7	Alexander Ave.	Alexander Ave.	Firestone Blvd.	Southern city limit	Buffered Bike Lanes	1.2	$72,600
8	Hildreth Ave.	Hildreth Ave.	Southern Ave.	Southern city limit	Bike Route with Sharrows	1.0	$19,600
9	Atlantic Ave.	Atlantic Ave.	Ardmore Ave.	Southern city limit	Type B sharrows (Atlantic)	1.4	$72,000
10	Wright Rd.	Wright Rd.	Chakemco St.	Southern city limit	Buffered Bike Lanes (Wright)	0.7	$39,000
12	Los Angeles River Bicycle Path	River	Ardmore Ave.	Century Blvd.	Five Access Improvements		$150,000
13	Garfield Ave.	Garfield Ave.	Ardmore Ave.	Eastern city limit	Bike lanes	2.0	$100,000
13	Garfield Ave.	Garfield Ave.	Gardendale St.	Roosevelt Ave.	Bike lanes	0.4	$17,500
13	Garfield Ave.	Garfield Ave.	Roosevelt Ave.	Southern city limit	Type B sharrows	0.4	$19,000
14	Rio Hondo	Rio Hondo	Ardmore Ave.	Los Angeles River	Wayfinding Signage Improvements	1.7	$16,900
15	Paramount Blvd.	Paramount Blvd.	Gardendale St.	Century Blvd.	Bike Lanes	0.5	$25,000

No.	Bikeway Name	Street	From	To	Project Type	Mileage	Cost
16	Liberty Blvd.	Liberty Blvd.	Long Beach Blvd.	Otis St.	Bicycle Boulevard	1.6	$326,000
17	Independence Ave.	Independence Ave.	Long Beach Blvd.	Otis St.	Bike lanes	1.5	$38,000
17	Independence Ave.	Independence Ave.	Long Beach Blvd.	Otis St.	Sharrows	1.5	$15,200
19	Ardmore Ave.	Ardmore Ave.	Long Beach Blvd.	Otis St.	Bike lanes	1.5	$37,500
19	Ardmore Ave.	Ardmore Ave.	Long Beach Blvd.	Otis St.	Sharrows	1.5	$15,000
20	Firestone Blvd.	Firestone Blvd.	Western city limit	Eastern city limit	Colored Bike Lanes	4.2	$627,000
21	Southern Ave.	Southern Ave.	Santa Fe Ave.	Burke Ave.	Bike path improvements	2.2	$2,170,000
21	Southern Ave.	Southern Ave.	Burke Ave.	Los Angeles River	Widen Bike Lanes, Add Buffers to Bike Lanes	0.7	$44,400
21	Southern Ave.	Southern Ave.	Los Angeles River	Eastern city limit	Bike Lanes	0.6	$31,000
22	Missouri Ave.	Missouri Ave.	Truba Ave.	Hildreth Ave.	Bicycle Boulevard	2.1	$426,000
23	Tweedy Blvd.	Tweedy Blvd.	Alameda St.	Atlantic Ave.	Colored Bike Lanes with Road Diet	2.7	$538,000
24	Sequoia Dr. / Michigan Ave.	Sequoia Dr.	Stanford Ave.	San Jose Ave.	Bicycle Boulevard	0.3	$56,000
24	Sequoia Dr. / Michigan Ave.	Michigan Ave	East of State St. (City Limit)	Wright Rd.	Bicycle Boulevard	1.9	$372,000
25	Gardendale St.	Gardendale St.	Los Angeles River	East end of Hollydale Park	Bicycle Path	0.1	$120,000
25	Gardendale St.	Gardendale St.	East end of Hollydale Park	Garfield Ave.	Sharrows	0.3	$6,000
25	Gardendale St.	Gardendale St.	Garfield Ave.	Eastern City Limit.	Buffered bike lanes with road diet	0.8	$82,000
26	Monroe Ave.	Monroe Ave.	Hollydale Park	Garfield Ave.	Bicycle Route with Sharrows	0.3	$5,200

*Note: Bike Lanes and Sharrows are one-way on Independence Ave. and Ardmore Ave. All other facilities are two-way. All mileage figures are centerline miles.

No.	Bikeway Name	Street	From	To	Project Type	Mileage	Cost
27	Main St.	Main St.	Pennsylvania Ave.	Garfield Ave.	Sharrows	0.2	$3,400
27	Main St.	Main St.	Garfield Ave.	Paramount Blvd.	Buffered bike lanes	0.6	$36,000
28	Century Blvd.	Century Blvd.	Los Angeles River	Pennsylvania Ave.	Sharrows	0.3	$5,400
28	Century Blvd.	Century Blvd.	Pennsylvania Ave.	Industrial Ave.	Buffered bike lanes	0.5	$32,400
29	Hollydale Park Paths		Gardendale St.	Century Blvd.	Signage and Maintenance Improvements	1.1	$10,700
30	Tweedy Blvd.	Tweedy Blvd.	Atlantic Ave.	Los Angeles River	Bike Path	0.4	$350,000
	TOTAL						**$7,050,400**

South Gate may decide to install other devices to improve its bikeways. Full roundabouts cost approximately $200,000 each, whereas mini-roundabouts and mini-circles will cost about $15,000 each.

South Gate will begin a bicycle parking program. Based on the recommended number of racks identified on page 6-34, there are a total of 330 inverted U-rack bicycle parking units required. To jump-start this program, the City will purchase 100 inverted U-racks for distribution and installation. Inverted U-racks typically cost $250 per rack. Additionally, bicycle lockers are recommended at 4 large employment sites. Bicycle lockers typically cost $3,000 / locker, which hold two bicycles. The city should work with employers to purchase and install one locker at each of the three existing large commercial parcels. The estimated total cost of the bicycle parking program will thus be $91,500 for bicycle racks and lockers. Additional bicycle parking will need to be added, maintained, and replaced over time as cycling increases throughout South Gate.

There will also be ongoing costs associated with each component of this plan. This includes bicycle parking, planning, education, encouragement, and enforcement programs. The City should also take care to provide and maintain adequate lighting on bikeways. Similarly, as bikeways are implemented, the City may want to provide increased enforcement on bikeways so that personal safety is not a deterrent to cycling.

It is important to note that the City will not have to allocate special budget to fund most of these improvements. The vast majority of these improvements can be made along with other projects. The bike lanes can be striped when streets are resurfaced at marginal extra cost. Most of the budget the City will need will be used for the following:

- Bike paths
- Improved access to existing bike paths
- Coloring of bike lanes
- Bicycle parking

8.2 PROJECT PRIORITIES

PRIORITIZATION PROCEDURE

Prioritizing capital improvements projects requires sensitivity to context. Rather than ranking the projects in a strict list, this plan groups them into three categories: short-term, medium-term, and long-term. Ranked lists collapse the many features and benefits of the projects into a single one-dimensional rating. Furthermore, ranked lists are likely to be rearranged because of political desires and other nonquantifiable factors. By providing broad groupings, we hope to communicate which projects will deliver the most benefits based on the criteria below, without providing false precision about exactly which projects are the “best.” The groupings proceed from the following criteria:

- Preferences expressed by local residents and cyclists at the public workshops and through comments received from the public via email and personal contact
- Preferences expressed by the Technical Advisory Committee
- Priorities established in the Plan survey (see Public Outreach chapter)
- City staff preferences
- Destinations served
- Completion of a network
- History of bicycle-involved or pedestrian-involved crashes
- Improvement that serves and immediate safety need
- Current availability and/or suitability of right-of-way
- Likelihood of attracting a large number of users
- Connectivity with other jurisdiction bikeways
- Land uses that support facilities
- Cost effectiveness
- Links to other transportation modes

The City will seek to implement planned facilities based on opportunity, such as when streets are resurfaced, development occurs, or other street projects are taking place.

The following tables identify all the projects grouped according to their project category. The projects are not ranked within each project category.

Table 8-3: Short-term Bikeway Projects

Bikeway	Project Type	Mileage	Cost
Santa Fe Ave. / Truba Ave.	Cycletrack, Type B sharrows	0.9	$67,500
California Ave.	Colored Bike Lanes with road diet	1.8	$366,000
Otis St.	Colored Bike Lanes with road diet	1.8	$364,000
Atlantic Ave.	Type B sharrows	1.4	$72,000
Atlantic Ave. / Wright Rd.	Buffered Bike Lanes (Wright)	0.7	$39,000
Los Angeles River Bicycle Path	Five Access Improvements		$150,000
Rio Hondo	Wayfinding Signage Improvements		$16,900
Liberty Blvd.	Bicycle Boulevard	1.6	$326,000
Tweedy Blvd.	Colored Bike Lanes with Road Diet, Bike Path	3.0	$888,000
Gardendale St.	Bicycle Path, Sharrows, Buffered bike lanes with road diet	1.2	$208,000
Total			**$2,553,400**

Table 8-4: Medium-term Bikeway Projects

Bikeway	Project Type	Mileage	Cost
Long Beach Blvd.	Type B sharrows	1.3	$65,500
State St.	Colored Bike Lanes with Road Diet	1.5	$294,000
Alexander Ave.	Buffered Bike Lanes	1.2	$72,600
Hildreth Ave.	Bike Route with Sharrows	1.0	$19,600
Garfield Ave.	Bike lanes, Type B Sharrows	2.7	$136,500
Independence Ave.	Bike lanes, Sharrows	1.5	$53,200
Ardmore Ave.	Bike lanes, Sharrows	1.5	$52,500
Missouri Ave.	Bicycle Boulevard	2.1	$426,000
Sequoia Dr. / Michigan Ave.	Bicycle Boulevard	2.1	$428,000
Monroe Ave.	Bicycle Route with Sharrows	0.3	$5,200
Main St.	Sharrows, Buffered bike lanes	0.8	$39,400
Total			**$1,536,500**

Table 8-5: Long-term Bikeway Projects

Bikeway	Project Type	Mileage	Cost
Stanford Ave.	Bike Route with Sharrows	0.7	$14,600
UPRR San Pedro Sub-Division	Bike Path, Two bridges	2.9	$10,940,000*
Hollydale Park Paths	Signage and Maintenance Improvements	1.1	$10,700
Paramount Blvd.	Bike Lanes	0.5	$25,000
UPRR Spur Line	Bike Path, Three bridges	3.9	$15,880,000*
Firestone Blvd.	Colored Bike Lanes	4.2	$627,000
Southern Ave.	Improvements to Existing Bike Path and Bike Lane, new Bike Lanes, Two bridges	3.5	$10,245,400*
Century Blvd.	Sharrows, Buffered bike lanes	0.8	$37,800
Wright Rd. Off-Ramp, I-710 Southbound	Bike Path	0.3	$340,000*
Total Including Variable Costs			**$38,120,500***
Total Excluding Variable Costs			**$2,960,500**

* includes bridge costs and / or bike path costs that are difficult to predict

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CHAPTER 9
DESIGN GUIDELINES

9.1 BICYCLE GUIDELINES

The following serve as general guidelines for the City when constructing facilities identified in this plan. The City will need to follow standard manuals such as the California Manual of Uniform Traffic Control Devices. The City may have to amend its own street design guidelines in order to implement certain facilities. South Gate should take precaution and research the newest bikeway design guidelines and engineering treatments prior to constructing a facility.

9.2 BIKEWAYS GUIDELINES

DEFINITIONS

The following section summarizes key operating and design definitions.

Bicycle

The American Association of State Highway and Transportation Officials' (AASHTO) (1999) definition of a bicycle is "every vehicle propelled solely by human power which any person may ride, having two tandem wheels, except scooters and similar devices. The term 'bicycle' also includes three- and four-wheeled human-powered vehicles, but not tricycles for children."

Class I

Referred to as a bike path, shared-use path, or multi-purpose trail. Provides for bicycle travel on a paved right-of-way completely separated from any street or highway. Other users may also be found on this type of facility.

Class II

Referred to as a bike lane. Provides a striped lane for one-way bicycle travel on a street or highway.

Class III

Referred to as a bike route. Provides for shared use with pedestrian or motor vehicle traffic.

DESIGN

The following guidelines present the recommended minimum design standards and other recommended ancillary support items for shared use paths, bike lanes, and 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 AASHTO Guide for the Development of Bicycle Facilities contain more detail standards and guidance and should be followed.

Class I Bike Path Facilities Design Recommendations

1. All Class I bike paths should conform to the design guidelines set forth by Caltrans.
2. 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.
3. 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.
4. 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. A pavement width of 12 feet is preferred.
5. 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.
6. 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.
7. Landscaping should generally consist of low water-consuming native vegetation and should have the least amount of debris.
8. Lighting should be provided where commuters will likely use the bike path in the late evening.

9. Barriers at pathway entrances should be clearly marked with reflectors and be ADA accessible (minimum five feet clearance), see Figure 9-1.

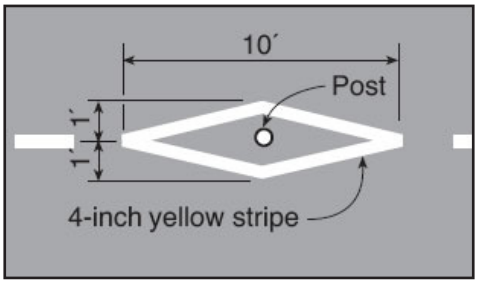

Figure 9-1: Bike Path Barrier Post Treatment

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

Cycle Tracks

Cycle tracks, also known as protected bike lanes, are bikeways located on or adjacent to streets where bicycle traffic is separated from motor vehicle traffic by physical barriers, such as on-street parking, posts/bollards, and landscaped islands. They can be well suited to downtown areas where they minimize traffic conflicts with pedestrians. Streets selected for cycle tracks should have minimal pedestrian crossings and driveways. They should also have minimal loading/unloading activity and other street activity. The cycle tracks should be designed to minimize conflicts with these activities as well as with pedestrians and driveways.

Cycle tracks can be provided on new facilities, but they require more width than other types of bikeways. They are best suited for existing streets where surplus width is available; the combined width of the cycle track and the barrier is more or less the width of a travel lane. The area to be used by bicycles should be designed with adequate width for street sweeping to ensure that debris will not accumulate. Cycle tracks tend to work most effectively where there are few uncontrolled crossing points with unexpected traffic conflicts.

Cycle track concerns include treatment at intersections, uncontrolled midblock driveways and crossings, wrong-way bicycle traffic, and difficulty accessing or exiting the facility at midblock locations. There is some controversy regarding the comparative safety of cycle tracks. Recent studies have concluded that cycle tracks are as safe as other treatments when high usage is expected and when measures such as separate signal phases for right-turning motor vehicle and through cyclists, and left-turning cyclists and through motor vehicles, are deployed to regulate crossing traffic.

Class II Bike Lane 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.

1. 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.
2. 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 9-4)
- 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 edge

3. "Bike Lane" signage, as shown in Figure 9-2, 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 9-2: Bike Lane Sign (Caltrans)

4. Bike lanes should be striped with a solid white stripe of width at least 6 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.

5. 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 9-3).

Figure 9-3: Bike Lane Striping and Stencil

6. 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.
7. Where space permits, intersection treatments should include bike lane ‘pockets’ as shown in Figure 9-4.
8. 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 9-4).

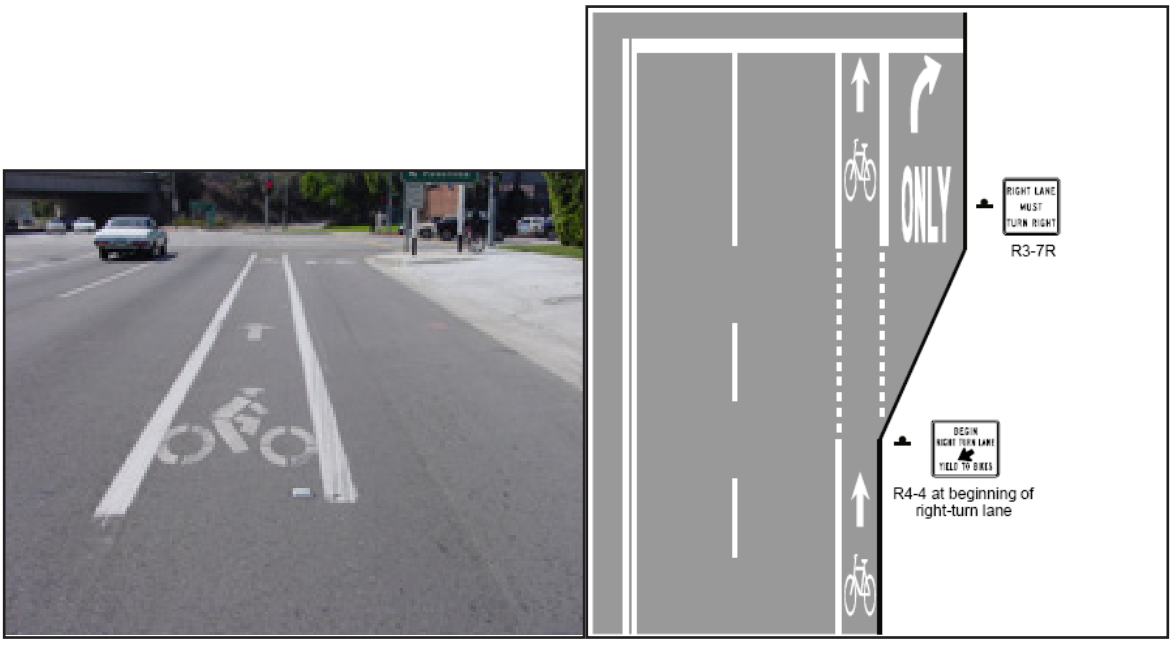

Figure 9-4: Bike Lane Treatment at Intersection (MUTCD, AASHTO)

Colored Bicycle Lanes

Green bicycle lanes 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.

Figure 9-5: Green Bicycle Lanes

Green bicycle lanes can be used as continuous treatment as well (Figure 9-5), not only in conflict zones. The treatment has been approved on an interim basis by the Federal Highway Administration and the California Traffic Control Device Committee. South Gate would need to notify the state if it chooses to use this treatment.

Buffered Bike Lanes

Buffered bike lanes provide a painted divider between the bike lane and the travel lanes. This additional space can improve the comfort of cyclists as they don't have to ride as close to motor vehicles. Buffered bike lanes can also be used to slow traffic as they narrow the travel lanes. An additional buffer may be used between parked cars and bike lanes to direct cyclists to ride outside of the door zone of the parked cars. Buffered bike lanes are most appropriate on wide, busy streets. They can be used on streets where physically separating the bike lanes with cycle tracks is undesirable for cost, operational, or maintenance reasons.

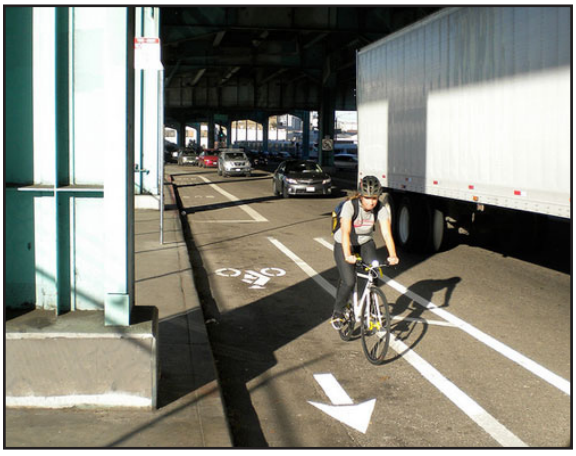

Figure 9-6: Buffered Bike Lanes

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 attractiveness 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

The following design guidelines should be used with the implementation of new Class III Bike Route facilities:

Proper "Bike Route" signage, as shown in Figure 9-7, 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 9-7: Class III Bike Route Sign

This Plan recommends using the sharrow stencil (Figure 9-8) 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 or more frequently on long blocks.

Figure 9C-107. Shared Roadway Bicycle Marking

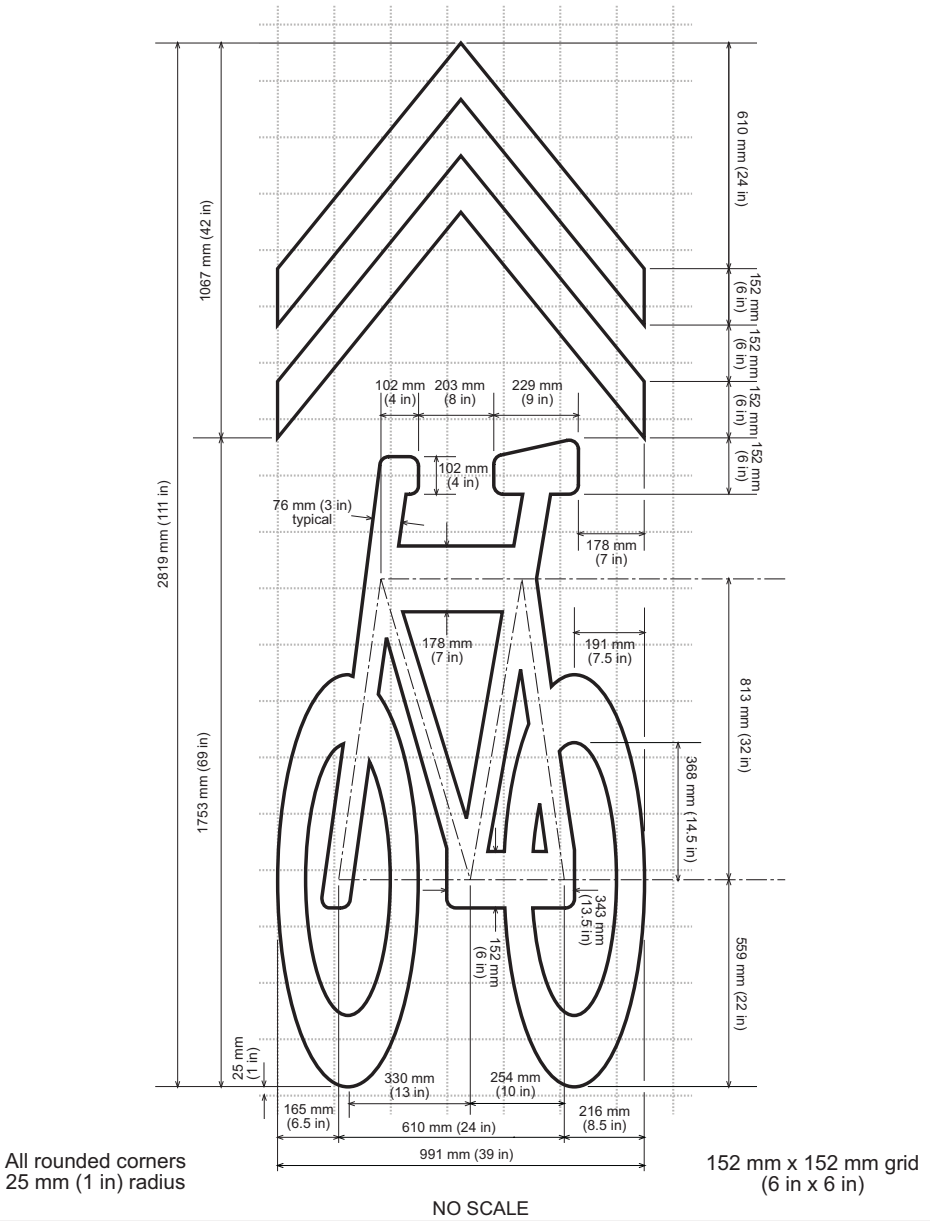

Figure 9-8: Sharrow Stencil

Based on California MUTCD, Section 9C.103(CA) Shared Roadway Bicycle Markings, the standard states: "The shared roadway bicycle marking shall only be used on a roadway (Class III Bikeway (Bike Route) or Shared Roadway (No Bikeway Designation)) which has on-street parallel parking. If used, shared roadway bicycle markings shall be placed so that the centers of the markings are a minimum of 3.3 meters (11 feet) from the curb face or edge of paved shoulder."

On two lane roadways, this minimum 11-foot distance will allow vehicles to pass bicyclists on the left within the same lane without encroaching in the opposite lane of traffic.

On multi-lane roadways, installing the sharrows marking more than 11 feet from the curb will move the bicyclist farther from the "door zone." Placing the sharrows between tire tracks increases the life of the markings and decreases long-term maintenance costs as shown in Figure 9-9.

Figure 9-9: Sharrow placement

B-Type Sharrows

The City of Long Beach is presently experimenting with green coloring of travel lanes (see Figure 9-10) with sharrows to strengthen the effect The wide green stripe indicates where cyclists should ride, and sends a strong signal 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. This treatment has not yet been approved as part of the California Manual of Uniform Traffic Control Devices (CA MUTCD). Until it is approved, the City would have to use them under a sanctioned experimental process.

Figure 9-10: Long Beach Green Sharrow Lane

Brookline, Massachusetts uses large sharrows placed close together with an additional outer marking.

Figure 9-11: Brookline, MA Sharrow Markings

Bicycle Boulevards

A bicycle boulevard is a street that prioritizes through bicycle traffic and discourages through motor vehicle traffic. Traffic calming devices control traffic speeds and slow or prohibit through trips by automobiles. Traffic controls limit conflicts between automobiles and bicyclists and give priority to through bicycle movement at intersections. One key advantage of bicycle boulevards is that they attract cyclists who do not feel comfortable on busy streets and prefer to ride on lower traffic streets.

Successful bicycle boulevard implementation requires careful planning with residents and businesses to ensure acceptance.

Elements of a Bicycle Boulevard

A successful bike boulevard includes the following design elements:

- A direct and continuous street, rather than a circuitous route that winds through neighborhoods. Bike boulevards work best on a street grid. If any traffic diversion will likely result from the bike boulevard, selecting streets that have parallel higher-level streets can prevent unpopular diversion to other residential streets.
- Motor vehicle traffic diverters at key intersections to reduce through motor vehicle traffic (diverters are designed to allow through bicyclist movement)
- Stop signs are turned towards intersecting streets, so bicyclists can ride with few interruptions
- Mini-circles and mini-roundabouts take the place of stop-controlled intersections to reduce the number of stops cyclists have to make
- Traffic-calming devices to lower motor vehicle traffic speeds
- Wayfinding and other signs or markings to route cyclists to key destinations, to guide cyclists through difficult situations, and to alert motorists of the presence of bicyclists
- Where the bike boulevard crosses high-speed or high-volume streets, crossing improvements such as:
    - Signals, where a traffic study has shown that a signal will be safe and effective. To ensure that bicyclists can activate the signal, loop detection should be installed in the pavement where bicyclists ride.
    - Roundabouts where appropriate.
    - Median refuges wide enough to provide a refuge (8 feet minimum) and with an opening wide enough to allow bicyclists to pass through (6 feet). The design should allow bicyclists to see the travel lanes they must cross.

Components of a bicycle boulevard are depicted in Figure 9-12.

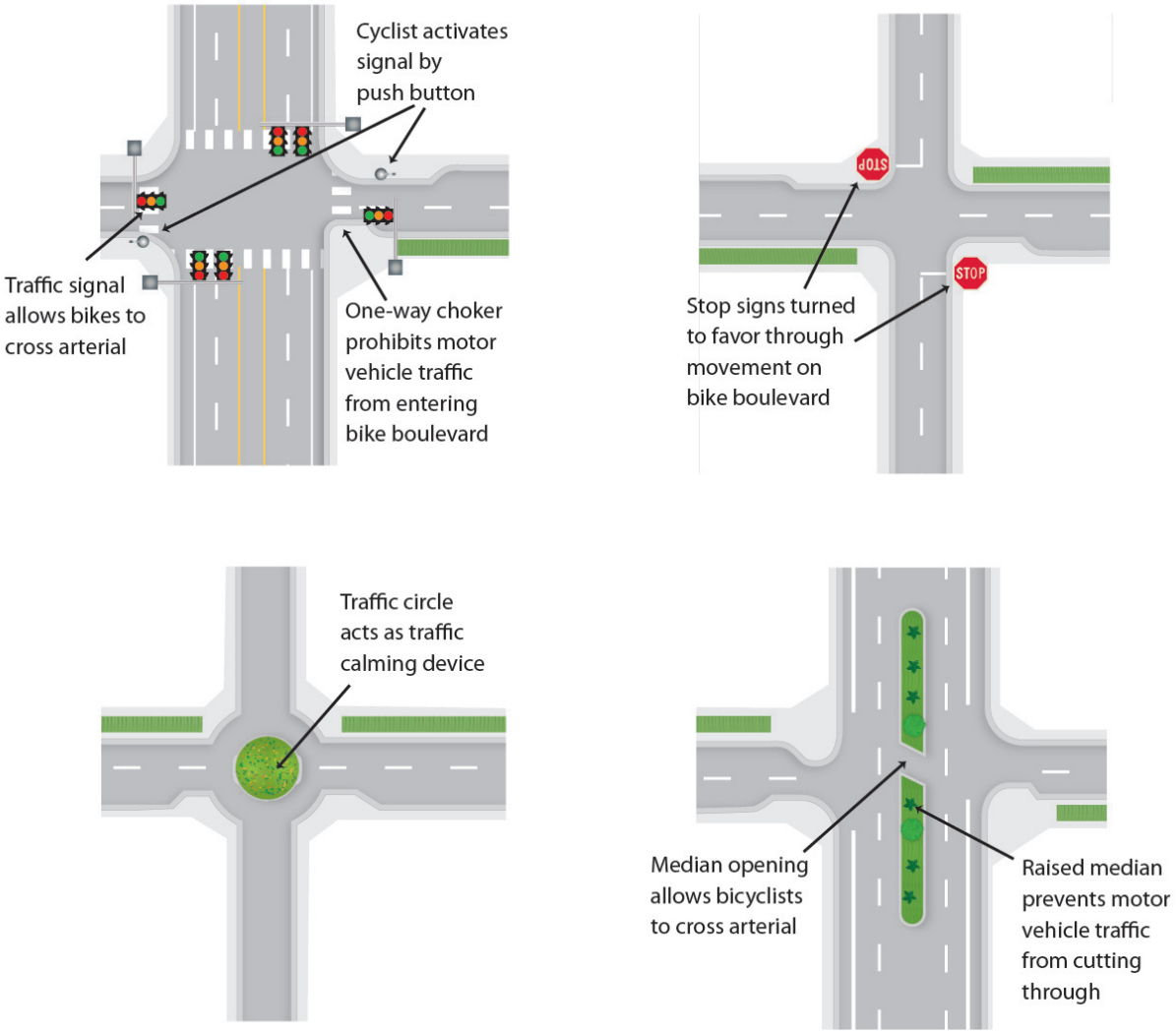

Figure 9-12: Components of a Bicycle Boulevard (Michele Weisbart)

9.3 FREEWAY ON- AND OFF-RAMP CROSSINGS

Interchanges are not always designed to accommodate bicyclists safely and comfortably across a freeway. The California Highway Design Manual (HDM) classifies freeway interchanges into 13 types, and the guide, "Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians," published by Caltrans in 2010, categorizes which of these types accomodate bicyclists and pedestrians. Interchange configurations where ramps are at a near right-angle provide the best accommodation because vehicles are forced to slow down before turning. The interchange at Firestone Boulevard and the 710 freeway is an "L-9" type of interchange, which Complete Intersections categorizes as not accommodating toward bicyclists and pedestrians.

Short-term Treatments

In the short-term, striping and signage can improve conditions for bicyclists crossing the 710 at Firestone Blvd. Figure 9-13 shows two options that improve safety and comfort at free-flow ramp intersections.

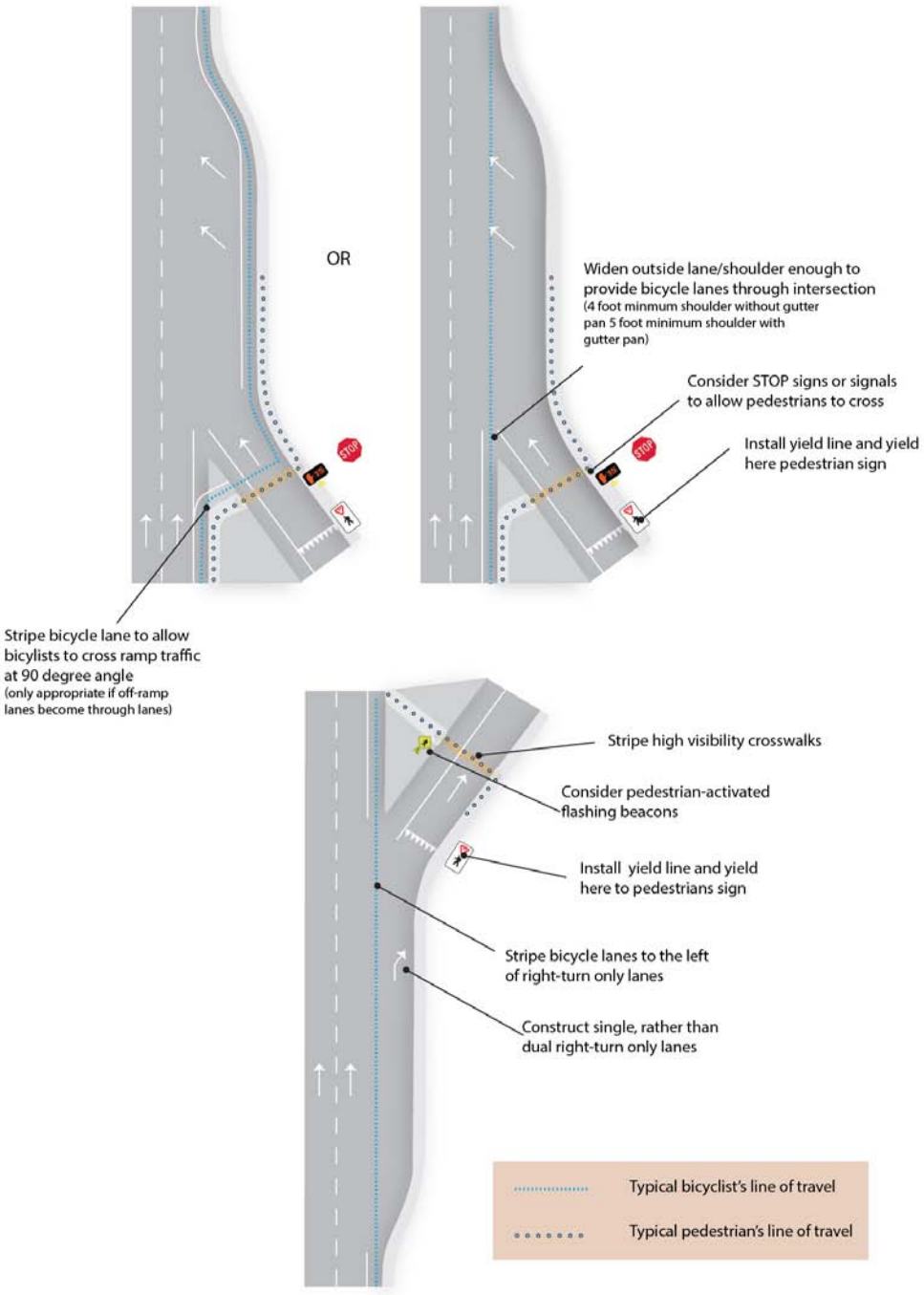

Figure 9-13: Signage and Striping Treatments for Free-Flow Ramp Intersections (Source: Complete Intersections, Caltrans 2010)

LONG-TERM TREATMENTS

In the long-term, an interchange can be reconstructed to eliminate free flow lanes and reconfigure intersections so that on and off ramps meet the crossroad at or near 90 degrees. Complete Intersections indicates that there are six interchange types that are best suited to accommodate pedestrian and bicyclists. These are shown in Figure 9-14.

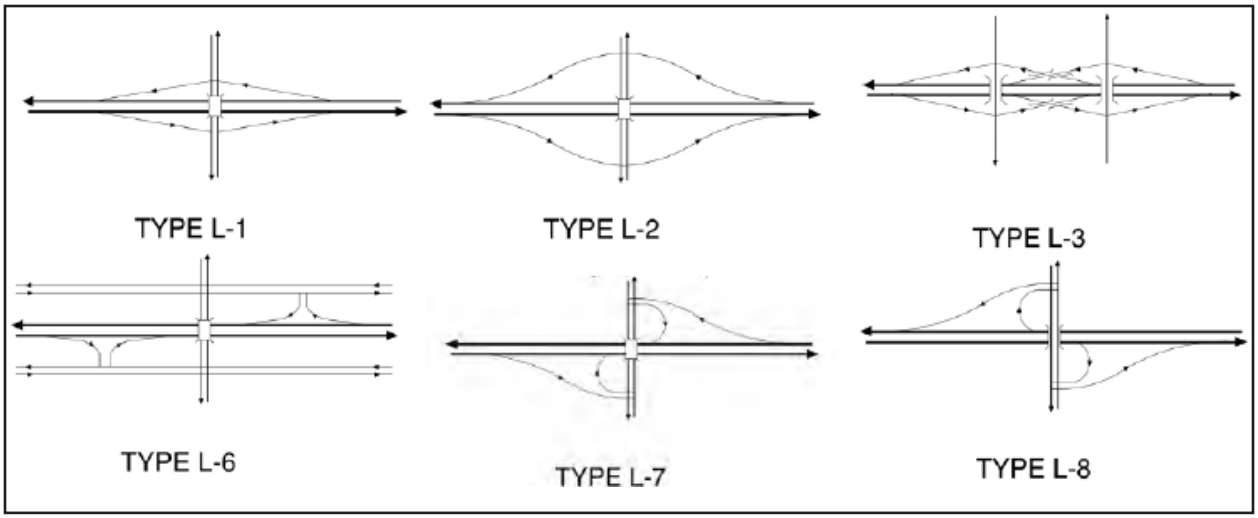

Figure 9-14: Interchanges that Best Accommodate Pedestrians and Bicyclists (Source: Figure 502.2, Caltrans Highway Design Manual)

9.4 SIGNAGE AND MARKINGS

Bikeway signage should conform to the signage standards identified in the Manual on Uniform Traffic Control Devices (MUTCD, 2009) and the California MUTCD 2010. These documents give specific information on the type and location of signage for the primary bikeway system. The table below provides guidance on some of the most important signs.

TABLE 9-1: RECOMMENDED BIKEWAY SIGNAGE AND MARKINGS

Signage	Location	Color	CA MUTCD Designation	MUTCD Designation
Bicycle Crossing	For motorists at a bikeway crossing	B on Y	N/A	W11-15 with W11-15P (optional)
Bike Lane	At the far side of significant arterial intersections	B on W	R81	R3-17
STOP Ahead	Where a STOP sign is obscured	B,R on Y	W3-1	W3-1
Signal Ahead	Where signal is obscured	B,R,G	W3-3	W3-3
Pedestrian Crossing	Where a pedestrian walkway crosses a bikeway	B on Y	W11-2	W11-2
Directional Signs	At intersections where access to major destinations is available	W on G	G7 G8	D1-1b, D1-2b, D1-3b, D1-1c, D1-2c, D1-3c
Right Lane Must Turn Right; Begin Right Turn Here, Yield to Bikes	Where a bike lane ends before an intersection	B on W	N/A R4-4	R3-7 R4-4
Share the Road	Where there is need to warn motorists to watch for bicyclists along the highway	B on Y	W16-1 with W11-1	W16-1P with W11-1
Bicycles May Use Full Lane	Where travel lanes are too narrow for bicyclists and motor vehicles to travel side by side	B on W	R4-11	R4-11

A numbered bike route network may be devised as a convenient way for bicyclists to navigate through the City 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 9-15.

Figure 9-15: Numbered Bikeway Sign (MUTCD)

Figure 9-16 below shows an example of a "Share the Road" sign.

Figure 9-16: Share the Road sign

South Gate may want to add its own logo to give the bikeway signage a distinctive local flavor as in the picture of signs used in Berkeley (Figure 9-17).

Figure 9-17: Berkeley Sign

Vancouver, British Columbia, marks street signs with bicycles if they are a bicycle route as shown below in Figure 9-18.

Figure 9-18: Vancouver Street Signs

Directional 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. South Gate can enhance typical Class III routes with directional signage and pavement markings. These markings allow the cyclist to understand how the route continues, especially if it is one which may be less direct.

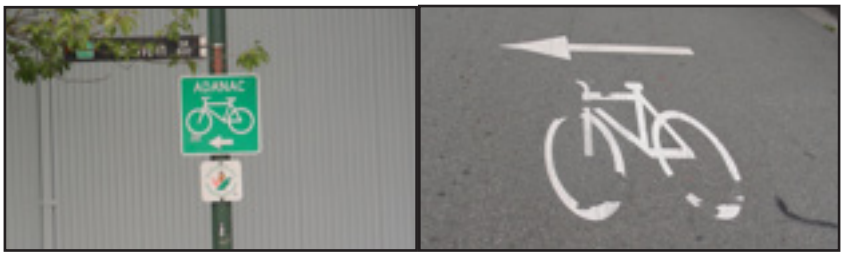

Figure 9-19: Bicycle Signage and Pavement Markings

Figure 9-20: Bicycle Route with Directional Signage

9.5 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.

1. Bike racks provide short-term parking. Bicycle racks should offer adequate support for the bicycles and should be easy to lock to. Figure 9-21 displays a common inverted-U design that does this. Figure 9-22 depicts a multi-bicycle rack that works well. Figure 9-23 shows an innovative concept in which the bike rack itself looks like a bicycle.

Figure 9-21: "Inverted-U" Bicycle Rack

Figure 9-22: Multi-Bicycle Parking Rack

Figure 9-23: "Bike" Bike Rack

2. Inverted-U racks placed next to each other (as shown in the right-hand photo of Figure 9-21) should be placed at least 36 inches apart (48 inches is recommended), so bicycles can be loaded on both sides of the rack.
3. 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 9-24. Bicycle lockers should be approximately 6′ x 2′ x 4′, and should consider the needs of folding and recumbent bicycles. Attendant and automated parking also serves long-term uses as shown in Figure 9-25.

Figure 9-24: Bicycle Lockers

Figure 9-25: Automated Bicycle Parking

4. Bicycle parking should be clearly identified by signage, such as in Figure 9-25. 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 9-26: Bicycle Parking Sign (Caltrans)

5. 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. The City should consider the "wheels to heels" transition. Every bicyclist must become a pedestrian when entering a building; the City should place bicycle parking in locations that facilitate this process, and discourage sidewalk riding in pedestrian-oriented districts.
6. At transit stations and in dense housing complexes, two-tier racks can be used. These racks allow bicycles to be loaded on the top or bottom, with a lever that swings to the ground to allow for top rack loading. Individual racks are also staggered in height such that bicycle handlebars will not hit each other. The racks are placed very closesly together (approximately 16" apart).

Figure 9-27: Berkeley Bike Station (two-tier racks)

7. Staggered wall-mounted bicycle racks can be used inside in small offices, commercial areas, and apartment complexes. Extra precaution should be taken for security including locked entry to the storage area, as well as locks on the rack itself. If staggered in height, bicycles can be placed every 16" apart. The figure below does not include a locking mechanism which is recommended.

Figure 9-28: Wall-mounted bicycle rack (without lock)

8. 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

9. Bicycle lockers should be labeled explicitly as such and shall not be used for other types of storage.
10. Bicycle racks and storage lockers should be bolted tightly to the ground in a manner that prevents their tampering.

11. 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.

Figure 9-29: Bicycle Corral

9.6 ADDITIONAL TREATMENTS AND CONSIDERATIONS

Road Diet

A "road diet" describes the reallocation of pavement space by removing one or more lanes of travel to add other types of facilities. Typical road diets change streets with four lanes (two lanes of travel in each direction) to two lanes with a center two-way-left-turn lane and bicycle lanes. Some road diets may be necessary to create a specified on-street bicycle facility. Road diets can be implemented during street re-pavings or re-surfacings. They often allow for an increase in not only bicycle facilities, but pedestrian facilities as well. They often provide a traffic calming effect as well. The City will need to prepare a traffic study and conduct outreach and notification for any suggested road diets; road diets will also require council approval. A typical road diet is shown below in Figure 9-30.

Figure 9-30: Before and After Road Diet

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 9-31 shows the appropriate types of drainage grates that should be used.

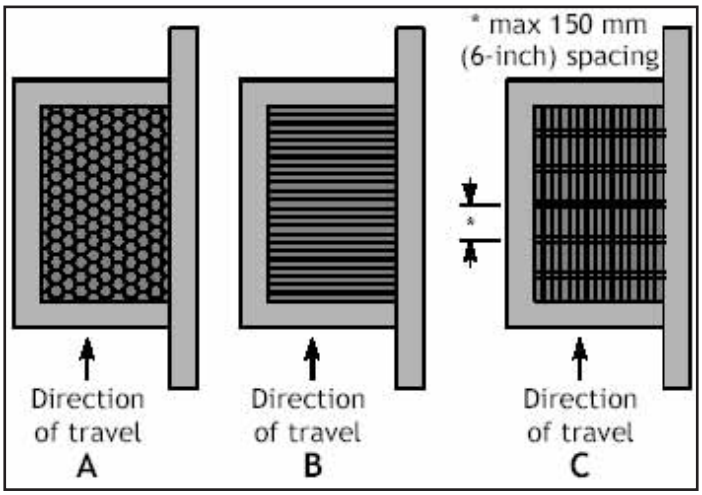

Figure 9-31: Proper Drainage Grate Design

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 of 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.

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