



# Bicycle Master Plan

City of Monrovia

June 2018

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# Chapter 1. Introduction

## Introduction

This Plan presents a review of the existing bicycling conditions in the City of Monrovia, an analysis of why this Plan is important to the city and the community, a set of goals and objectives to guide development, and recommendations to improve the bicycling environment. These components are organized in the following chapters:

- Chapter 2 Monrovia Now
- Chapter 3 Why? Needs Analysis
- Chapter 4 Vision, Goals, and Objectives
- Chapter 5 Infrastructure Recommendations
- Chapter 6 Program Recommendations
- Chapter 7 Implementation Plan
- Appendix A Existing Plans and Policies Review
- Appendix B Additional Existing Conditions Data
- Appendix C Detailed Survey Results
- Appendix D Funding Resources

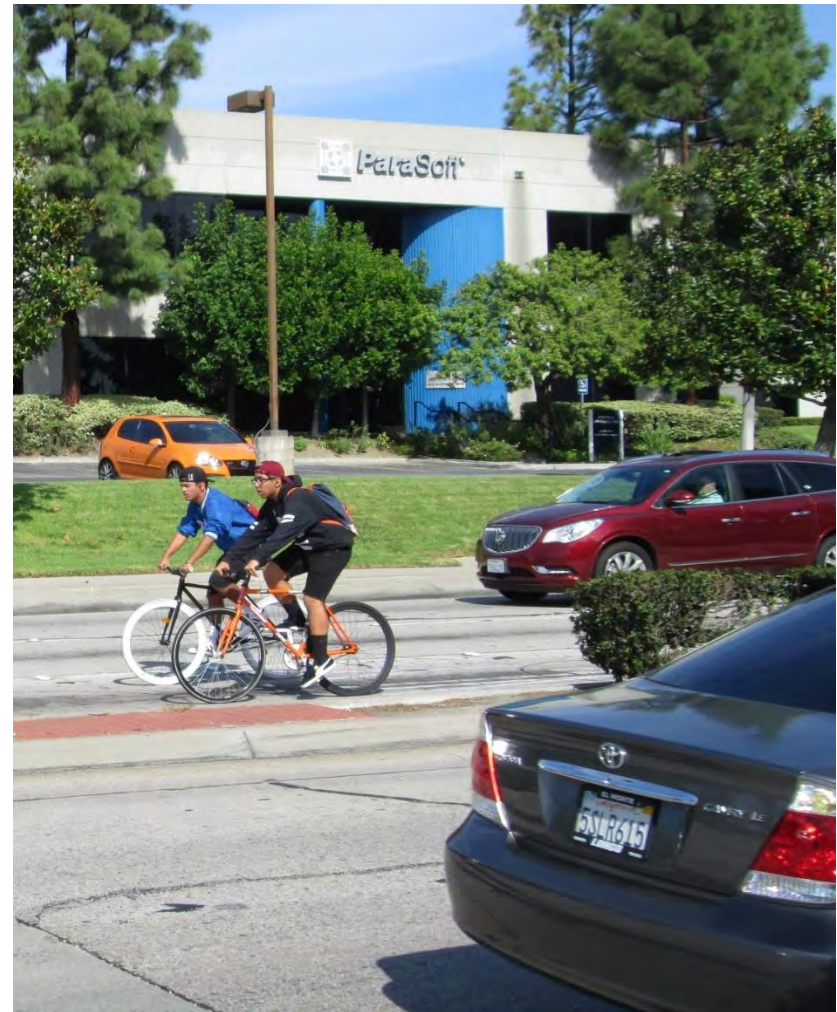


Figure 1-1: Bicyclists on Huntington Drive in Monrovia

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## Chapter 2. Monrovia Now

The foundation of a successful Bicycle Master Plan is a comprehensive understanding of the existing conditions, including:

- Land use and community demographics
- Transportation and recreation facilities and programs
- Activity generators
- Commuter travel patterns

A review of relevant plans and policies is in **Appendix A**. Additional existing conditions data and background are included in **Appendix B**.



Figure 2-1: Monrovia Public Library

### About Monrovia

Located 20 miles northeast of Los Angeles at the base of the San Gabriel Mountains, Monrovia is part of the San Gabriel Valley, just eight miles east of the City of Pasadena in Los Angeles County. This growing city of nearly 40,000 residents distinguishes itself from other communities with its dynamic small-town charm and collection of high-tech industry. A world of amenities is available here: everything from world-class cultural facilities to glorious recreational outlets to top-rated education and healthcare is available right at residents' fingertips. Monrovia is ideally positioned to continue its trend for controlled growth. The city's vibrant economy fosters enhanced job creation, while a commitment to revitalization and development ensures that Monrovia maintains its attractive neighborhoods. Visitors are encouraged to experience all that Monrovia has to offer: a welcoming community, the brilliant California backdrop, and the promise for a prosperous future.

### Topography and Land Use

The land in the southern end of the city is fairly flat, but the northern end is well into the San Gabriel Mountain foothills and therefore quite hilly.

Single-family residential properties cover most of northern Monrovia and the southwest part of the city. Commercial and office uses surround the major roadways of Myrtle Avenue, Huntington Drive, and Foothill Boulevard. Industrial enterprises are clustered in two areas: along Chestnut Avenue and Maple Avenue near Myrtle Avenue and south of the I-210 freeway, especially along the Metro Gold Line right-of-way. See **Figure 2-2** for a map of land uses in the city.

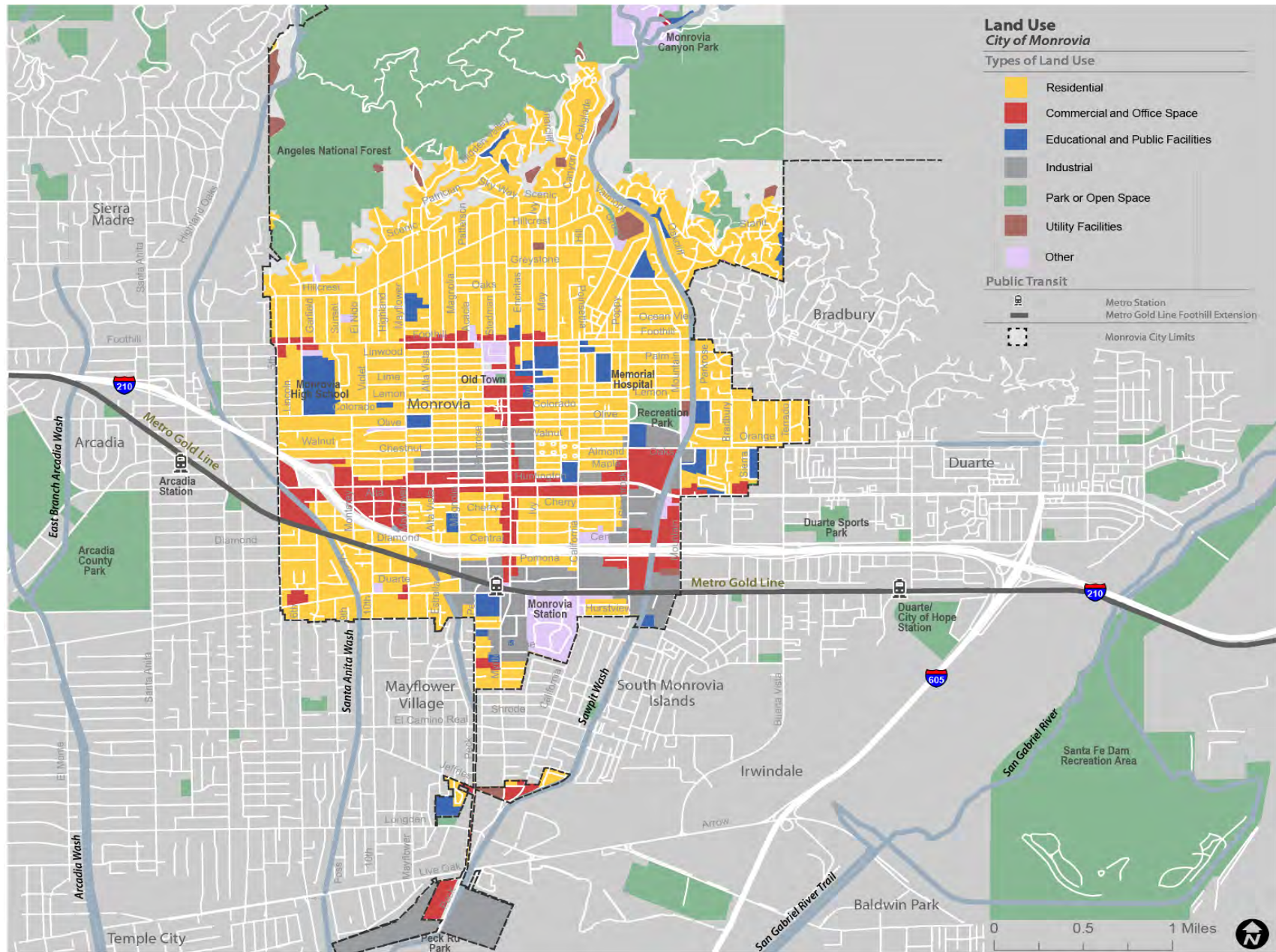


Figure 2-2: Land Use Map



## Demographics

### Population

Monrovia's population was estimated to be 38,787 in 2014, according to the U.S. Census Bureau's American Community Survey (ACS).

### Age

Monrovia is home to many young residents. Over 60 percent of the population is under 45 years old, and nearly 24 percent are children under 18 (see Figure 2-3).

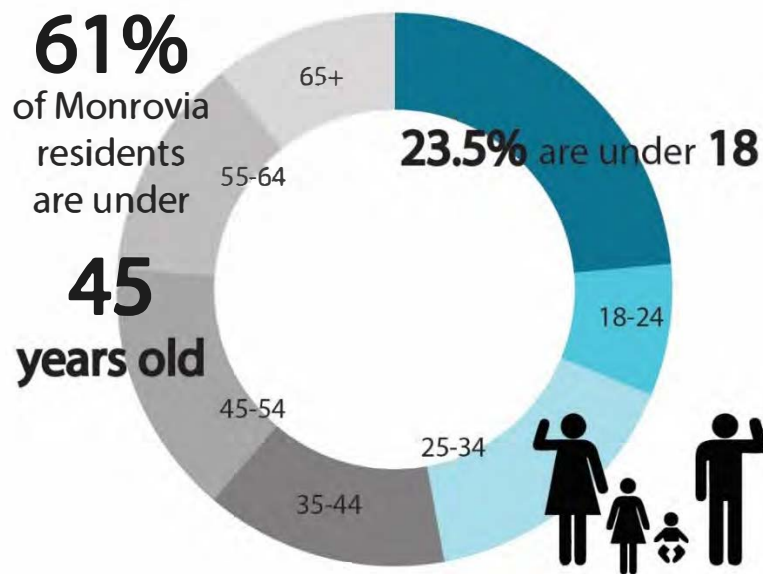


Figure 2-3: Age Distribution

### Access to Automobiles

Households without an automobile rely on other modes of transportation for their daily travel needs. As shown in Figure 2-4, 1.2 percent of Monrovia households do not have access to a private automobile (223 households), and an additional 21 percent (3,898 households) have access to only one automobile, according to the most recent ACS data. Based on the Monrovia average household size of 2.65 people, this means as many as 10,921 residents may walk, bicycle, or take transit for their daily transportation needs.

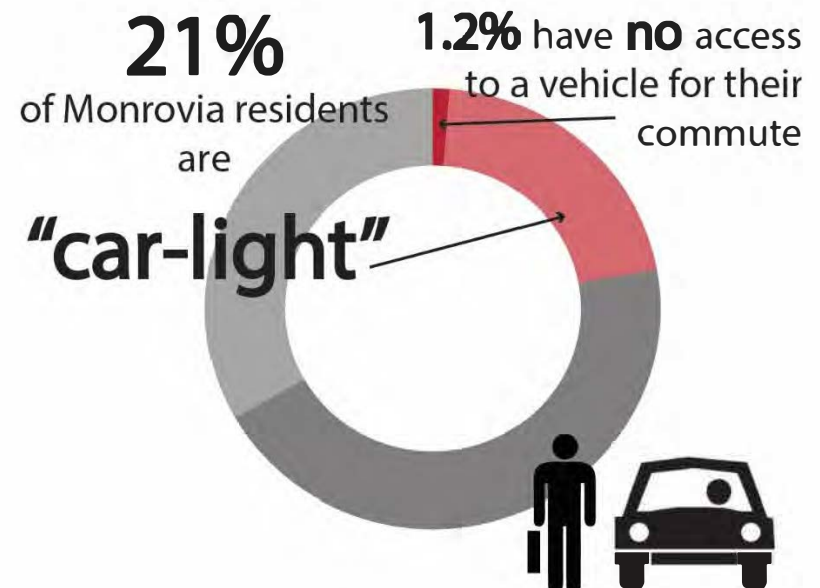


Figure 2-4: Automobiles Available by Household

## Transportation Facilities and Programs

Communities that support high levels of bicycling demonstrate achievement across five categories, often referred to as the “Five E’s”. This section describes existing bicycle facilities and programs within the framework of these “E’s”:

- **Engineering** includes bicycle facilities, bicycle parking, sidewalks, crosswalks, as well as signage and maintenance.
- **Education** programs improve safety and awareness. They may be delivered in schools as bicycle riding knowledge and skills programs, or provided through non-profit organizations.
- **Encouragement** programs such as bicycling maps and Bike to School or Work days reward people currently riding bicycles and motivate more people to try riding a bicycle for regular trips.
- **Enforcement** programs that reinforce legal and respectful driving, bicycling, and walking behaviors can make bicycling feel more secure.
- **Evaluation** programs provide a method for monitoring improvements and informing future investments



Figure 2-5: Old Town Monrovia

## Engineering

### Transportation Network

Monrovia's street network primarily follows a traditional grid pattern, interrupted by the I-210 Freeway, the Santa Anita Wash, and the rail line in the southern end of the community. Nearly three-quarters of Monrovia's streets are scheduled to be rehabilitated between 2016 and 2020 as part of the "Monrovia Renewal" infrastructure improvement program. **Figure 2-6** shows a residential street in Monrovia that is scheduled to be repaved.



Figure 2-6: Residential Street in Monrovia Set To Be Repaved through the Monrovia Renewal Program

The Metro Gold Line Foothill Extension light rail line traverses the southwest corner of the city, creating a barrier to bicycle and pedestrian travel between the adjacent neighborhoods, and limiting north-south movement to six crossing points (listed in **Table 2-1**, from west to east).

Table 2-1: Metro Gold Line Crossing Opportunities

Street	Type
5th Avenue	Underpass - Ped / Bike Only
Mayflower Avenue	At-grade
Magnolia Avenue	At-grade
Myrtle Avenue	At-grade
California Avenue	At-grade
Mountain Avenue	At-grade

### Traffic Safety Committee

The Traffic Safety Committee is established by the Monrovia Municipal Code, Chapter 2.60, and serves as an advisory board to the City Council on traffic safety matters. The Committee oversees Title 10 of the Monrovia Municipal Code, "Vehicles and Traffic," that references: speed limits, one-way streets and alleys, stop intersections, stopping-standing-parking, parking citation process, public parking lots, truck routes, abandoned vehicles, bicycles, and wheeled toys. In general, residents, business operators, and property owners can contact Public Works directly with issues or concerns regarding any of these items including other issues within the right-of-way that include curb, gutter and sidewalks, parkway trees, street lights, traffic signals, signs and pavement markings, water and sewer issues, pot holes, and street resurfacing.

*More information:*

<http://www.cityofmonrovia.org/your-government/boards-and-commissions/traffic-safety-committee>

## Public Transit

Foothill Transit operates bus service in Monrovia and throughout the San Gabriel and Pomona Valleys. Foothill Transit also operates two bus lines in Monrovia: Line 270 and Line 187. Stops are primarily located every two to five blocks along Huntington Drive, Primrose Avenue, and Myrtle Avenue. **Figure 2-7** shows a Foothill Transit bus stop along Huntington Drive. All Foothill Transit buses are equipped to carry up to two bicycles on a front rack.

Metro also runs local bus line 264 through Monrovia along Duarte Road to connect with City of Hope in Duarte. In early 2016, Metro opened the Metro Gold Line Foothill Extension with a stop in Monrovia at Pomona Avenue between Primrose Avenue and Magnolia Avenue (“Station Square”). Metro buses can hold up to two or three bicycles, depending on the bus model, and Gold Line train cars have designated spaces that allow for several bicycles on board at all times.

In addition, the city runs Monrovia Transit, a service for residents and visitors that does not follow fixed routes or schedules. Monrovia Transit is a shuttle service that provides on-demand curb-to-curb trips within the service area. As of March 2018, the City modified the Monrovia Transit service to include the GoMonrovia program, which provides service through two private partners with the car-share provider, Lyft, and the bike-share provider, LimeBike. Monrovia Transit is continuing to operate its shuttle service to provide on-demand curb-to-curb trips within the service area for residents and visitors with ADA-related needs and those that require other special accommodations.

Several bicycle parking racks are installed at Station Square and at key locations in Old Town Monrovia. Bus stops do not have bicycle parking facilities.

See Figure 2-8 for a map of light rail and bus lines that serve Monrovia.

## Bike Share

The city is partnering with Metro to study the potential for a bike share program in Monrovia and surrounding communities. The first phase would likely help connect the Gold Line Station with Old Town and other key destinations. In March 2018, the city launched a partnership with LimeBike to operate a dockless bike-share program in Monrovia. The city will continue its partnership with Metro to study the potential for additional bike share programs in Monrovia and surrounding communities.



Figure 2 7: Foothill Transit Bus Stop



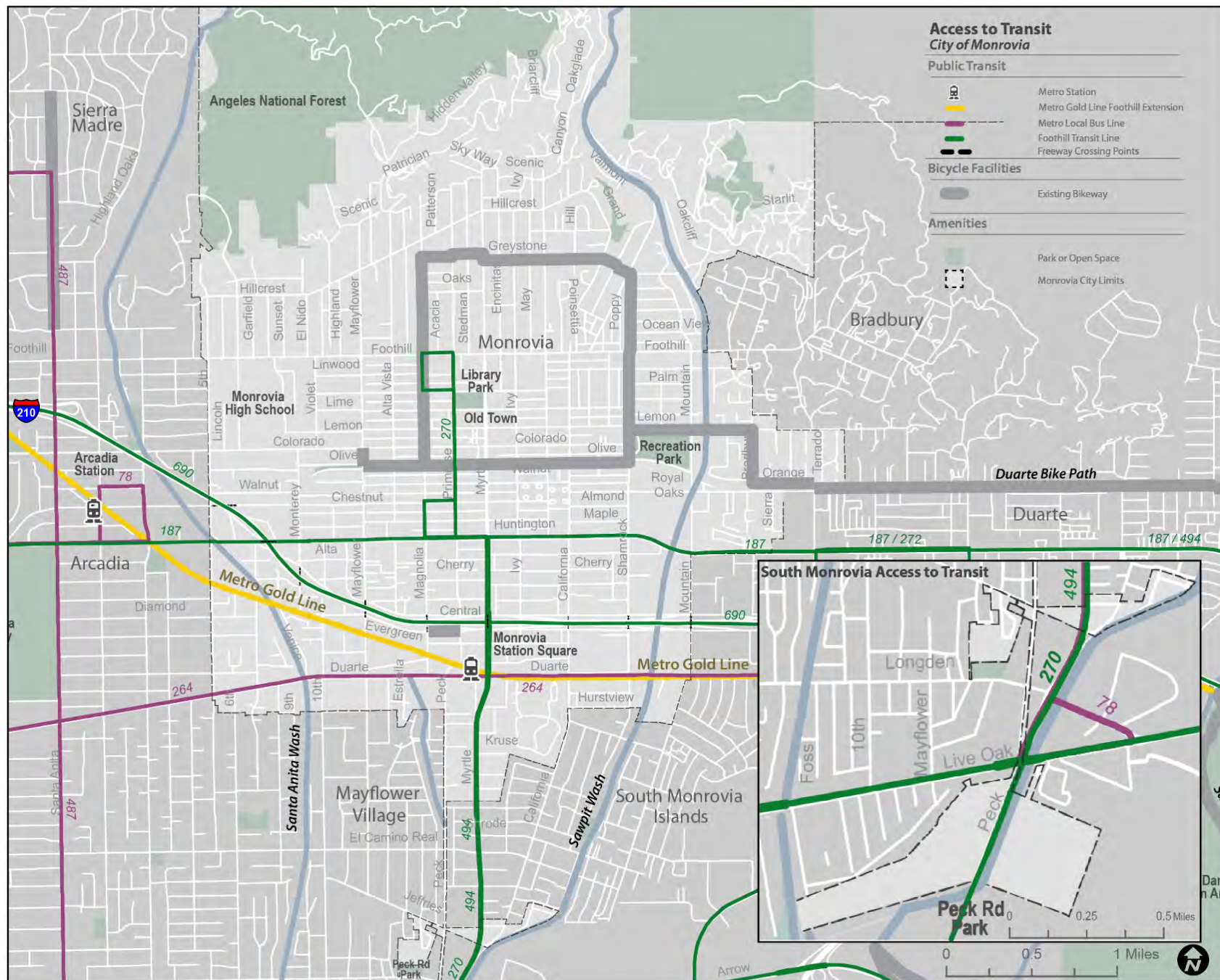


Figure 2-8: Public Transit Routes

## Bicycle Network Inventory

Caltrans designates four classifications of bikeways that vary in level of separation from motor vehicles. **Table 2-2** and **Figure 2-13** summarize existing bikeway mileage, as well as additional planned bikeway mileage identified in the Monrovia General Plan.

Table 2-2: Summary of Bikeway Mileage by Classification

Classification	Existing	Additional Planned	Total
Class I	0.0	0.0	0.0
Class II	0.5	0.6	1.1
Class III	4.3	3.9	8.2
Class IV	0.0	0.0	0.0
<b>Total</b>	<b>4.7</b>	<b>4.5</b>	<b>9.3</b>

### Class I Shared-Use Paths

A Class I Bicycle or Shared-Use Path provides for bicycle and pedestrian travel on a paved right-of-way completely separated from streets or highways, as shown in **Figure 2-9**. Monrovia currently does not have any Class I paths, but has direct bikeway connections to Class I paths in surrounding communities. In addition, the Sawpit and Santa Anita Washes present opportunities for paths. These channels are managed by the Los Angeles County Flood Control District.



Figure 2-9: Class I Shared-Use Path

### Class II Bike Lanes

Class II Bike Lanes provide a signed, striped, and stenciled lane for one-way travel on both sides of a roadway, as shown in **Figure 2-10**. Bike lanes are often recommended on roadways where traffic volumes and speeds are too high for bicycle riders to comfortably share the travel lane with automobile traffic.

Class II bike lanes are currently striped along 0.4 miles of Olive Avenue between Mayflower Avenue and Primrose Avenue, and on Evergreen Avenue between Magnolia Avenue and Primrose Avenue. “Bike Lane” signs are installed along the western portion of Colorado Boulevard between Fifth Avenue and Mayflower Avenue, although the bike lane striping on the roadway has faded.



Figure 2-10: Class II Bike Lanes

### Class III Bike Routes

Class III Bike Routes provide for shared travel lane use and are generally only identified with signs, and increasingly with shared lane markings (“sharrows”). Bike routes may have a wide travel lane or shoulder that allow for parallel travel with automobiles. They may also be appropriate on low volume, low speed streets. In some cases, ‘bicycle boulevards’ may be created with enhanced features such as sharrows, mini roundabouts, or traffic diverters. See Figure 2-11.

Monrovia currently has 4.3 total miles of designated Class III bike routes. A group of these routes form a ring in the northern part of the city along Magnolia Avenue, Monroe Place, Greystone Avenue, Shamrock Avenue, and Olive Avenue; another set of designated bicycle routes connect Recreation Park and the Duarte Bike Path along Lemon Avenue, Bradbury Road, and Orange Avenue. In Fall 2017, the City installed additional Class III sharrows and signage. The city’s General Plan identified 2.9 Miles of additional future Class III bike routes in the southern half of Monrovia that would provide connections to Station Square.



Figure 2-11: Class III Bike Route with Sharrows

### Class IV Separated Bikeways

Class IV separated bikeways are a new class of bicycle facility, and Caltrans is currently developing design guidelines for communities. Generally, Class IV bikeways are on-street bicycle facilities that are separated from vehicle traffic by some kind of physical barrier—including a curb, on-street parking, flexible bollards, or concrete planters—as shown in Figure 2-12.

No Class IV bikeways have been implemented in Monrovia.



Figure 2-12: Class IV Separated Bikeway



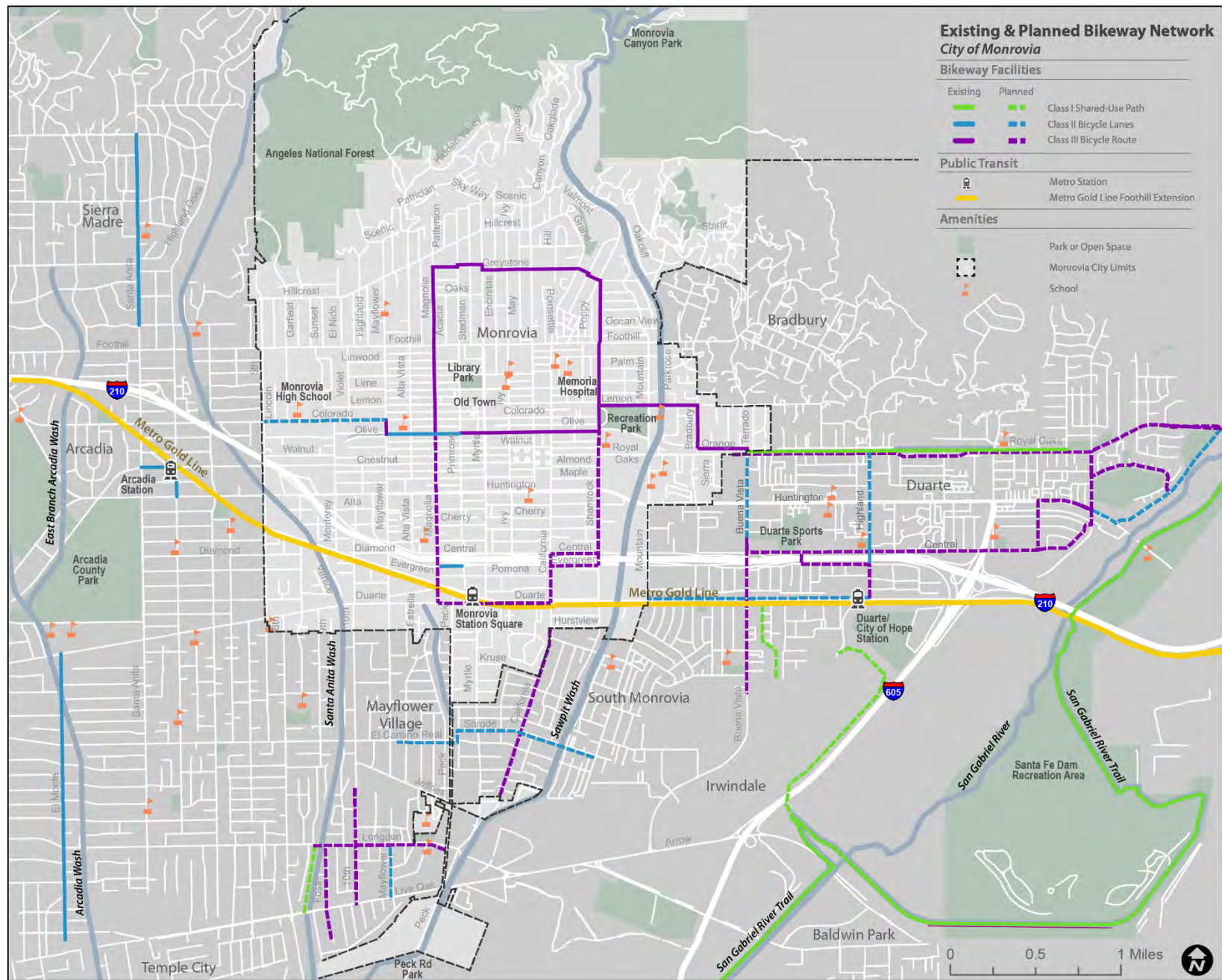


Figure 2-13: Existing and Previously Planned Bikeways



## Bicycle Parking

The city does not have a documented inventory of all public bicycle parking. Throughout the existing conditions assessment, the project team identified bicycle racks along Myrtle Avenue in Old Town, in Library Park, and at the Huntington Oaks Shopping Center off of Huntington Drive. Long-term bicycle lockers and a repair station is available at Station Square. Two examples of custom bicycle racks in Old Town Monrovia is shown in **Figure 2-14**. Other city-owned parks and public spaces, such as Recreation Park (**Figure 2-15**), lack established bicycle parking in locations where there appears to be demand. However, as of June 2018, the City had installed new bike racks at City Hall, Library Park, Monrovia Community Center, and Old Town Monrovia.



Figure 2-14: Custom Old Town Bicycle Racks



Figure 2-15: Improvised Bicycle Parking in Recreation Park

## Safe Routes to School Improvements

The city has been awarded Safe Routes to School funding in the form of a state grant. The Safe Routes to School program allows the city the opportunity to make capital improvements in the areas around and leading to school sites to create a safer environment for those who walk or bicycle to school. The improvements may include intersection crossing improvements (which may include new traffic signals or indicator lights), updated signage and striping, and improvements to sidewalks and walking routes, among other improvements. The city currently has one pending grant project and will apply for additional projects as the funding is available.

## Education Programs

### Bicycle Maintenance & Safety Education

The city, along with Move Monrovia and Bike San Gabriel Valley, conducted a Family Bicycle Safety Class in the summer of 2015 to teach participants basic rules of the road for people on bicycles, basic bicycle maintenance tips, and safety information. Geared to adults and teens 16 years and older, the program included a group bicycle ride.

## Encouragement Programs

### Move Monrovia Fun Ride

In August 2015, Move Monrovia led a 3.1-mile group ride with city officials and staff, residents, and visitors that showed participants recommended routes to ride a bicycle between Old Town and the city's soon-to-open Metro Gold Line station. Following the relatively short ride in Monrovia, an optional longer ride led participants to each of the other Metro Gold Line Foothill Extension stations.

### Walk 'n' Roll to School Events

Some schools in the Monrovia Unified School District, including Bradoaks Elementary, hosted a Walk 'n' Roll to School Week program to encourage students and their families to walk, skate, ride a bicycle, or use other active transportation modes to travel to school (Figure 2-16).

## Enforcement Programs

Monrovia Police Department officers enforce traffic laws on city streets, including bicyclist and motorist violations. In addition, the city's police respond to and investigate cases of bicycle theft.

## Evaluation Programs

No evaluation programs were identified.



Figure 2-16: Banner from Bradoaks Elementary's Walk 'n' Roll Day

## Activity Generators

For a map of all activity generators, see **Figure 2-17**.

### Schools

There are 12 schools in the Monrovia Unified School District, which serves all of Monrovia. **Table 2-3** lists the grades served and enrollment numbers for the 2014-2015 school years.

Table 2-3: School Enrollment

School	Grades Served	Enrollment
Bradoaks Elementary School	K-5	528
Canyon Early Learning Center	Pre-K	218
Canyon Oaks High School	7-12	115
Clifton Middle School	6-8	667
Mayflower Elementary School	K-5	555
Monroe Elementary School	K-5	596
Monrovia Community Adult School	N/A	N/A
Monrovia High School	9-12	1,785
Monrovia Mountain School	K-8	71
Plymouth Elementary School	K-5	419
Santa Fe Middle School	6-8	612
Wild Rose Elementary School	K-5	511

Source: California Department of Education DataQuest:  
<http://data1.cde.ca.gov/dataquest/>

### Mount Sierra College

Mount Sierra College is a private institution located on Royal Oaks Drive at Mountain Avenue in Monrovia. It enrolls 538 students along with 115

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<sup>1</sup> Employees of the Monrovia Unified School District are dispersed across the city at the several public school campuses.

staff, and the school offers degrees in Information Technology, Media Arts, and Business.

### Major Employers

Top employers in Monrovia include the school district, medical services, manufacturing, and technology companies (**Table 2-4**).

Table 2-4: Top Employers by Number of Staff

Name	Address	Industry	Staff
Modern Healthcare	110 Huntington Dr	Medical	307
Trader Joe's Corporate Office + Store	800 S. Shamrock Ave	Retail	274
Home Depot	1625 Mountain Ave	Retail	264
Ducommun Aero Structures	801 Royal Oaks Dr	Manufacturing and Engineering	263
Sierra Auto cars	1450 S. Shamrock Ave	Retail	252
Worley Parsons	181 W. Huntington Dr	Engineering Consulting	234
Monrovia Memorial Hospital	323 S. Heliotrope Ave	Medical	209
24-Hour Fitness	715 E. Huntington Dr	Retail	192
Vinyl Technology	200 Railroad Ave	Manufacturing	185
Monrovia Unified School District	325 Huntington Dr	Public	572 <sup>1</sup>

Source: Monrovia City Manager's Office



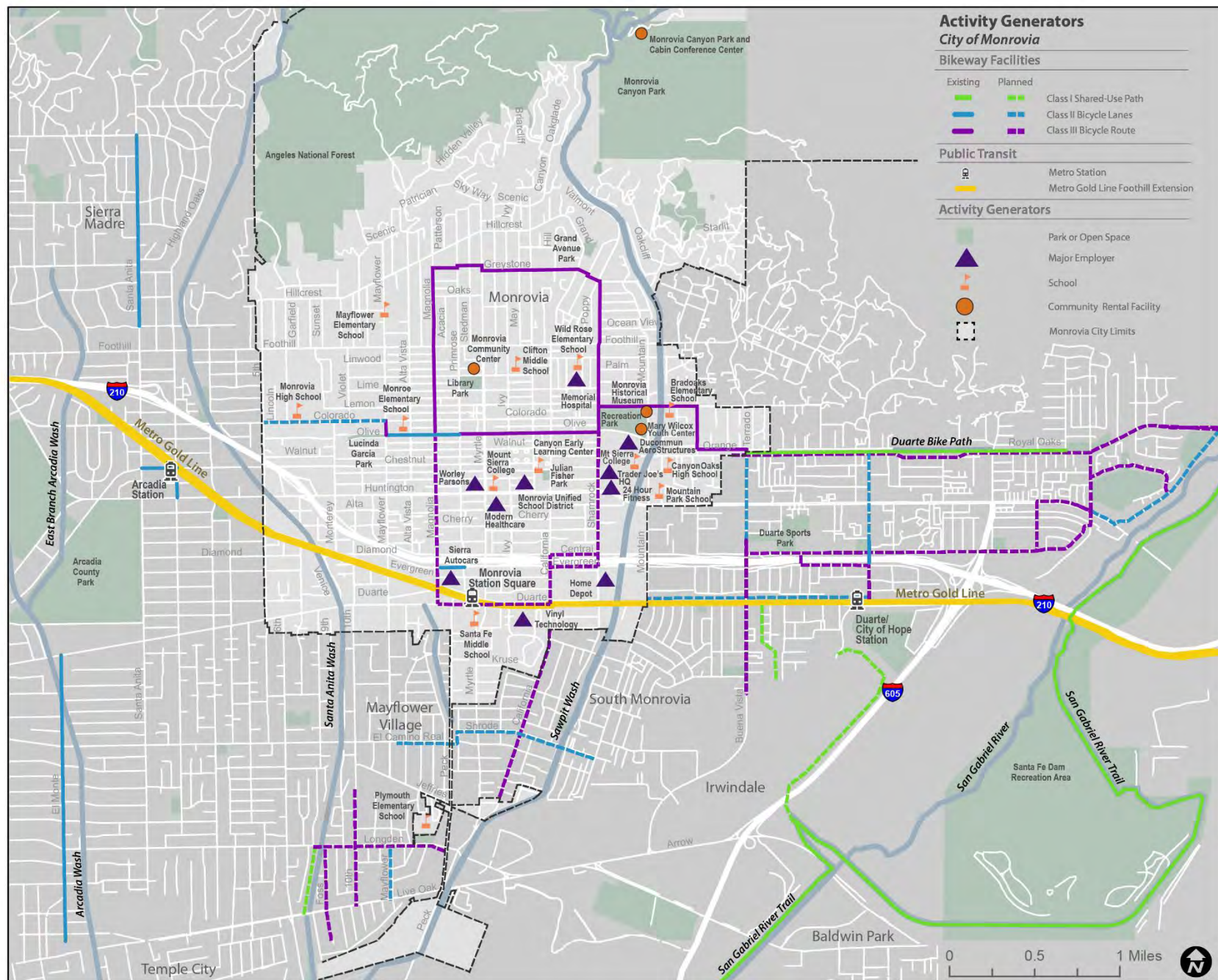


Figure 2-17: Activity Generators



## Parks and Community Centers

Monrovia has nine parks ranging in size from half an acre to 80 acres, listed in **Table 2-5**. Many of the parks offer facilities such as playground equipment, picnic tables, barbeque grills, and drinking fountains.

The city also has several facilities available for event rental or recreation. These are:

- Mary Wilcox Youth Center (843 E. Olive Avenue)
- Monrovia Community Center (119 W. Palm Avenue)
- Monrovia Historical Museum Courtyard & Gardens (742 E. Lemon Avenue)
- Monrovia Canyon Park Cabin / Conference Center (1200 N. Canyon Boulevard)

Table 2-5: Parks

Name	Location	Acres
Monrovia Canyon Park	1200 N. Canyon Boulevard	80
Recreation Park	620 South Shamrock Avenue	22
Monrovia Library Park	321 South Myrtle Avenue	13
Kiwanis Park at Grand Avenue	340 North Grand Avenue	3.5
Julian Fisher Park	915 South California Avenue	1.8
Lucinda Garcia Park	502 West Olive Avenue	1.5
Station Square Park	Immediately north of Gold Line tracks, between Magnolia Avenue and Myrtle Avenue	1.48
Rotary Park	401 South California Avenue	0.87
Evergreen Plaza	Southeast corner of Evergreen Avenue and California Avenue	0.5

## Commuter Travel

According to the most recent American Community Survey, approximately three-quarters of Monrovia residents currently drive alone to work; carpooling is the second most common mode of transportation. Walking accounts for 2.5 percent of commute trips, while bicycling accounts for less than one percent.

When only those commute trips lasting less than 20 minutes are evaluated, a significant opportunity becomes clear. Many of these commuters likely work in Monrovia, given the short commute time, yet nearly 87 percent currently drive alone to work (**Figure 2-18**). These trips represent an opportunity to encourage at least some commuters to walk, bicycle, or take transit to work.

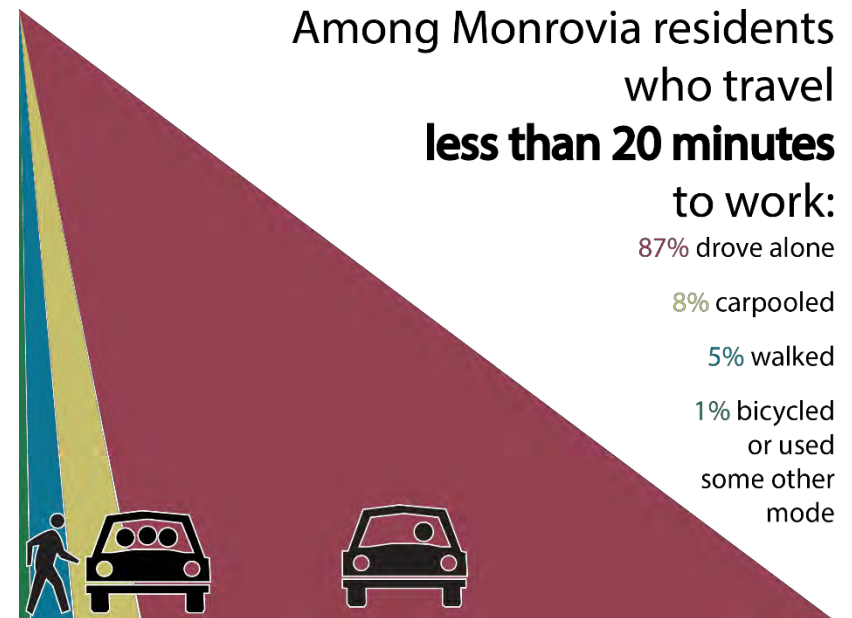


Figure 2-18: Travel Modes for Short Commutes

## Chapter 3. Why? Needs Analysis

This chapter outlines the need for bicycling-related improvements in Monrovia with an analysis of collision data and community desires expressed through survey responses and a community workshop.

### Bicyclist-Involved Collisions

Safety is often a concern for current and potential bicycle riders, and it can be a determining factor in the decision to bicycle or use another mode of transportation. Analysis of bicyclist-involved collision data provides a basis for infrastructure and program recommendations that lead to improved safety.

#### Total Collisions

Bicycle-related collision data was pulled from the Statewide Integrated Traffic Records System (SWITRS). From 2009 to 2013, there were a total of 85 bicyclist-involved collisions in Monrovia, which accounted for nine percent of all collisions within the city. In all of these bicyclist-involved collisions a motor vehicle was involved in as many as 92 percent. The remaining collisions occurred between bicycle riders and parked vehicles (3 collisions), and between a bicycle rider and a pedestrian (1 collision).

For a map of all bicyclist-involved collisions during the study period, see **Figure 3-1**.

### Top Collision Locations

The three corridors with the highest numbers of reported collisions and almost 35 percent, combined, of all bicyclist-involved collisions in the city during the study period were Huntington Drive (13 collisions), Foothill Boulevard (8), and Myrtle Avenue (8). These three roadways have certain similarities as the three of them are major arterial streets without designated bicycle infrastructure. Huntington Drive and Foothill Boulevard cross Monrovia from east to west, with posted speed limits ranging from 35 mph to 40 mph. Speed limits on Myrtle Avenue vary to a great degree, from 25 mph in Old Town Monrovia to 40 mph in the southern portion of the city.

The two intersections with the most bicyclist-involved collisions reported are Duarte Road at 10<sup>th</sup> Avenue (4 collisions) and Huntington Drive at Monterey Avenue (3).

### Age

The most common age group represented in bicyclist-involved collisions was adults between 18 and 50 years old (49 percent). However, minors between 9 and 17 years old accounted for almost one third of all bicyclist-involved collisions in Monrovia. Adults age 50 to 69 were underrepresented compared to the city's general population.

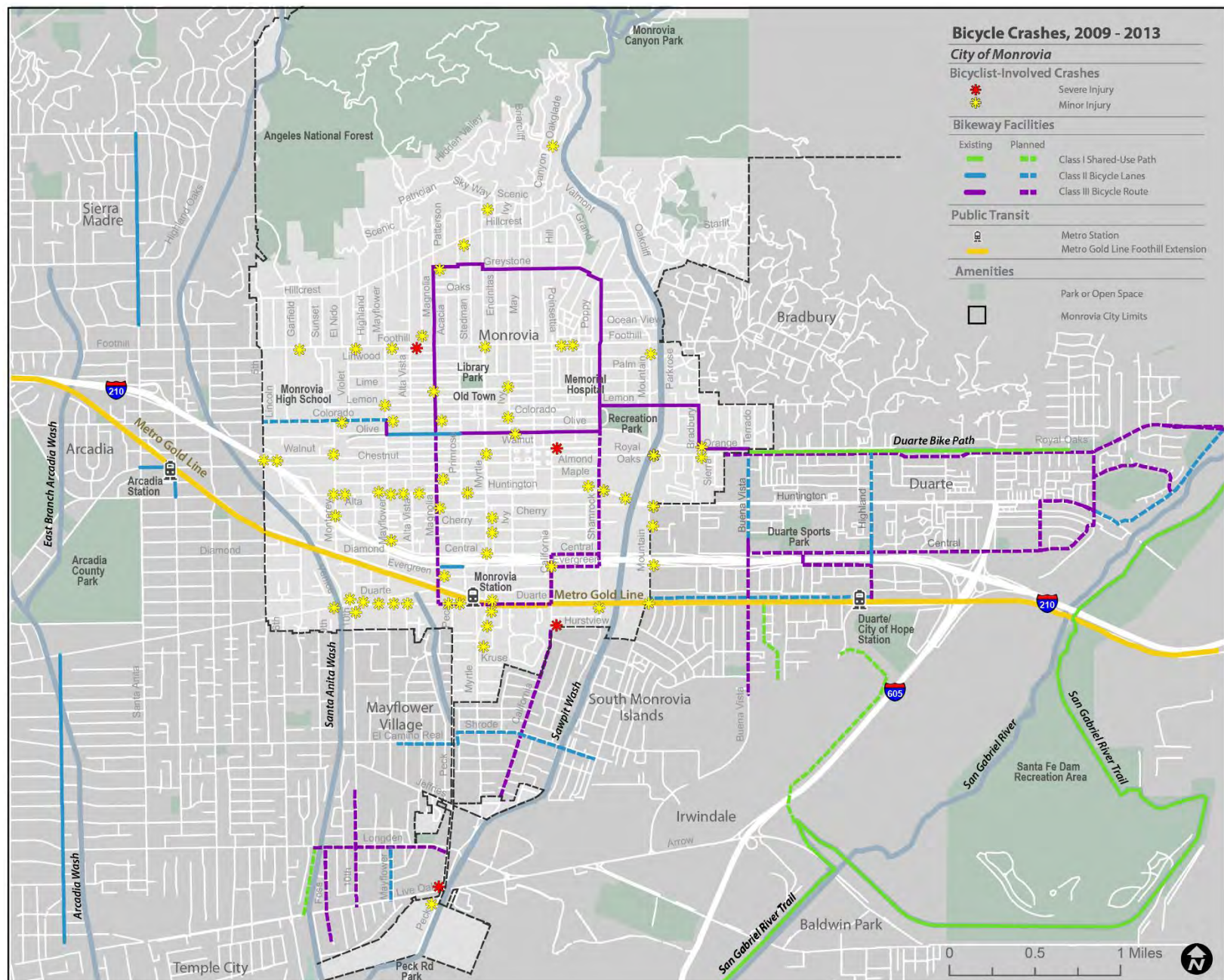


Figure 3-1: Bicyclist-Involved Collisions (2009-2013)



## Collision Severity

There were no bicyclist fatalities during the analysis period. Six bicyclists reported severe injuries, and the rest had visible injuries (43) or reported complaints of pain (36).

## Fault and Primary Collision Factors

Bicyclists were found to be at fault in more than half of all bicyclist-involved collisions during the study period, while motorists were found at fault in 39 percent of these collisions.

The most common collision factor was bicycle riders riding on the wrong side of the road, which contributed to twenty eight collisions. Other contributing factors included violating another road user's right-of-way, and improper turning. See Figure 3-2.

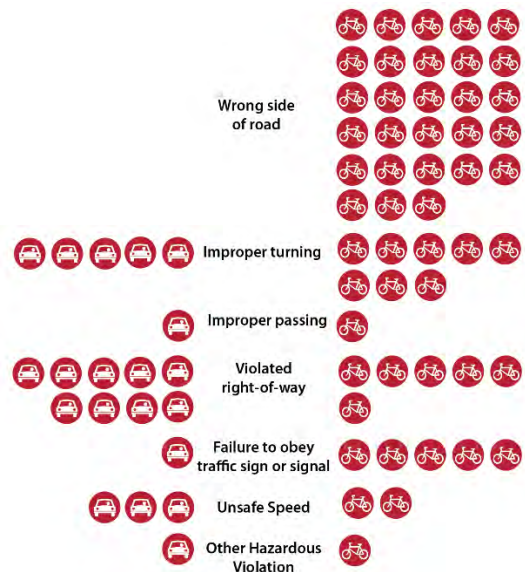


Figure 3-2: Bicyclist-Involved Collisions (2009-2013)

## Annual Bicyclist-Involved Collisions

There is a clear upward trend in bicyclist-involved collisions during the study period. Almost one third of all bicyclist-involved collisions occurred in 2013, while 2009 only accounted for 10 percent of the reported bicyclist involved collisions during the study period. Table 3-1 details the number of bicyclist-involved collisions per year.

Table 3-1: Annual Bicyclist-Involved Collisions

Year	Number of Bicyclist-Involved Collisions
2009	8
2010	12
2011	18
2012	19
2013	28
<b>Total</b>	<b>85</b>

## Collision Summary

Bicyclist-involved collisions occurred at higher frequencies on Huntington Drive, Myrtle Avenue and Foothill Boulevard, arterial streets without bicycle infrastructure that are key roadways in Monrovia for the access and connectivity they provide to residents and visitors.

Bicycle riders were commonly deemed at fault for the collisions they were involved in, mainly for riding on the wrong side of the road. This may suggest a need for increased education efforts for people bicycling. In addition, this also may suggest the bicycle network is incomplete, or does not support desired paths of travel.

Note: This analysis did not take into account different skill levels among the population of bicycle riders.

## Community Survey

A community survey was developed to gather input on bicycling challenges and opportunities throughout Monrovia. The survey was made available online from December 10, 2015 through February 8, 2016, and was distributed to community members in hard copy at a community workshop on February 3, 2016.

Two hundred and twelve responses to the survey were received and are summarized below. For detailed survey results, see **Appendix C**.

The largest age group represented was adults age 51 to 70, with eighty responses, followed closely by adults between 36 and 50 years old with 69 responses. There were almost two male respondents for every female respondent.

### Bicycling In Monrovia

In the community survey, respondents were asked for their preferred destinations to reach by bicycle. Almost 20% of respondents ride their bicycle to 'no particular destination', stating that they typically ride for fitness or leisure. Survey respondents answered with nearly uniform frequency that they currently or would like to ride their bicycles to paved off-street paths, a bus stop or train station, and shopping. Commuting to work or school were not among the most common responses.

Survey respondents indicated that the most common reasons for not bicycling more often were heavy traffic or dangerous behavior by people driving and lack of or incomplete bicycle lanes. See **Figure 3-3**.

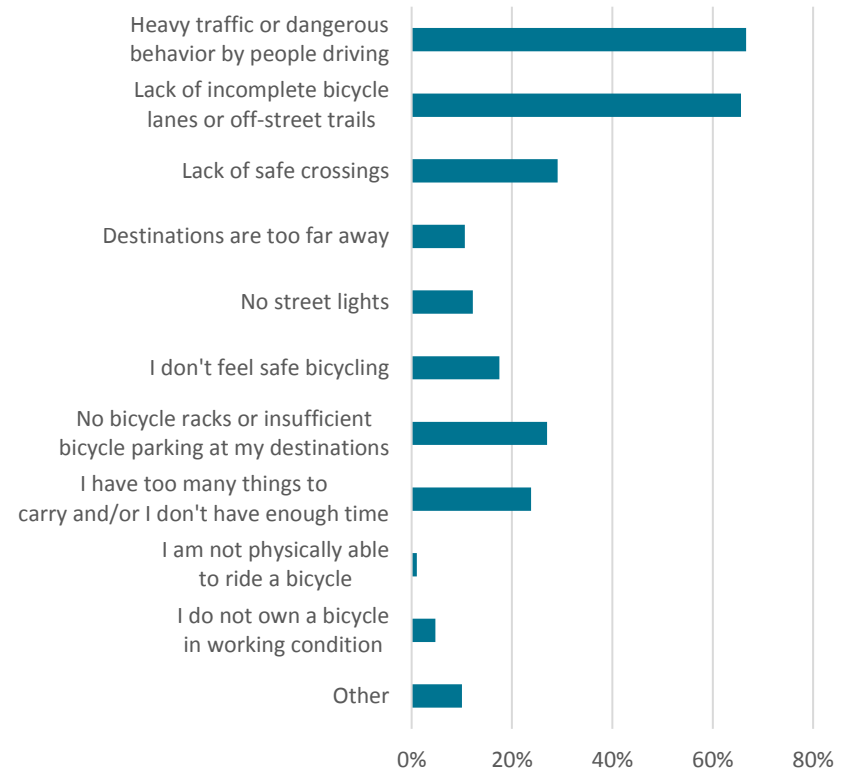


Figure 3-3: Reasons for Not Bicycling More Often

## Public Workshop

A public workshop was held to gather input from community residents on February 3, 2016, at the Monrovia Community Center (see **Figure 3-4**).

The city project team provided an overview of the bicycle planning process and a brief description of state-of-the-practice bicycle infrastructure and programs to the 21 attendees. Afterward, attendees were invited to view maps from the Existing Conditions analysis and provide comments or suggestions for improving the bicycling experience in Monrovia. Additionally, workshop participants were asked to vote for bicycle infrastructure and programs that they would like to see in the city.

The most common themes from this feedback included:

- Need for traffic calming
- Need for bicycle parking
- Need for pavement repairs
- Need for separated bicycle infrastructure on major roads
- Need for bicycle infrastructure to connect Old Town Monrovia with Station Square at the Metro Gold Line



Figure 3-4: Mapping Activity at the Public Workshop



## Key Findings and Summary of Needs

Based on the evaluation of Monrovia's collision data, existing bicycle network, and community-identified needs, the following key themes were identified:



### Create a Bikeable Street Network

Many of the safety challenges and community concerns related to an incomplete bicycle network and complex intersections in Monrovia, leading to people riding bicycles in wrong direction, motorists being unsure where to expect bicycle riders, and some residents choosing another mode of transportation because of their concerns.

Challenges to this objective include limited off-street parking, century-old street infrastructure, and built-out land uses.



### Provide Bicycle Parking

No bicycle network is complete without secure, convenient bicycle parking at the end of a trip. Monrovia has a few scattered bicycle racks near the Old Town area, along with new parking facilities at Station Square, but a comprehensive bicycle parking system including short-term and long-term options would increase bicycling by making residents confident they will have a safe place to leave their bicycle when they arrive at their destination.



### Implement Traffic Calming Measures

Traffic calming measures are key to creating a bicycle network where bicycle and vehicular traffic cannot be separated, such as along neighborhood greenways or designated bicycle routes. Reducing traffic speeds improves the bicycling environment by decreasing unpredicted events and diminishing the severity of collisions. The City's Traffic Safety Committee reviews requests for traffic calming measures and coordinates implementation.



### Improve Transit Access

With the opening of the Foothill Gold Line Extension in March 2016, improving connectivity from and to Monrovia's Station Square is critical to have an effective public transportation system. Under Federal Transit Law, bicycle infrastructure improvements located within three miles of a public transportation stop have a de facto physical relationship to public transportation.

## Chapter 4. Vision, Goals, Objectives and Policies

The City of Monrovia aims to increase the use of active transportation (e.g., walking, bicycling, and using other non-motorized devices) by residents and visitors of all ages and abilities, especially as a means to connect with the new Metro Gold Line station.

The goals, objectives, and policies of this Bicycle Master Plan will guide the development and implementation of the city's bicycle network and programming for years to come. They support the city's vision, and describe the most important aspects of the city's priorities.

This chapter presents the Bicycle Master Plan's vision, goals, objectives, and policies, which will direct the way public improvements are made, where resources are allocated, and how programs are operated. The following vision, goals, objectives, and policies are consistent with and support the Monrovia General Plan. Policies contained in this Plan are suggestions for the city to consider for guidance, as feasible; the suggested policies are not binding upon the city.

A **vision** is a broad inspirational statement for the desired future state.

**Goals** are general statements of what the city and residents hope to achieve over time.

**Objectives** are more specific statements that mark progress towards the goal.

**Policies** are actions that guide the city to achieve the objectives and goals.

### Vision

*The Monrovia Bicycle Master Plan aims to encourage healthy and more active lifestyles by creating a safe and interconnected bicycle transportation network in the City of Monrovia that is easily accessible for people of all ages and abilities.*

The City of Monrovia will provide and promote bicycle-friendly environments including streets and pathways that are attractive, convenient, and safe for active transportation modes. The city will also implement policies and programs to educate and encourage residents and visitors to use a variety of transportation choices as they travel throughout Monrovia.

This vision statement was developed through looking at comparable cities' plans, then tailored to Monrovia and presented to staff at the kick-off meeting for feedback.

### Goals, Objectives, and Policies

This Plan uses local input as well as best practices from cities across California to establish goals, objectives, and policies for Monrovia as it moves forward with advancing active transportation modes. Specific goals and objectives are listed on the following pages.

## Goal 1: Mobility

Increase and improve bicycling access to community destinations across the City of Monrovia for people of all ages and abilities.

Objective 1.A: Plan, design, construct, and manage a transportation network that accommodates the needs of all mobility types, users, and ability levels.

Policy 1.A.1: Integrate bicycle facilities as part of the design and, where there is available right-of-way, to upgrades or resurfacing of existing roadways.

Policy 1.A.2: Coordinate with Metro to establish appropriate designs for transit stops and station accessways.

Objective 1.B: Eliminate barriers to bicycle travel.

Policy 1.B.1: Identify opportunities to improve or add bicycle crossings of Interstate Highway 210 (Foothill Freeway), the Metro Gold Line Foothill Extension, and major arterial roadways.

Policy 1.B.2: Prioritize projects that close gaps in the existing bicycle network.

Policy 1.B.3: Coordinate with neighboring jurisdictions to ensure that bikeways and sidewalks provide continuous connections across jurisdictional boundaries.

## Goal 2: Design

Design active transportation projects that are accessible and comfortable for people of all ages and abilities.

Objective 2.A: Implement designs that emphasize safety and comfort for the most vulnerable road users.

Policy 2.A.1: Utilize state of the practice and emerging designs contained in national manuals such as the National Association of City Transportation Officials' Urban Bikeway Design Guide.

Policy 2.A.2: Implement bikeway designs for the needs and comfort for people of all ages and abilities, considering issues such as street design speed, hierarchy of streets, connectivity and level of stress experienced.

Policy 2.A.3: Strive to provide enhanced bicycling facilities and separation on higher volume and higher speed roads such as Old Town, community, regional, and service streets, and in school areas.



## Goal 3: Safety

Improve safety for people riding bicycles through the design and maintenance of streets, intersections, and other roadway improvements. These include signage, lighting, and landscaping. Infrastructure projects combined with best practice non-infrastructure programs aim to enhance and improve the overall safety of people bicycling.

Objective 3.A: Continue to keep the number of bicycle-related collisions with injuries low and fatalities at zero.

Policy 3.A.1: Annually review crash data, including causes, to implement ongoing improvements throughout the transportation network.

Policy 3.A.2: Prioritize improvements at intersections and corridors with high numbers of injuries and fatalities.

Policy 3.A.3: Develop an education campaign focusing on road safety for all users and the city's objective to eliminate traffic fatalities.

Policy 3.A.4: Coordinate with the Monrovia Police Department to develop an Enforcement Plan.

## Goal 4: Programs

Increase awareness of the value of bicycle travel for commute and non-commute trips through encouragement, education, enforcement, and evaluation programs that support bicycling.

Objective 4.A: Enable and encourage more students to ride a bicycle for school trips.

Policy 4.A.1: Coordinate with Monrovia Unified School District to identify and develop education and encouragement projects through the Safe Routes to School program.

Objective 4.B: Introduce and promote education, encouragement, and outreach for bicycle programs.

Policy 4.B.1: Support programs that encourage and promote travel by bicycle and other active modes.

Objective 4.C: Facilitate non-motorized travel to transit stations and stops.

Policy 4.C.1: Identify and implement Safe Routes to Transit projects.

Objective 4.D: Encourage non-motorized travel to shops and restaurants.

Policy 4.D.1: Create a citywide Bicycle Friendly Business program.

Policy 4.D.2: Work with business owners to provide recurring discounts to people who arrive by bicycle.

## Goal 5: Implementation

Implement the Bicycle Master Plan over the next 20 years.

Objective 5.A: Determine funding needs for expanding and improving bicycle facilities and programs, and seek funding for those needs.

Policy 5.A.1: Develop and update a 20-year Financial Plan on a five year basis. Cost is to be determined.

Policy 5.A.2: Apply for local, State, and Federal grants for major bicycle projects and programs, including the State's Active Transportation Program and Metro's Call for Projects.

Policy 5.A.3: Develop requirements and incentives for private property owners and developers to incorporate bicycle-friendly features into new projects.

Policy 5.A.4: Explore partnerships with private and public organizations to fund incentive programs and events that encourage bicycling.

Objective 5.B: Incorporate bicycle projects into the city's Capital Improvement Program (CIP) that will create a more bicycle-friendly environment in Monrovia.

Policy 5.B.1: Prioritize the top ten projects in this Master Plan for inclusion in the CIP.

Policy 5.B.2: Identify dedicated bicycle-specific project funding by 2021.

Objective 5.C: Review the Bicycle Master Plan recommendations at regular intervals to ensure it reflects the most current priorities, needs, and opportunities.

Policy 5.C.1: Update the Bicycle Master Plan every five years to identify new facility improvements and programmatic opportunities as the bicycle network develops, assess their feasibility, gauge public support, identify funding sources, and develop implementation strategies.

## Chapter 5. Infrastructure Recommendations

This chapter presents recommended bicycle infrastructure projects, along with citywide projects to support and promote bicycling in Monrovia.

These recommendations set the foundation for improving safety for those who currently bicycle and to encourage more trips by bicycling within Monrovia and connecting to regional destinations. Although the northern end of the city is hilly, most of these recommendations should benefit most community members regardless of topography.

### Citywide Projects

#### Bicycle Detection at Traffic Signals

Detection of bicyclists at actuated (not timed) traffic signals is important for safety of bicyclists and motorists. The California Manual on Uniform Traffic Control Devices (CA MUTCD) requires all new and modified traffic signals be able to detect bicyclists with passive detection (rather than having to push a button).

##### *Recommendation*

This Plan recommends implementing agencies in Monrovia adhere to this requirement by ensuring passive detection of bicyclists at signalized intersections. While all new signals are required to conform to the requirement, the city can consider retrofitting existing signals as demand dictates and resources allow.

#### Bicycle Wayfinding Program

Bicycle wayfinding helps bicyclists find key community destinations. A good bicycling environment not only includes bicycle facilities, but also an easily navigable network that includes signs and pavement markings placed at decision points along preferred bicycle routes. A successful wayfinding program can enhance efforts to promote bicycling in the city. Signs may also include “distance to” information, which displays mileage to community destinations, as seen in **Figure 5-1**’s examples.

##### *Recommendation*

This Plan recommends the development of a bicycle wayfinding program that offers guidance to destinations including schools, bicycle parking, parks, Old Town Monrovia, Station Square, and civic buildings. The wayfinding kiosks currently installed at Station Square could potentially be replicated at other locations throughout the city.



Figure 5-1: Bicycle Wayfinding Examples



## End of Trip Facilities

Bicycle parking is critical for promoting bicycling. Convenient, easily used, and safe bicycle parking encourages people to complete more trips by bicycle. Bicycle parking ranges from simple bicycle racks or bicycle corrals to bicycle lockers or cages that protect against weather, vandalism and theft. The majority of existing bicycle parking facilities are located in Monrovia's Old Town district.

Across the city, people visiting downtown, parks, schools, retail stores and employment centers on bicycles do not have available bicycle parking and instead may lock their bicycles to street fixtures such as trees, telephone poles, and sign poles.

There are other ends of trip facilities important to have a comprehensive bicycle network such as repair stations and hydration stations. Repair stations provide tools in highly visible places for people to perform simple bicycle maintenance. Hydration stations are essential for preventing dehydration of the bicycle network users and can be a good feature to enhance bicycle riding throughout the city. A repair station and hydration station are installed at Station Square.

## *Recommended Types of Bicycle Parking*

Bicycle parking can be categorized into short-term and long-term parking. Bicycle racks are the preferred device for short-term bike parking. These racks serve people who leave their bicycles for relatively short periods of time, typically for shopping or errands, eating or recreation. Bicycle racks provide a high level of convenience and moderate level of security. Other type of short-term parking device are Bicycle Corrals, an on-street bicycle parking facility installed instead of a single vehicle parking space.

Long-term bike parking includes bike lockers and bike rooms and serve people who intend to leave their bicycles for longer periods of time and are typically found in public transit stations and commercial buildings. These facilities provide a high level of security but are less convenient than bicycle racks.

## *Recommendation*

This Plan recommends the city require all new major development to provide bicycle parking according to their size and use. Best practice bicycle parking rates for different land uses are shown in **Table 5-1**. The city can modify these rates or specify maximums as appropriate. This action will require a Zoning Code amendment. More information can be found in Appendix A.

Table 5-1: Guidelines for Bicycle Parking Location and Quantities

Land Use or Location	Physical Location	Quantity
Parks	Adjacent to restrooms, picnic areas, fields, and other attractions	8 bicycle parking spaces per acre
Schools	Near office and main entrance with good visibility	8 bicycle parking spaces per 40 students
Public Facilities (libraries, community centers)	Near main entrance with good visibility	8 bicycle parking spaces per location
Commercial, retail and industrial developments over 10,000 square feet	Near main entrance with good visibility	1 bicycle parking space per 15 employees or 8 bicycles per 10,000 square feet
Shopping Centers over 10,000 square feet	Near main entrance with good visibility	8 bicycle parking spaces per 10,000 square feet
Transit Stations	Near platform, security or ticket booth	1 bicycle parking space or locker per 30 automobile parking spaces
Multi-Family Residential	Near main entrance with good visibility	1 short-term bicycle parking space per 10 residential units AND 1 long-term bicycle parking space per 2 residential units

The guidelines and recommendations in this section come from industry best practices as well as the Association of Pedestrian and Bicycle Professionals' (APBP) *Essentials of Bicycle Parking Guidelines*. The APBP Guidelines can be downloaded here:

<http://www.apbp.org/?page=publications>.

Bicycle parking cost estimates can be found in Chapter 7.

This Plan also recommends the city and private developers only install bicycle parking that provide two points of contact to support the bicycle frame, and that allow the frame and at least one wheel to be secured with a standard U-lock. Recommended standard rack types are shown in **Figure 5-2**.

Long-term bicycle parking should provide some weather protection and greater security than bicycle racks. Long-term parking should be in the form of a secure room or locker.

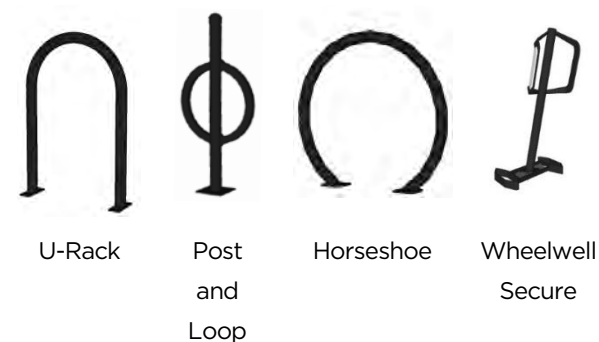


Figure 5-2: Types of Bicycle Racks

Bicycle parking is recommended at key destinations on the city's property, including Old Town Monrovia and Library Park. Recommended locations to install bicycle parking within the city's right-of-way are identified in **Table 5-2**.

While the city cannot install bicycle parking on private right-of-way, it is recommended that the city encourage the property owners and the School District to install bicycle parking identified in **Table 5-3**. Locations for other recommended end of trip facilities are listed in Table 5-5. All proposed bicycle parking and end of trip facilities are shown in **Figure 5-3**.

Table 5-2: Recommended Bicycle Parking Locations

Location	Type	Quantity
Evergreen Plaza	Corner of California Ave & Evergreen Ave	Bicycle Rack 4
Live Oak Memorial Park	Midblock between Walker Ave & California Ave	Bicycle Rack 4
Lucinda Garcia Park	Olive Ave	Bicycle Rack 1
Mary Wilcox Youth Center	Olive Ave entrance	Bicycle Rack 1
Monrovia Historical Museum	Midblock between Shamrock Ave & Mountain Ave	Bicycle Rack 2
Monrovia Police Department	Ivy Ave entrance	Bicycle Rack 2
Monrovia Police Department	Lime Ave main entrance	Bicycle Rack 2
Recreation Park	Corner of Lemon Ave & Shamrock Ave	Bicycle Rack 4

Table 5-3: Suggested School Bicycle Parking

Location	Type	Quantity
Bradoaks Elementary School	Lemon Ave & Park Rose Ave	Bicycle Rack 12
Clifton Middle School	Main entrance	Bicycle Rack 12
Monrovia High School	Main entrance	Bicycle Rack 12
Monrovia High School	Madison Ave midblock between Foothill Blvd and Colorado Blvd	Bicycle Rack 12
Monrovia High School	Main entrance	Bicycle Locker 3
Royal Oaks High School	Main office	Bicycle Rack 12

Table 5-4: Suggested Private Property Bicycle Parking

Location	Type	Quantity
24 Hour Fitness	Main entrance	Bicycle Rack 2
Arcadia Specialty Shopping Center	In front of stores	Bicycle Rack 4
Foothill Park Plaza Shopping Center	In front of stores	Bicycle Rack 4
Huntington Oaks Shopping Center	In front of stores	Bicycle Rack 4
Magnolia Ave & Huntington Drive Shopping Center	In front of stores	Bicycle Rack 4
Sprouts Farmers Market	In front of store	Bicycle Rack 6
Trader Joe's Headquarters	Main entrance	Bicycle Locker 3

Table 5-5: Recommended End of Trip Facilities

Location	Type of Facility	Quantity
Monrovia High School	Repair Station	1
Library Park	Repair Station & Hydration Station	1
Monrovia Canyon Park	Repair Station & Hydration Station	1
Recreation Park	Repair Station & Hydration Station	1

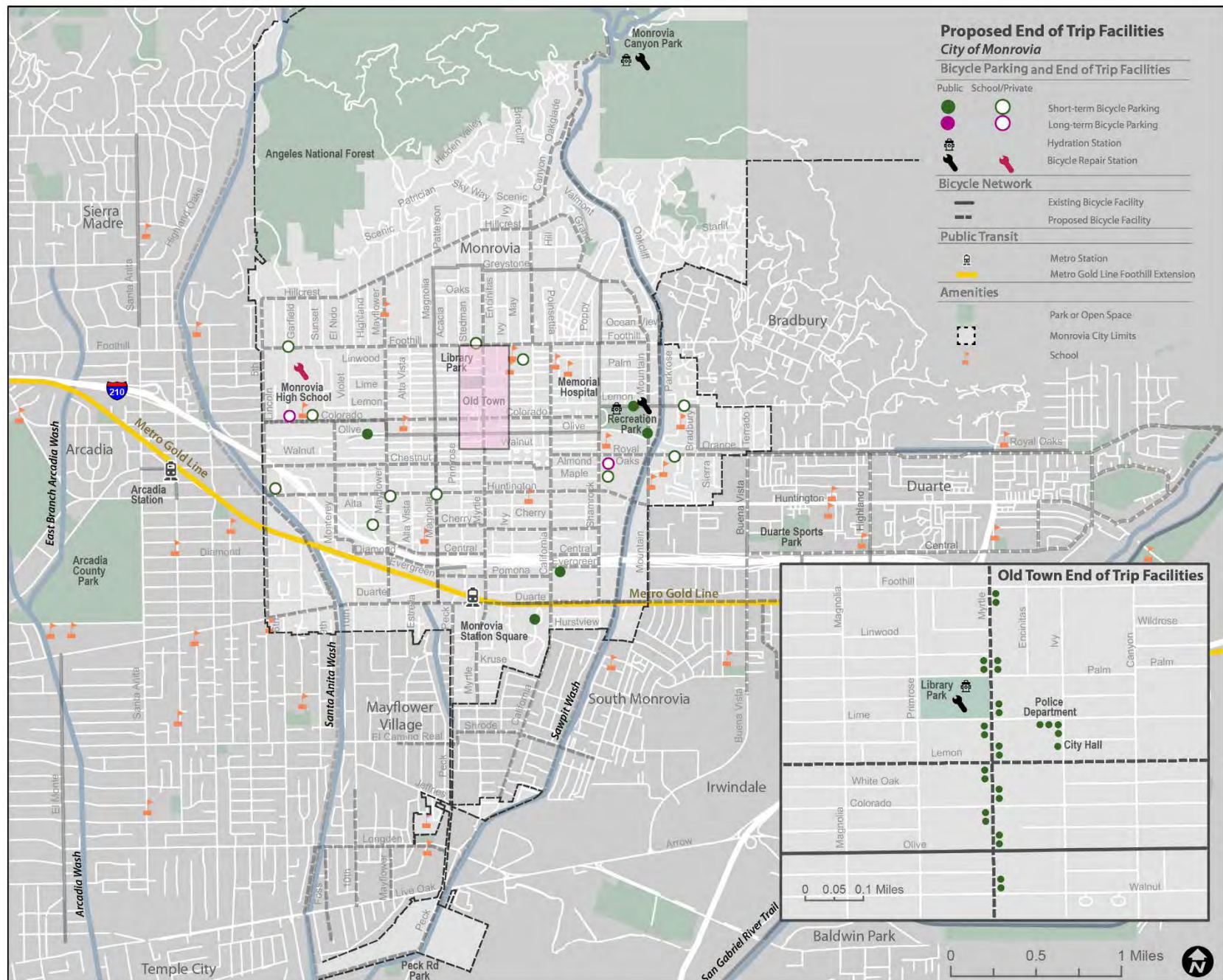


Figure 5-3: Recommended End of Trip Facilities



## Bikeway Projects

The bikeway recommendations that follow include a number of treatments which are described below in greater detail. The previously planned bike routes identified in the 2008 General Plan are included in these recommendations. Several of the recommended bikeway facilities, such as Class III Bike Routes with signage and pavement markings or Class II Bike Lanes, could be implemented initially then enhanced to a neighborhood greenway or Class IV Separated Bikeway, respectively, in the future. This Plan recommends further studies be conducted for potential bikeways that are controlled by a non-city agency and/or are not feasible within the current right-of-way or lane striping configuration. While potential Class II or Class IV bikeways are being studied on priority roadways, Class III bike routes could be considered for implementation.

### Class I Shared-Use Paths

A Class I Shared-Use Path provides for bicycle and pedestrian travel on a paved right-of-way completely separated from streets or highways (**Figure 5-4**). These recommended facilities can be popular for recreational bicycling as well as for commuting.



Figure 5-4: Class I Shared-Use Path

### Class II Bike Lanes

Class II Bike Lanes provide a signed, striped and stenciled lane on a roadway (**Figure 5-5**). Bike lanes are often recommended on roadways where traffic volumes and speeds are too high for comfortably sharing the travel lane. Bike lanes can be improved by adding a painted buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.



Figure 5-5: Class II Bike Lanes

## Class III Bike Routes

Class III Bike Routes provide for shared travel lane use and are generally only identified with signs (**Figure 5-6**). It is recommended to upgrade any existing Class III routes to add shared-lane markings. In a shared lane with on-street parallel parking, pavement markings should be placed so that the centers of the markings are at least 11 feet from the face of the curb. Proper placement of “sharrows” increases bicycle riders visibility, assists bicyclists with positioning in order to reduce the chance of impacting the open door of a parked vehicle, and reduce maintenance costs. Bike Routes are appropriate on low volume, low speed streets.



Figure 5-6: Class III Bike Route with Sharrows

## Class IV Separated Bikeways

Class IV separated bikeways are a new class of bicycle facility, and Caltrans has developed design guidance for communities. Generally, Class IV bikeways are on-street bicycle facilities that are separated from vehicle traffic by some kind of physical protection—including a curb, on-street parking, flexible bollards, or concrete planters (**Figure 5-7**).



Figure 5-7: Class IV Separated Bikeways

Recommended bikeway projects and studies, including those potential bikeways identified in the General Plan, are summarized by bikeway class in **Table 5-6**. The complete list of recommended bikeway projects is provided in **Table 5-7**, and a map of the recommended improvements is shown in Figure 5-8. Implementation costs can be found in Chapter 7.

Table 5-6: Summary of Recommended Bikeways by Class

Bikeway Class	Proposed Miles
Class I – Shared-Use Path	3.7
Class II – Bike Lane	4.5
Class II – Buffered Bike Lane	0.3
Class III – Bike Route	17.7
Class IV – Separated Bikeway	10.6
<b>TOTAL</b>	<b>36.7</b>

Table 5-7: Recommended Bikeway Projects

Location	Start	End	Class	Length (mi)	Notes
<b>Peck Rd I</b>	Peck Rd	Myrtle Ave	Class I Path	0.1	Off-street connection from Peck Road cul-de-sac to Myrtle Avenue, near Live Oak Avenue.
<b>Regional Path Connector</b>	Peck Road Park	Peck Road Park	Class I Study	0.6	Connection between Santa Anita Wash Path and Sawpit Wash Path. The city should partner with the County to conduct a feasibility study for a Class I shared-use path.
<b>Santa Anita Wash</b>	San Gabriel Mountains	Peck Road Park	Class I Study	0.8	Managed by Los Angeles County Flood Control District. The city should partner with the County to conduct a feasibility study for a Class I shared-use path.
<b>Saw Pit Wash</b>	San Gabriel Mountains	Peck Road Park	Class I Study	2.2	Managed by Los Angeles County Flood Control District. The city should partner with the County to conduct a feasibility study for a Class I shared-use path.
<b>California Ave I</b>	Maple Ave	Central Ave	Class II Study	0.4	Existing 4-lane roadway with parking on both sides of the street. Study feasibility of bike lane through either parking removal or travel lane reduction.
<b>California Ave II</b>	Pomona Ave	Hurstview Ave	Class II Study	0.3	Existing 4-lane roadway with parking on both sides of the street. Study feasibility of bike lane through either parking removal or travel lane reduction.
<b>Central Ave I</b>	Mayflower Ave	Magnolia Ave	Class II	0.3	Existing 3-lane roadway with parking on north side of the street. Existing ROW allows for: One 9-ft parking lane Two 11-ft travel lanes One 6-ft bike lane
<b>Chestnut Ave I</b>	5 <sup>th</sup> Ave	Mayflower Ave	Class II	0.6	Existing 2-lane roadway with parking on south side of the street. Existing ROW allows for: One 8-ft parking lane Two 11-ft travel lanes One 6-ft bike lane
<b>Colorado Blvd I</b>	5th Ave	Mayflower Ave	Class II	0.6	Existing 2-lane roadway with parking on both sides of the street. Existing ROW allows for: Two 10-ft parking lanes Two 11-ft travel lanes Two 6-ft bike lanes

Location	Start	End	Class	Length (mi)	Notes
Duarte Rd I	California Ave	Mountain Ave	Class II	0.5	Existing 2-lane roadway with parking on both sides of the street. Existing ROW allows for: One 10-ft parking lane Two 12-ft travel lanes Two 6-ft bike lanes
Mountain Ave I	Foothill Blvd	Duarte Rd	Class II Study	1.3	Existing 4-lane roadway with parking on both sides of the street. Study feasibility of bike lane through either parking removal or travel lane reduction.
Olive Ave	Magnolia Ave	Mayflower Ave	Class II Buffered Bike Lane	0.3	Existing 2-lane roadway with parking on both sides of the street, and bike lane. Existing ROW allows for: Two 8-ft parking lane Two 11-ft travel lanes Two 7-ft buffered bike lanes
Shamrock Ave I	Huntington Dr	Duarte Rd	Class II Study	0.5	Existing 4-lane roadway with parking on both sides of the street. Study feasibility of bike lane through either parking removal or travel lane reduction.
5th Ave	Hillcrest Blvd	Duarte Rd	Class III	1.6	Shared-lane pavement markings and signage
Alamitas Ave	Diamond St	Monterey Ave	Class III	0.2	Shared-lane pavement markings and signage
Almond Ave	Canyon Blvd	California Ave	Class III	0.1	Shared-lane pavement markings and signage
California Ave II	Foothill Blvd	Maple Ave	Class III	0.7	Shared-lane pavement markings and signage, with potential upgrade to Neighborhood Greenway
Canyon Blvd I	Sawpit Wash Path	Scenic Dr	Class III	0.8	Shared-lane pavement markings and signage
Canyon Blvd II	Scenic Dr	Foothill Blvd	Class III	0.6	Shared-lane pavement markings and signage
Canyon Blvd III	Visitor Center	Sawpit Wash Path	Class III	0.4	Shared-lane pavement markings and signage
Canyon Blvd IV	Chestnut Ave	Almond Ave	Class III	0.1	Shared-lane pavement markings and signage
Central Ave II	California Ave	Shamrock Ave	Class III	0.2	Shared-lane pavement markings and signage
Chestnut Ave II	Mayflower Ave	Canyon Blvd	Class III	0.8	Shared-lane pavement markings and signage, with potential upgrade to Neighborhood Greenway
Cherry Ave	Myrtle Ave	Magnolia Ave	Class III	0.2	Shared-lane pavement markings and signage
Colorado Blvd II	Mayflower Ave	Shamrock Ave	Class III	1.1	Shared-lane pavement markings and signage, with potential upgrade to Neighborhood Greenway
Diamond St	Magnolia Ave	Alamitas Ave	Class III	0.4	Shared-lane pavement markings and signage
Duarte Rd II	Walker Ave	California Ave	Class III	0.3	Shared-lane pavement markings and signage



Location	Start	End	Class	Length (mi)	Notes
<b>Evergreen Ave I</b>	California Ave	Shamrock Ave	Class III	0.2	Shared-lane pavement markings and signage
<b>Grand Ave</b>	Canyon Blvd	Greystone Ave	Class III	0.5	Shared-lane pavement markings and signage
<b>Greystone Ave</b>	Mountain Ave	Shamrock Ave	Class III	0.1	Shared-lane pavement markings and signage
<b>Hillcrest Blvd</b>	Canyon Blvd	5 <sup>th</sup> Ave	Class III	1.5	Shared-lane pavement markings and signage
<b>Los Angeles Ave</b>	Shamrock Ave	Myrtle Ave	Class III	0.6	Shared-lane pavement markings and signage
<b>Magnolia Ave I</b>	Hillcrest Blvd	Greystone Ave	Class III	0.1	Shared-lane pavement markings and signage
<b>Magnolia Ave II</b>	Olive Ave	Central Ave	Class III	0.6	Shared-lane pavement markings and signage
<b>Magnolia Ave IV</b>	Pomona Ave	Duarte Rd	Class III	0.1	Shared-lane pavement markings and signage
<b>Mayflower Ave I</b>	Hillcrest Blvd	Huntington Dr	Class III	1.1	Shared-lane pavement markings and signage, with potential upgrade to Neighborhood Greenway
<b>Monterey Ave</b>	Colorado Blvd	Alamitas Ave	Class III	0.6	Shared-lane pavement markings and signage
<b>Mountain Ave II</b>	Greystone Ave	Foothill Blvd	Class III	0.4	Shared-lane pavement markings and signage
<b>Myrtle Ave I</b>	Greystone Ave	Walnut Ave	Class III	0.9	Shared-lane pavement markings and signage, with potential upgrade to Neighborhood Greenway
<b>Myrtle Ave III</b>	Central Ave	Pomona Ave	Class III	0.1	Shared-lane pavement markings and signage, with potential upgrade to Neighborhood Greenway
<b>Peck Rd II</b>	Duarte Rd	Live Oak Ave	Class III	1.5	Shared-lane pavement markings and signage
<b>Pomona Ave</b>	Magnolia Ave	California Ave	Class III	0.6	Shared-lane pavement markings and signage
<b>Royal Oaks Dr</b>	California Ave	East City Limit	Class III	0.9	Shared-lane pavement markings and signage, with potential upgrade to Neighborhood Greenway
<b>Shamrock Ave II</b>	Olive Ave	Huntington Dr	Class III	0.3	Shared-lane pavement markings and signage
<b>Primrose Ave II</b>	Evergreen Ave	Metro Gold Line	Class III	0.1	Shared-lane pavement markings and signage
<b>Primrose Ave I</b>	Foothill Blvd	Central Ave	Class IV Study	1.1	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Ivy Ave</b>	Foothill Blvd	Central Ave	Class IV Study	1.1	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Central Ave III</b>	Magnolia Ave	California Ave	Class IV Study	0.6	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Evergreen Ave II</b>	Magnolia Ave	California Ave	Class IV Study	0.6	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Magnolia Ave III</b>	Central Ave	Pomona Ave	Class IV Study	0.1	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.

Location	Start	End	Class	Length (mi)	Notes
<b>California Ave III</b>	Central Ave	Pomona Ave	Class IV Study	0.1	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Duarte Rd III</b>	Walker Ave	5 <sup>th</sup> Ave	Class IV Study	1.2	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Foothill Blvd</b>	Mountain Ave	5 <sup>th</sup> Ave	Class IV Study	1.9	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Huntington Dr</b>	Mountain Ave	5 <sup>th</sup> Ave	Class IV Study	1.9	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Mayflower Ave II</b>	Huntington Dr	Duarte Rd	Class IV Study	0.5	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Myrtle Ave II</b>	Walnut Ave	Central Ave	Class IV Study	0.5	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Myrtle Ave IV</b>	Pomona Ave	Altern Ave	Class IV Study	0.7	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.
<b>Peck Rd III</b>	Live Oak Ave	Peck Road Park	Class IV Study	0.3	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.

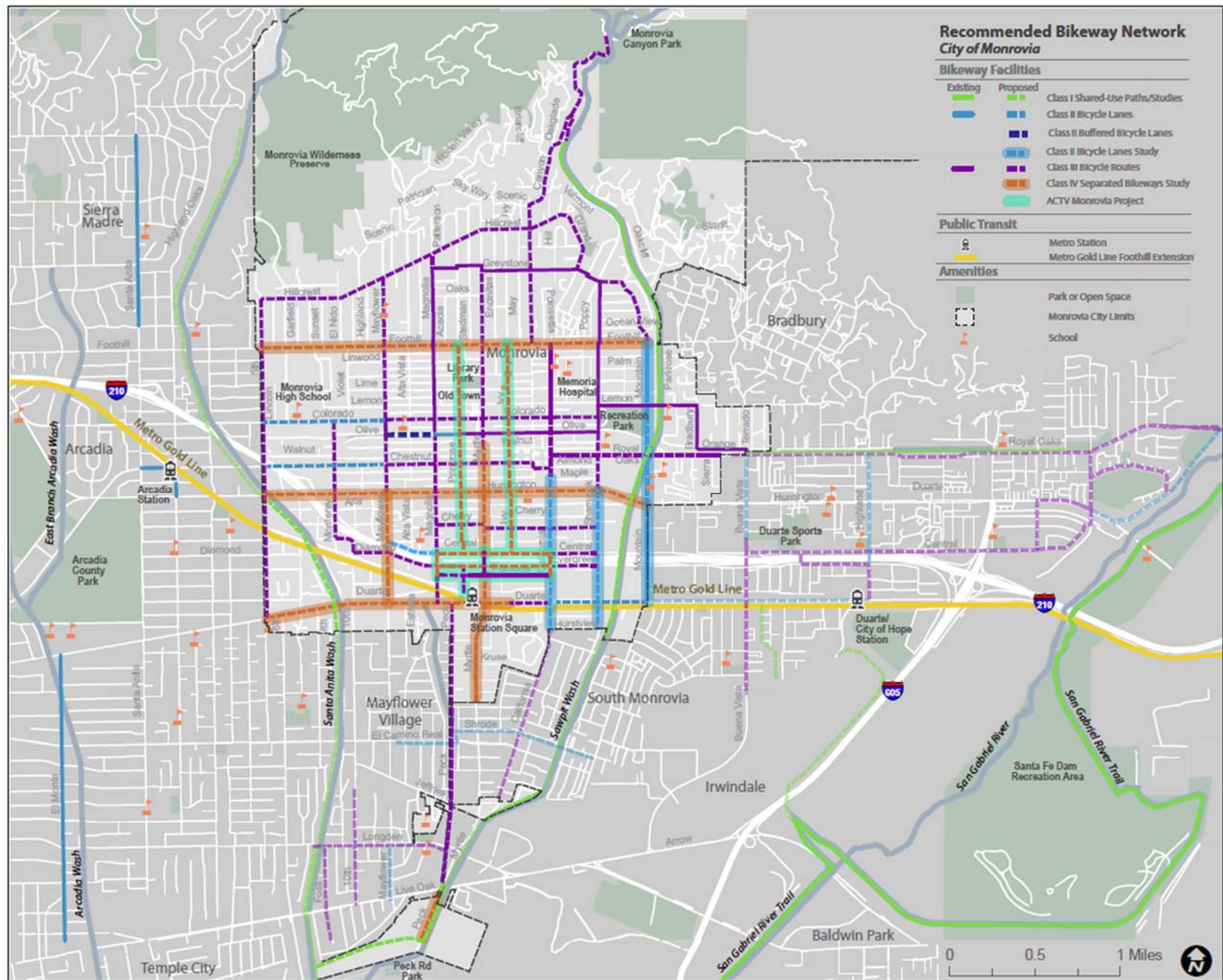


Figure 5-8: Recommended Bikeway Projects & Studies



## Additional Study

This Plan recommends the following study be conducted to address community-expressed needs and desires with regards to bicycling in Monrovia.

### Bike Share Feasibility Study

City leaders and community members have expressed interest in bringing a public bike share system to Monrovia, especially to connect the Gold Line light rail station with major destinations such as Old Town Monrovia. This Plan recommends that the city continue to coordinate with Los Angeles County Metro as they conduct a feasibility study to determine if and how a bike share system could be an effective transportation option in Monrovia and surrounding cities.

In March 2018, the city launched a partnership with LimeBike to operate a dockless bike-share program in Monrovia. The initial deployment consisted of 200 bicycles. The city installed additional bike racks and signage in Old Town Monrovia, the Monrovia Community Center, and Station Square to improve the use of bike-share (**Figure 5-9**).

The city will continue to coordinate with Los Angeles County Metro as they conduct a feasibility study to determine if and how a bike share partnership with Metro could also be deployed in Monrovia and the surrounding cities.



Figure 5-9: Bike Share Kiosk at Monrovia City Hall



## ACTV Monrovia Bikeway Project

To better connect the Metro Gold Line Station at Station Square with Old Town Monrovia, the City has further studied potential bikeway improvements along this north-south corridor (**Figure 5-8**). In so doing, the City noted multiple barriers for bicyclists including:

- High-speeds on two major east-west thoroughfares: Huntington Drive and the I-210 freeway and its on/off ramps,
- Unsafe intersections preventing the safe crossing of Huntington Drive in several key areas,
- Narrow street widths preventing Class I, II, and IV bikeways, and
- Dim lighting and narrow streets in the I-210 freeway underpasses.

With these barriers in mind, and in order to assist with safe bicycle travel on priority roadways, the City is proposing the “ACTV Monrovia” Plan, which stands for Active Community Travel Vinculum. These proposed bikeway improvements would create a north-south “spine” between Old Town and Station Square by implementing the following changes:

- Convert two, bi-directional motor vehicle travel lanes to one, one-way motor vehicle travel lane on Primrose Avenue (for south-bound traffic) and Ivy Avenue (for north-bound traffic) between Foothill Boulevard and Central Avenue
- Install a Class I Shared-Use Path for two-way protected bike and pedestrian travel on Primrose Avenue and Ivy Avenue, where the streets have been converted into one-way motor vehicle traffic, as well as on Magnolia Avenue and California Avenue under the I-210 freeway to Pomona Avenue
- Install Class IV Separate Bikeways (One-Way) on Central Avenue and Evergreen Avenue between Magnolia Avenue and California Avenue
- Install Class III Bicycle Routes (sharrows) on Pomona Avenue between Magnolia Avenue and California Avenue, as well as on Myrtle Avenue under the I-210 freeway to Pomona Avenue, and on the Primrose Avenue entrance to the Metro Gold Line Station

According to recent assessments completed by Gibson Transportation Consulting, Inc., the City’s consultant traffic engineer, the ACTV Monrovia Plan would allow for the establishment of protected bike lanes without any loss of on-street parking. Additionally, the Plan would encourage traffic to slow down in the identified areas and would facilitate the “greening” of Primrose Avenue and Ivy Avenue, to create a more park-like setting for residents throughout the length of the identified project area.

The City is engaged in various community outreach efforts to solicit community feedback on the proposed ACTV Monrovia Plan, including targeted outreach to those directly impacted by the bikeway improvements. Special outreach effort has been made to those living in the environmentally-disadvantaged area of Monrovia (census tract 6037431100), as categorized by the Office of Environmental Health Hazard Assessment’s CalEnviroScreen, which identifies communities that are most affected by various sources of pollution.

Outreach activities include hosting a block party to build support for the project and installing a mock-up of the street improvements for public comment, as well as presentations at various City Board and Commission Meetings, a City Council Study Session, and outreach to the Monrovia Area Partnership (MAP), a grassroots effort that focuses on building connections between community members and their local government.

The City is committed to continuing these discussions at each stage of the proposed ACTV Monrovia Plan and making bikeway improvements with community input.

## Chapter 6. Recommended Programs

This chapter presents recommended bicycle-related programs for Monrovia. These recommendations are organized into four “E’s”:

- **Education** programs are designed to improve safety and awareness. They can include programs that teach students how to safely ride on busy streets or teach drivers to expect people on bicycle. They may also include brochures, posters, or other information that targets people bicycling and/or driving.
- **Encouragement** programs provide incentives and support to help people leave their car at home and try bicycling instead.
- **Enforcement** programs enforce legal and respectful bicycling and driving. They include a variety of tactics, ranging from police enforcement to neighborhood signage campaigns.
- **Evaluation** programs are an important component of any investment. They help measure success at meeting the goals of this Plan and to identify adjustments that may be necessary.

Costs estimates for each program is not provided in this chapter as the costs can vary depending on the size and scale for each program.



Figure 6-1: Local Bike Shop in Monrovia

## Education

Education programs are important for teaching safety rules and laws as well as increasing awareness regarding bicycling opportunities and existing facilities. Education programs may be designed to reach groups at varying levels of knowledge and there may be many different audiences: pre-school age children, elementary school students, teenage and college students, workers and commuters, families, the elderly, new immigrants, and non-English speakers.

### Rail Safety Education

Monrovia has the Metro Gold Line Foothill Extension running through the city and residents could benefit from education on rail safety. Rail safety education and messaging can address the new challenges of riding near the line and crossing the tracks on a bicycle.

The Federal Rail Administration has partnered with Operation Lifesaver on a national program designed to end collisions, deaths, and injuries related to rail crossings. Information can be found at: <http://oli.org/>

#### *Recommendation*

This Plan recommends the city seek funding to develop and implement rail safety education in partnership with Metro.



Figure 6-2: Operation Lifesaver Offers Education Tools

## Adult Bicycling Skills Classes

Adult education programs were identified as a need by the community through the survey and public workshop. Most people bicycling do not receive training on safe bicycling practices, the rules of the road, and bicycle handling skills.

Bicycling skills classes can address this education gap. The League of American Bicyclists offers classes taught by certified instructors. Information can be found at: <http://www.bikeleague.org/>.

### ***Recommendation***

This Plan recommends the city support adult bicycle rider skills classes. Of the city's largest employers, those listed below may consider offering classes for employees:

- Modern Healthcare
- Trader Joes Corporate Office and Store
- WorleyParsons
- Monrovia Memorial Hospital
- 24-Hour Fitness

## Bicycle-Related Ticket Diversion Class

Diversion classes are offered to bicycle riders who have been cited for certain traffic violations, such as running a stoplight. This type of program was favored by members of the public.

California Assembly Bill 209, signed by Governor Brown on September 21, 2015, allows for such programs for violations not committed by a driver of a motor vehicle. This program is a good way to educate bicycle riders about rights and responsibilities.

Similar programs exist throughout California. More information: [www.marinbike.org/Campaigns/ShareTheRoad/Index.shtml#StreetSkills](http://www.marinbike.org/Campaigns/ShareTheRoad/Index.shtml#StreetSkills)  
<http://www.cityoflivermore.net/citygov/police/ops/traffic/bikesafety/diversion.asp>

### ***Recommendation***

This Plan recommends the city consider offering bicycle rider diversion classes.



## StreetSmarts Campaign

Outreach conducted during this planning effort identified a need to raise public awareness of bicycling as a viable form of transportation and to combat negative stereotypes about people who choose to bicycle.

On a citywide scale, Monrovia could start a StreetSmarts media campaign, similar to those in other California cities. Developed by the City of San José, StreetSmarts uses print media, radio spots and television spots to educate people about safe driving, bicycling, skateboarding, and walking behavior. More information about StreetSmarts can be found at [www.getstreetsmarts.org](http://www.getstreetsmarts.org).

### *Recommendation*

This Plan recommends the city consider implementation of a public awareness program such as StreetSmarts.



Figure 6-3: Davis, CA Street Smarts Campaign Posters

## Student Bicycle Traffic Safety Education

Student education programs are an essential component of bicycle education. Students are taught traffic safety skills that help them understand basic traffic laws and safety rules. Monrovia currently does not have a formal Safe Routes to School education program, although public comment favored this type of education programming.

Bicycle education curriculum typically includes two parts: knowledge and skills. Knowledge lessons are typically in-class, while skills are practiced on a bicycle. Lessons can include helmet and bicycle fit, hand signals, and riding safely with traffic.

### *Benefits*

Student bicycle traffic safety education can benefit the Monrovia community by:

- Improving safety by teaching children about lifelong safety skills
- Create awareness with students and parents
- Encourage families to consider bicycling to school on a more frequent basis

### *Recommendation*

This Plan recommends the School District implement a pilot education program and to expand it to include all Monrovia schools over time.

## Encouragement

Everyone from young children to elderly residents can be encouraged to increase their rates of bicycling or to try bicycling instead of driving for short trips.

### Bike Week

Bike Week (<https://www.metro.net/bikes/bike-week/>) is a regional event to promote bicycling to work and is typically held in May. Los Angeles County Metro hosts Bike Week and organizes several events.

Popular events include:

- Bike to Work Day (typically the 3<sup>rd</sup> Thursday of the month)
- Bike-in Movie
- City rides

#### *Recommendation*

This Plan recommends the city consider sponsoring a Bike Week event. The event can include a Bike to Work Day celebration in Old Town with group rides, raffles and prizes, and speeches from Council Members or the Mayor. The type of events held can be developed through community input.

## Employer-Based Encouragement Programs

Though the city cannot host these programs, it can work with or provide information to employers about commuting by bicycle. Popular employer-based encouragement programs include hosting a bicycle user group to share information about how to bicycle to work and to connect experienced bicycle riders with novice bicycle riders. Employers can host bicycle classes and participate in Bike Week.

#### *Recommendation*

This Plan recommends the city collaborate with employers to implement bicycle-related programs.

### Open Streets Events

Open Streets events, such as the regionally popular CicLAvia, celebrate walking and bicycling by closing key streets to vehicle traffic for a day or a few hours and opening them up for walking, bicycling, and other community activities. These events can create opportunities for people to try walking or bicycling away from the potential stresses of adjacent vehicle traffic.

Monrovia collaborated with Metro and other San Gabriel Valley communities to organize an open streets event called “626 Golden Streets” that was scheduled to occur on June 26, 2016. However, the event was postponed due to wildfires in the vicinity. The event will open stretches of roadway from South Pasadena to Azusa for people to walk, jog, skate, bike, and more to explore the new stations along the Metro Gold Line Foothill Extension.

#### *Recommendation*

This Plan recommends the city work with local community groups to host Open Streets events on a semi-annual basis.

## Bicycle Friendly Business Districts

Bicycle Friendly Business Districts (BFBDs) provide end-of-trip bicycle infrastructure such as water bottle filling stations and bicycle parking in localized retail areas of a community. Providing infrastructure encourages the local community to buy local more often. “Shopping” was one of the most cited destinations in the community survey. Additionally, this would help address the lack of bicycle parking identified as a community need in **Chapter 3: Why?**

The City of Long Beach began a BFBD program by adding bicycle racks and corrals, bicycle lanes, and signage along major corridors. Participating bicycle friendly businesses receive a listing and map location on the Bike Long Beach website, as well as additional exposure through the website’s Bike Saturdays discount program which offers bicycle riders a discount or deal every Saturday at more than 150 businesses within the six districts. More information can be found at <http://www.bikelongbeach.org/bike-friendly-businesses>.

### Recommendation

It is recommended the city declare Old Town a BFBD, provide additional end-of-trip facilities within the District, and encourage shop owners to offer discounts to patrons who arrive by bicycle.

## Suggested Walking and Bicycling Routes to School Maps

Suggested Walking and Bicycling Routes to School Maps can help parents overcome fears related to traffic and/or lack of knowledge of family friendly routes to school. These types of maps show stop signs, traffic signals, crosswalks, paths, overcrossings, crossing guard locations, and similar elements that can help parents make decisions about choosing the route that best fits their family’s walking and bicycling needs.

### Recommendation

This Plan recommends that the city partner with the School District to create Walking and Bicycling Routes to School Maps.



Figure 6-4: Pico Rivera, CA Suggested Routes to School Maps

## Bicycle Trains

Bicycle Trains are an organized group of students who bicycle to school under the supervision of a parent/adult volunteer. Parent champions take turns bicycling along a set route to and from school, collecting children from designated “train stops” along the way.

Schools and parent champions can encourage parents to form Bicycle Trains at the back-to-school orientation or other fall events. The School District can provide safety vests to indicate the leader(s). Incentives for the parent volunteers can include coffee at the school or gift cards for coffee shops.

### ***Benefits***

Bicycle Trains benefit the Monrovia community by:

- Improving safety - Children are more visible bicycling in groups, accompanied by an adult
- Saving parents' money by not using a car
- Saving parents' time when they are not leading the train
- Reducing traffic congestion around the school

### ***Recommendation***

This Plan recommends the city and school district work with schools and parent champions to develop a Bicycle Train program.

Example outreach materials:

- Sonoma Safe Routes to School's Bicycle Train Guide for Volunteers: <http://sonomasaferoutes.org/resources/bike-train-guide-for-volunteers.pdf/view>
- Marin County Safe Routes to Schools' SchoolPool Marin materials: <http://www.schoolpoolmarin.org/>

## Back-to-School Encouragement Marketing

Families set transportation habits during the first few weeks of the school year and are often not aware of the multiple transportation options and routes available to them. A back-to-school encouragement marketing can promote bus, carpool, walking, and bicycling to school. The marketing campaign can include suggested route maps, safety education materials, volunteer opportunities, event calendars, and traffic safety enforcement notices. It can also include an illustrative guide with the Suggested Walking and Bicycling to School maps.

### ***Benefits***

Back to school encouragement marketing can benefit the Monrovia community by:

- Informing families about ways to walk and bicycle to school
- Informing families about school support for walking and bicycling to school

### ***Recommendation***

This Plan recommends the School District implement a pilot education program and to expand it to include all Monrovia schools over time.



## Student Incentive Programs

Contests and incentive programs reward students by tracking the number of times they walk, bicycle, carpool, or take transit to school. Contests can be individual, classroom, school-wide, or interschool competitions, and can be integrated with other programs like Walk 'n' Roll to School Days. Types of incentive programs are listed below:

- Pollution Punch Card is a year-round program designed to encourage students and families to consider their options for getting to school. Every time a student walks, bicycles, carpools, or takes transit a school representative records the activity. After a certain number of points are reached, the student received a prize or incentive.
- Walk or Bike across California/America is a year-round program designed to encourage walking and bicycling by tracking the miles they travel throughout the year. Students are taught how to track their mileage and will also learn about places along their way.

### ***Benefits***

Participation in incentive programs can benefit the Monrovia community by:

- Increasing awareness of walking and bicycling to school
- Increasing the number of students who walk or bicycle to school

### ***Recommendation***

This Report recommends the School District work with the schools and parent champions to sponsor a number of incentive programs.

## Golden Sneaker Contest

In the Golden Sneaker Contest, classrooms compete to see which class has the highest rate of students walking, bicycling, or carpooling to and from school. The class tracks how many students commute by these modes and calculates the percent of total trips by each mode. The winner of the contest receives a “golden sneaker” trophy, along with other incentive prizes.

A Golden Sneaker Contest can be expanded from classroom competitions to intra-school competitions or district-wide competitions. Some schools hold celebrations for winning classrooms.

### ***Benefits***

Participation in the Golden Sneaker Contest can benefit the Monrovia community by:

- Increasing awareness of walking and bicycling to school
- Increasing the number of students who walk or bicycle to school

### ***Recommendation***

This Report recommends the School District work with the schools and parent champions to hold the Golden Sneaker Contest.

## Monthly Walk and Roll Days

Walk and Roll to School Days are events to encourage students to try walking or bicycling to school. The most popular events of this type are International Walk to School Day (held in early October) and Bike to School Day (held in early May). Many communities have expanded on this once a year event and hold monthly or weekly events such as Walk and Roll the First Friday (of every month) or Walk and Roll Wednesdays (held every Wednesday).

Holding weekly or monthly Walk and Roll to School Day promotes regular use of active transportation and helps establish good habits. Events can take on a wide range of activities, with some schools choosing to make them weekly rather than monthly, such as with a “Walk and Roll Wednesday.”

Volunteers can set up a welcome table for people walking and bicycling. The welcome table could provide refreshments, incentive prizes, and an interactive poster letting students document their mode to school. Walking School Buses, Bicycle Trains, and Golden Sneaker Contests can be organized and promoted on these days.

### *Benefits*

Participation in Monthly Walk and Roll Days can benefit the Monrovia community by:

- Building community
- Saving parents’ money by not using a car
- Reducing traffic congestion around the school

### *Recommendation*

It is recommended the Monrovia Unified School District, schools, PTAs, and parent champions work together to expand Walk and Bike to School days to be held on a weekly basis.

## Enforcement Programs

Enforcement programs enforce legal and respectful use of the transportation network. This programs will help educate motorists, bicycle riders, and pedestrians about the rules and responsibilities of the road.

### Bicycle Helmet and Light Giveaways

The California Office of Traffic Safety (OTS) grant program can fund bicycle helmets or lights for giveaways to children at schools or children observed bicycling without wearing helmets or residents riding without lights. Many members of the public noted that many Monrovia streets are very dark at night. Bicycle lights are required for nighttime riding in California (CVC21201) and can help increase the safety of a person riding a bicycle. Typically this type of program is conducted in partnership with the Police Department.

The Los Angeles County Bicycle Coalition manages “Operation Firefly,” an education and bicycle light distribution program which organizes groups of volunteers to meet for “street distributions” at undisclosed locations throughout Los Angeles where night-time bicycle ridership is expected to be high. The volunteers invite people who are riding bicycles without lights to stop in order to give them front and rear lights along with an information “spoke card” that explains the laws related to riding at night as well as tips they should know for night-time safety. The spoke cards are printed in English and Spanish, and “Team Firefly” volunteers always include at least a few people who speak Spanish. More information can be found here: <http://www.la-bike.org/operationfirefly>.

### *Recommendation*

This Plan recommends the city seek an OTS grant and conduct helmet and light giveaways.



Figure 6-5: Operation Firefly finds annual or seasonal sponsors to cover the cost of bicycle lights

## Evaluation Programs

Evaluation programs help the city measure how well it is meeting the goals of this Plan and the General Plan, and evaluation is a key component of any engineering or programmatic investment. It is also a useful way to communicate success with elected officials as well as local residents.

### Annual Collision Data Review

Reviewing bicycle rider-involved collisions and near-misses on an annual basis can help the city identify challenging intersections or corridors. This review should include an assessment of the existing infrastructure to determine whether improvements can be made to reduce the number of collisions in the community.

#### *Recommendation*

This Plan recommends the city and Police Department review bicycle-involved collision data on an annual basis to identify needed improvements. It is also recommended the city and the Police Department collaborate to develop a way for community members to report near misses.

## Parent Surveys

The National Center for Safe Routes to School provides a standard parent survey, collecting information on modes of travel, interest in walking or bicycling to school, and challenges to walking and bicycling to school. The information gathered from the parent surveys can help the City of Monrovia and School District provide programs that are attractive to parents. Parent surveys can also help measure parent attitudes and changes in attitude towards walking and bicycling to school.

#### *Recommendation*

It is recommended that the City of Monrovia and School District work together to conduct parent surveys every two to three years.

## Student Walking and Bicycling Counts

Student hand tallies are one way to count the number of students who walk, bicycle, take transit or carpool to school. The National Center for Safe Routes to School provides the standard tally form at <http://www.saferoutesinfo.org/program-tools/evaluation-student-class-travel-tally>.

#### *Recommendation*

It is recommended the Monrovia Unified School District conduct student tallies on a biannual basis.



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# Chapter 7. Implementation Plan

This chapter presents a prioritized list of the individual infrastructure improvements, including the evaluation criteria, project cost estimates, and a list of prioritized projects.

## Project Evaluation Strategy

Bicycle infrastructure projects were proposed according to the criteria described below. Projects were organized into priority tiers based on community input, collision history, feasibility, local context, projected implementation timeframe, and estimated costs.

- **Tier 1** projects have been identified by the community as priorities, address locations with a history of frequent bicyclist-involved collisions, do not require removal of automobile travel or parking lanes, and/or can be implemented in the short-term (within 5 years), including projects along streets scheduled for resurfacing as part of the Monrovia Renewal program. Studies and short-term bicycle parking facilities are included in Tier 1.
- **Tier 2** projects include recommended facilities that are desired by the community but are not on the scheduled street resurfacing program and/or do not address a high-collision situation. High-capacity bicycle parking facilities are included in Tier 2.

The project list and individual projects to be included in this Plan are flexible concepts that serve as a guideline. The high-priority project list, and perhaps the overall project list, may change over time as a result of changing bicycling patterns, land use patterns, implementation constraints and opportunities, and the development of other transportation improvements.

This Plan's recommendations should be implemented within the context of meeting the performance measures in **Chapter 4**.

## Unit Cost Assumptions

**Table 7-1** presents the planning level cost assumptions used to determine project cost estimates. Unit costs are typical or average costs informed by Alta Planning + Design's experience working with California communities. While they reflect typical costs, unit costs do not consider project-specific factors such as intensive grading, landscaping, or other location-specific factors that may increase actual costs. For some segments, project costs may be significantly greater.

Table 7-1: Unit Cost Assumptions

Item	Unit	Cost Assumption
Bicycle Rack	EA	\$500
Bicycle Locker	EA	\$2,700
Bike Corral	EA	\$2,000
Class I Shared-Use Path	MI	\$900,000
Class II Bike Lane (one side)	MI	\$50,000
Class II Bike Lanes (two sides)	MI	\$85,000
Class II Buffered Bike Lanes (two sides)	MI	\$140,000
Class III Bicycle Route With Shared-Lane Markings	MI	\$25,000
Class III Neighborhood Greenway	MI	\$60,000
Class IV Separated Bikeway (one side)	MI	\$150,000

## Priority Projects Summary

**Table 7-2** presents a cost summary by priority tier and project type. These cost estimates do not include the potential costs of recommended bicycle facilities that will require further feasibility studies.

Table 7-2: Estimated Cost Summary by Tier and Project Type

Project Type	Estimated Cost
<b>Tier 1 Projects</b>	
Class I Studies	TBD
Class II (not requiring lane reconfiguration)	\$190,500
Class III (signs and stencils)	\$445,000
Class IV Studies	TBD
Bicycle Parking	\$68,000
<b>Total for Tier 1</b>	<b>\$703,500</b>
<b>Tier 2 Projects</b>	
Class I	\$90,000
Class III (Neighborhood Greenway enhancements)	\$330,000
Bicycle Parking	\$18,200
<b>Total for Tier 2</b>	<b>\$438,200</b>
<b>Total for All Tiers</b>	<b>\$1,141,700</b>

**Table 7-3** and **Table 7-4** on the following pages present lists of all Tier 1 and Tier 2 priority projects, respectively.

Table 7-3: Tier 1 Priority Project List

Category	Location	Start	End	Notes	Length (mi) / Quantity	Cost Estimate
Class I Study	Saw Pit Wash	San Gabriel Mountains	Peck Road Park	Managed by Los Angeles County Flood Control District. The city should partner with the county to conduct a feasibility study for a Class I path.	2.2	TBD
Class II Study	California Ave I	Maple Ave	Central Ave	Existing 4-lane roadway with parking on both sides of the street. Study feasibility of bike lane through either parking removal or travel lane reduction.	0.4	TBD
Class II Study	California Ave II	Pomona Ave	Hurstview Ave	Existing 4-lane roadway with parking on both sides of the street. Study feasibility of bike lane through either parking removal or travel lane reduction.	0.3	TBD
Class II	Central Ave	Myrtle Ave	Mayflower Ave	Existing 3-lane roadway with parking on north side of the street. Existing ROW allows for: One 9-ft parking lane Two 11-ft travel lanes One 6-ft bike lane	0.5	\$25,000
Class II	Chestnut Ave I	5th Ave	Mayflower Ave	Existing 2-lane roadway with parking on south side of the street. Existing ROW allows for: One 8-ft parking lane Two 11-ft travel lanes One 6-ft bike lane	0.6	\$30,000
Class II	Colorado Blvd I	5th Ave	Mayflower Ave	Existing 2-lane roadway with parking on both sides of the street. Existing ROW allows for: Two 10-ft parking lanes Two 11-ft travel lanes Two 6-ft bike lanes	0.6	\$51,000
Class II	Duarte Rd I	California Ave	Mountain Ave	Existing 2-lane roadway with parking on both sides of the street. Existing ROW allows for: One 10-ft parking lane Two 12-ft travel lanes Two 6-ft bike lanes	0.5	\$42,500
Class II Study	Mountain Ave I	Foothill Blvd	Duarte Rd	Existing 4-lane roadway with parking on both sides of the street. Study feasibility of bike lane through either parking removal or travel lane reduction.	1.3	TBD
Class II Buffered Bike Lane	Olive Ave	Magnolia Ave	Mayflower Ave	Existing 2-lane roadway with parking on both sides of the street, and bike lane. Existing ROW allows for: Two 8-ft parking lane Two 11-ft travel lanes Two 7-ft buffered bike lanes	0.3	\$42,000



Category	Location	Start	End	Notes	Length (mi) / Quantity	Cost Estimate
Class II Study	Shamrock Ave I	Huntington Dr	Duarte Rd	Existing 4-lane roadway with parking on both sides of the street. Study feasibility of bike lane through either parking removal or travel lane reduction.	0.5	TBD
Class III	5th Ave	Hillcrest Blvd	Duarte Rd	Pavement markings and signage	1.6	\$40,000
Class III	Alamitas Ave	Diamond St	Monterey Ave	Pavement markings and signage	0.2	\$5,000
Class III	Almond Ave	Canyon Blvd	California Ave	Pavement markings and signage	0.1	\$2,500
Class III	California Ave II	Foothill Blvd	Maple Ave	Pavement markings and signage	0.7	\$17,500
Class III	Canyon Blvd I	Sawpit Wash Path	Scenic Dr	Pavement markings and signage	0.8	\$20,000
Class III	Canyon Blvd II	Scenic Dr	Foothill Blvd	Pavement markings and signage	0.6	\$15,000
Class III	Canyon Blvd III	Visitor Center	Sawpit Wash Path	Pavement markings and signage	0.4	\$10,000
Class III	Canyon Blvd IV	Chestnut Ave	Almond Ave	Pavement markings and signage	0.1	\$2,500
Class III	Central Ave	California Ave	Shamrock Ave	Pavement markings and signage	0.2	\$5,000
Class III	Chestnut Ave II	Mayflower Ave	Canyon Blvd	Pavement markings and signage	0.8	\$20,000
Class III	Cherry Ave	Myrtle Ave	Magnolia Ave	Pavement markings and signage	0.2	\$5,000
Class III	Colorado Blvd II	Shamrock Ave	Mayflower Ave	Pavement markings and signage	1.1	\$27,500
Class III	Diamond St	Magnolia Ave	Alamitas Ave	Pavement markings and signage	0.4	\$10,000
Class III	Duarte Rd II	Walker Ave	California Ave	Pavement markings and signage	0.3	\$7,500
Class III	Evergreen Ave I	California Ave	Shamrock Ave	Pavement markings and signage	0.2	\$5,000
Class III	Evergreen Ave II	Primrose Ave	Myrtle Ave	Pavement markings and signage	0.1	\$2,500
Class III	Grand Ave	Canyon Blvd	Greystone Ave	Pavement markings and signage	0.5	\$12,500
Class III	Greystone Ave	Mountain Ave	Shamrock Ave	Pavement markings and signage	0.1	\$2,500
Class III	Hillcrest Blvd	Canyon Blvd	5th Ave	Pavement markings and signage	1.5	\$37,500
Class III	Los Angeles Ave	Shamrock Ave	Myrtle Ave	Pavement markings and signage	0.6	\$15,000
Class III	Magnolia Ave I	Hillcrest Ave	Greystone Ave	Pavement markings and signage	0.1	\$2,500
Class III	Magnolia Ave II	Olive Ave	Central Ave	Pavement markings and signage	0.6	\$15,000
Class III	Magnolia Ave III	Pomona Ave	Duarte Rd	Pavement markings and signage	0.1	\$2,500
Class III	Mayflower Ave I	Hillcrest Blvd	Huntington Dr	Pavement markings and signage	1.1	\$27,500
Class III	Monterey Ave	Colorado Blvd	Alamitas Ave	Pavement markings and signage	0.6	\$15,000
Class III	Mountain Ave II	Greystone Ave	Foothill Blvd	Pavement markings and signage	0.4	\$10,000
Class III	Myrtle Ave I	Greystone Ave	Walnut Ave	Pavement markings and signage	0.9	\$22,500
Class III	Myrtle Ave II	Central Ave	Pomona Ave	Pavement markings and signage	0.1	\$2,500
Class III	Peck Rd II	Duarte Rd	Live Oak Ave	Pavement markings and signage	1.5	\$37,500
Class III	Pomona Ave	Magnolia Ave	California Ave	Pavement markings and signage	0.6	\$15,000
Class III	Primrose Ave	Evergreen Ave	Metro Gold Line	Pavement markings and signage	0.1	\$2,500

Category	Location	Start	End	Notes	Length (mi) / Quantity	Cost Estimate
Class III	Royal Oaks Dr	California Ave	East City Limit	Pavement markings and signage	0.9	\$22,500
Class III	Shamrock Ave II	Olive Ave	Huntington Dr	Pavement markings and signage	0.3	\$7,500
Class IV Study	Duarte Rd III	Walker Ave	5th Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	1.2	TBD
Class IV Study	Foothill Blvd	Mountain Ave	5th Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	1.9	TBD
Class IV Study	Huntington Dr	Mountain Ave	5th Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	1.9	TBD
Class IV Study	Mayflower Ave II	Huntington Dr	Duarte Rd	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	0.5	TBD
Class IV Study	Myrtle Ave II	Walnut Ave	Central Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	0.5	TBD
Class IV Study	Myrtle Ave IV	Pomona Ave	Altern Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	0.7	TBD
Class IV Study	Peck Rd III	Live Oak Ave	Peck Road Park	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	0.3	TBD
Class IV Study	Primrose Ave I	Foothill Blvd	Central Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	1.1	TBD
Class IV Study	Ivy Ave	Foothill Blvd	Central Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	1.1	TBD
Class IV Study	Central Ave III	Magnolia Ave	California Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	0.6	TBD
Class IV Study	Evergreen Ave II	Magnolia Ave	California Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	0.6	TBD
Class IV Study	Magnolia Ave III	Central Ave	Pomona Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	0.1	TBD
Class IV Study	California Ave III	Central Ave	Pomona Ave	Study feasibility of Class IV Separated Bikeway through either parking removal or travel lane reduction.	0.1	TBD
Bicycle Rack	Evergreen Plaza	-	-	Corner of California Ave & Evergreen Ave	4	\$2,000
Bicycle Rack	Live Oak Memorial Park	-	-	Midblock between Walker Ave & California Ave	4	\$2,000
Bicycle Rack	Lucinda Garcia Park	-	-	Olive Ave	1	\$500
Bicycle Rack	Mary Wilcox Youth Center	-	-	Olive Ave entrance	1	\$500

Category	Location	Start	End	Notes	Length (mi) / Quantity	Cost Estimate
Bicycle Rack	Monrovia Historical Museum	-	-	Midblock between Shamrock Ave & Mountain Ave	2	\$1,000
Bicycle Rack	Monrovia Police Department	-	-	Ivy Ave entrance	2	\$1,000
Bicycle Rack	Monrovia Police Department	-	-	Lime Ave main entrance	2	\$1,000
Bicycle Rack	Recreation Park	-	-	Corner of Lemon Ave & Mountain Ave	4	\$2,000
Bicycle Rack	Bradoaks Elementary School	-	-	Lemon Ave & Park Rose Ave	12	\$6,000
Bicycle Rack	Clifton Middle School	-	-	Main entrance	12	\$6,000
Bicycle Rack	Monrovia High School	-	-	Madison Ave midblock between Foothill Blvd and Colorado Blvd	12	\$6,000
Bicycle Rack	Monrovia High School	-	-	Main entrance	12	\$6,000
Bicycle Rack	Royal Oaks High School	-	-	Main Office	12	\$6,000
Bicycle Rack	24 Hour Fitness	-	-	Main entrance	2	\$1,000
Bicycle Rack	Arcadia Specialty Shopping Center	-	-	In front of stores	4	\$2,000
Bicycle Rack	Foothill Park Plaza Shopping Center	-	-	In front of stores	4	\$2,000
Bicycle Rack	Huntington Oaks Shopping Center	-	-	In front of stores	4	\$2,000
Bicycle Rack	Magnolia Ave & Huntington Dr Shopping Center	-	-	In front of stores	4	\$2,000
Bicycle Rack	Sprouts Farmers Market	-	-	In front of store	6	\$3,000

Table 7-4: Tier 2 Priority Project List

Category	Location	Start	End	Notes	Length (mi)/ Quantity	Total Cost
Class I Path	Peck Rd I	Peck Rd	Myrtle Ave	Off-street connection from Peck Road cul-de-sac to Myrtle Avenue, near Live Oak Avenue.	0.1	\$90,000
Class I Study	Regional Path Connector	Peck Road Park	Peck Road Park	Connection between Santa Anita Wash Path and Sawpit Wash Path. The city should partner with the county to conduct a feasibility study for a Class I path.	0.6	TBD
Class I Study	Santa Anita Wash	San Gabriel Mountains	Peck Road Park	Managed by Los Angeles County Flood Control District. The city should partner with the county to conduct a feasibility study for a Class I path.	0.8	TBD
Class III	California Ave II	Foothill Blvd	Maple Ave	Neighborhood Greenway, enhanced from previous shared-lane marking treatment	0.7	\$42,000
Class III	Chestnut Ave II	Mayflower Ave	Canyon Blvd	Neighborhood Greenway, enhanced from previous shared-lane marking treatment	0.8	\$48,000
Class III	Colorado Blvd II	Mayflower Ave	Shamrock Ave	Neighborhood Greenway, enhanced from previous shared-lane marking treatment	1.1	\$66,000
Class III	Mayflower Ave I	Hillcrest Blvd	Huntington Dr	Neighborhood Greenway, enhanced from previous shared-lane marking treatment	1.1	\$66,000
Class III	Myrtle Ave I	Greystone Ave	Walnut Ave	Neighborhood Greenway, enhanced from previous shared-lane marking treatment	0.9	\$54,000
Class III	Royal Oaks Dr	East City Limit	California Ave	Neighborhood Greenway, enhanced from previous shared-lane marking treatment	0.9	\$54,000
Bicycle Corral	Old Town Monrovia	Myrtle Ave midblock between Lime Ave & Lemon Ave	-		1	\$2,000
Bicycle Locker	Monrovia High School	Main Entrance	-		3	\$8,100
Bicycle Locker	Trader Joe's Headquarters	Main Entrance	-		3	\$8,100



## Bikeway Maintenance Costs

Typical maintenance costs for bikeway facilities and the resulting estimates for the entire recommended bikeway network in this Plan are shown in **Table 7-5**.

**Appendix D** describes several potential funding sources that could aid the city in implementing this Plan.

Table 7-5: Bikeway Maintenance Cost Estimates

Facility Type	Cost per Mile per Year	Proposed Length (miles)	Total Annual Cost	Notes
Class I Shared-Use Path	\$8,500	3.7	\$31,450	Lighting, debris cleanup, and removal of vegetation overgrowth
Class II Bicycle Lanes (two sides)	\$1,500	5.1	\$6,825	Repainting lane stripes and stencils; sign replacement as needed
Class III Bicycle Routes (two sides)	\$1,000	17.9	\$17,900	Sign and shared-lane stencil replacement as needed
Class IV Separated Bikeways (two sides)	\$4,000	7.1	\$28,400	Debris removal; repainting stripes and stencils; sign replacement; replacing damaged barriers
<b>Total</b>		<b>33.8</b>	<b>\$84,575</b>	

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## Appendix A. Existing Plans and Policies Review

This appendix provides a summary of adopted or in-progress planning studies and policies that apply to bicycling in the City of Monrovia, as well as relevant regional and state plans. The 22 plans and policies reviewed for this Plan are listed in **Table A-1**.

The city and other local and regional agencies are aware of the importance of bicycle facilities and programs, as shown in the many goals, policies, implementation programs, and recommendations in the following planning documents. Key recommendations common among the following documents include:

- Provide sustainable, active transportation options for the city and region
- Enhance the regional bikeway network
- Promote quality bicycle facilities for transportation and recreation
- Provide supportive facilities for bicycle riders, such as bicycle parking racks and showers, in development projects

Table A-1: Relevant Planning &amp; Policy Documents Reviewed

Document	Agency	Year Adopted
Monrovia General Plan (Circulation & Housing Elements)	City of Monrovia	2008
The Parks at Station Square Specific Plan	City of Monrovia	2014
5th and Huntington Specific Plan	City of Monrovia	2013
700 South Myrtle Avenue Specific Plan	City of Monrovia	2012
The Rose Gardens at Santa Teresita Specific Plan	City of Monrovia	2011
Monrovia Municipal Code	City of Monrovia	1982, Updated 2018
County of Los Angeles Bicycle Master Plan	County of Los Angeles	2011
San Gabriel Valley Subregional Mobility Matrix	Metro	2015
Metro First Last Mile Strategic Plan& Planning Guidelines	Metro	2014
Metro Complete Streets Policy	Metro	2014
Metro Bicycle Transportation Strategic Plan	Metro	2006
Metro Active Transportation Strategic Plan	Metro	In Progress
Metro Safe Routes to School Initiative	Metro	In Progress
Regional Transportation Plan / Sustainable Communities Strategy	Southern California Association of Governments (SCAG)	2015
AB 32 – Global Warming Solutions Act & SB 375 – Sustainable Communities and Climate Protection Act	State of California	2006, 2009
AB 1358 – California Complete Streets Act	State of California	2008
SB 99 – Active Transportation Program Act	State of California	2013
Caltrans Complete Streets Policy & Deputy Directive 64	State of California	2001, 2008
California Transportation Plan 2025	State of California	2006
California Green Building Code	State of California	2012
US DOT Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations	United States Department of Transportation	2010



## Local Plans and Policies

### Monrovia General Plan (2008)

A comprehensive update of the Monrovia General Plan was adopted in 2008 and serves as the city's main policy document to guide future development of the community. Within the General Plan, there are seven required chapters or "elements": Land Use, Circulation, Housing, Noise, Safety, Open Space and Conservation. There are two Elements in the General Plan that provide guidance on bicycle planning in the city, which are the Circulation and Housing Elements.

#### Circulation Element

The Circulation Element is intended to guide the development of the city's circulation system in a manner compatible with the General Plan's Land Use Element. It also aims to provide the city a circulation system that is safe, sensible, and provides efficient movement of people and goods throughout the city. The Circulation Element makes reference to bicycle riders and bicycle infrastructure in two out of the six Goals and Policies included: Accident and Traffic Safety and Pedestrian and Bicycle Facilities.

One of the Goals of the Circulation Element is to reduce the number of roadway collisions and maintain adequate traffic safety in the entire circulation system. Accident and Traffic Safety Policies from the adopted General Plan developed to reach this goal include:

- Policy 3.2: Provide for safe operations of rail service, motorized traffic, pedestrians, bicycles, and other modes by adhering to state and national standards and uniform practices.
- Policy 3.4: Continue the traffic accident monitoring program. Develop an annual traffic safety review of traffic collision data to identify any particular "hot spots" for automobiles, bicycles, and pedestrians and develop appropriate countermeasures as appropriate.

- Policy 3.7: Expand bicycle routes where opportunities arise and demand warrants to minimize conflicts between cyclists and motorists.

Another goal included in the Circulation Element is to protect and encourage non-motorized transportation such as bicycle and pedestrian travel. Pedestrian and Bicycle Facilities Policies from the adopted General Plan developed to reach this goal include:

- Policy 6.1: Provide for the safety of pedestrians and bicycles by adhering to state and national standards and uniform practices.
- Policy 6.2: Develop a Citywide Pedestrian Master Plan and a Bicycle Master Plan. These may include preparing Geographic Information System-based inventories of existing pedestrian and bicycle facilities within the city and at its perimeter (including all handicapped-accessible ramps, marked crosswalks, paved sidewalks, and bicycle facilities) and key activity generators and locations (such as schools, retail districts, parks, public buildings, downtown, higher density areas, and transit corridors), identifying existing gaps or other deficiencies, developing and prioritizing necessary improvements, and identifying funding sources to implement those improvements.
- Policy 6.5: Encourage the provision of an accessible and secure area for bicycle storage at all new and existing developments.
- Policy 6.6: Encourage provision of bicycle racks or storage facilities at public gathering places.
- Policy 6.7: Maintain established bicycle facilities within the city according to established design standards. Review the signage

on the existing bikeways and install additional signage as appropriate. Respond in a timely manner to citizen requests regarding maintenance concerns on all bicycle facilities.

- Policy 6.10: Periodically review the established Safe Routes to School programs in cooperation with the Monrovia Unified School District. These programs educate students, parents, and other residents on the benefits of walking and bicycling for school travel. Consider partnering with school officials to seek available State funding to develop and implement programs to promote bicycle safety education and the benefits of bicycle transportation.

The Element also includes a Bicycle Facilities Plan, which includes a combination of the following three types of facilities:

**Class I bicycle trail:** a facility that is physically separated from a roadway and designated primarily for the use of bicycles.

**Class II bicycle lane facility:** a facility that features a striped lane on the paved area of a road for preferential use by bicycles.

**Class III bicycle route:** a facility typically identified by green and white “Bike Route” guide signage only.

The Circulation Element notes that the current bicycle infrastructure in the city, only Class II and III bikeway segments, were implemented in consistency with a sub-regional bikeway master plan for the area led by Los Angeles County Metropolitan Transportation Authority (Metro) and developed more than two decades ago. The Bicycle Facilities Plan identifies several future expansions of the bikeway network on Magnolia Avenue and Shamrock Avenue south of Lemon Avenue and on Duarte Road.

## Housing Element

The Housing Element addresses goals and policies that are intended to guide the city in making decisions related to housing-related issues and to educate the public in understanding the general direction of Monrovia’s housing policies. Removing Governmental Constraints is one of the goals of this Element, and to accomplish this goal, the city will undertake a review and update of its minimum unit sizes and parking standards. As stated in the General Plan, this review requires the evaluation of the following to enhance parking efficiencies and sustainability:

- Reduced parking requirements for studio and one bedroom units;
- Reduced parking requirements in proximity to transit;
- Inclusion of bicycle parking requirements in parking standards; and
- Establishment of shared parking guidelines for mixed-use projects.

## Area Specific Plans

The City of Monrovia has eight Specific Plans that intend to constitute the primary zoning provisions for defined areas of the city. Each guides development with the overall goal of ensuring that development projects meet the goals and objectives of the entire district. The following outlines content of the City of Monrovia's Specific Plans that pertain to bicycle and pedestrian planning.

### **The Parks at Station Square Specific Plan (2014)**

The Parks at Station Square Specific Plan includes the provision of bicycle parking for approximately 80 bicycles in the parking structure. In the Circulation Plan there is a section dedicated to bicycle circulation. This will be on the surrounding public streets and connected to the existing regional bicycle network. The overall framework will connect to Metro's Bicycle Plan and Los Angeles County's Trail Master Plan.

### **5th and Huntington Specific Plan (2013)**

There are three chapters of this plan that directly makes reference to bicycles: Land Use and Architectural Style, Circulation Plan and Development Standards and Landscape Guidelines. The Land Use and Architectural Style Chapter allows for the development of residential ancillary uses, such as bicycle storage. The Circulation Plan and Development Standards enhance connectivity for the movement of bicyclists through the implementation of bicycle facilities. Finally, the Development Standards and Landscape Guidelines Chapter contains the bicycle parking standards, which mandate that designated bicycle parking/storage spaces shall be located on the site at a location that is convenient and safe for building residents and bicycle racks or other secure bicycle parking shall be provided to accommodate a minimum of 35 bicycles.

### **700 South Myrtle Avenue Specific Plan (2012)**

The 700 South Myrtle Avenue Specific Plan directly references to bicycles in the Mobility Chapter, which states that improvements for the transit center will include bicycle lockers. It also references to bicycles in the Community Design Guidelines Chapter. This chapter outlines that bicycle storage areas within the garage should be provided.

### **The Rose Gardens at Santa Teresita Specific Plan (2011)**

One of the objectives of this specific plan is to provide safe and efficient vehicular, pedestrian, and bicycle movement within and around the Specific Plan area. Under the Uses and Development Standards Chapter there is a bicycle parking section, which states that designated bicycle parking/storage shall be considered at the time a conditional use permit is secured for construction of a building within the Specific Plan area.

## Monrovia Municipal Code (1982, Updated 2018)

Table A-2 lists ordinances in the Monrovia Municipal Code that are relevant to bicycling and bikeshare in the city.

Table A-2: Bicycle-Related Municipal Code Ordinances

Section	Regulation
Chapter 10.32	Bicycles
Section 10.32.010 Title-Authority <sup>1</sup>	<p>(A) This chapter shall be known as the "Bicycle Registration and Licensing Ordinance of the City of Monrovia," as required pursuant to the Cal. Vehicle Code, for the purpose of regulating the registration and licensing of bicycles within the city. All matters pertaining to the definition of a bicycle, license and registration forms, requirement to be licensed, fees, records, sale, transfer, and such other matters as may now or in the future be contained in the California Vehicle Code relating to bicycles, are hereby adopted as if fully set forth in this chapter.</p> <p>(B) For the purpose of this chapter, a BICYCLE shall be defined as every device propelled by human power upon which any person may ride, having two tandem wheels, either of which is 20 inches or more in diameter.</p> <p>(C) It shall be unlawful for the parent of any child or the guardian of any ward to authorize or knowingly permit any such child or ward to violate any of the provisions of this chapter.</p>
Section 10.32.020 Applicability-Responsibility	The provisions of this chapter shall apply to all bicycles which are owned and operated by residents of the city. The Chief of Police shall be responsible for the enforcement of the provisions of this chapter and shall establish procedures, collect fees, issue registration forms and license indicia, and maintain records as authorized and required by this chapter.
Section 10.32.030 Fees	<p>The fees to be paid pursuant to provisions of this chapter are:</p> <p>(A) For each new bicycle license and registration certificate, the sum shall be \$2 per year or any portion thereof.</p> <p>(B) For each transfer of registration certificate, the sum shall be \$1.</p> <p>(C) For each replacement of a bicycle license or registration certificate, the sum shall be \$1.</p> <p>(D) For each bicycle license renewal, the sum shall be \$1 per year.</p>
Section 10.36.010 Definitions	<p>For purposes of this chapter, certain words and terms are defined as follows:</p> <p>Bicycle. As defined in the California Vehicle Code.</p>
Section 10.36.020 Prohibition-Parking Restrictions	<p>(B) No person shall use or operate any bicycle upon any sidewalk in the zone designated SP-1, Specific Plan District, Area A in Ordinance No. 75-23;</p> <p>(C) No person shall park or leave standing any wheeled toy or bicycle upon any street or alley or upon any sidewalk in the area designated SP-1, Specific Plan District, Area A in Ordinance No. 75-23, in such a manner as to obstruct or hinder the free passage of pedestrians or other vehicles or devices permitted to use the same;</p> <p>(D) No person shall use or operate a bicycle, skateboard, roller skates or in-line skates on the grounds of any public school when the Board of Education has adopted a rule or regulation prohibiting such use or operation pursuant to Cal. Vehicle Code § 21113 (or any successor statute) and appropriate signs giving notice of such prohibition are posted on the premises;</p> <p>(G) No person shall use or operate any bicycle or wheeled toy upon the specified streets, during the days and times described in division (G)(2) unless authorized by or pursuant to a permit, license or agreement approved by the City Council.</p> <p>(H) This section shall not apply to bicycles or wheeled toys when operated by members of the Monrovia Police Department or Monrovia Fire Department, or their duly authorized representatives, while in the performance and execution of their duties in their official capacities.</p>

<sup>1</sup> The registration program has not been conducted in practice for several years due to cost considerations and the availability of a national online registry.

Section	Regulation
Chapter 12.42	Bikeshare Services (updated 2018)
Section 12.42.010 Bikeshare services permitted.	The renting, lending, or sharing of bicycles by and to members of the public from an unattended rack or other location ( "Bikeshare"), placed upon or near a public sidewalk or right-of-way, or in another publicly accessible location, shall be permitted only in accordance with the regulations of this chapter.
Section 12.42.020 License and Permit Required	<p>(A) No person shall operate a Bikeshare service or install or maintain a rack therefor without first obtaining a business license and permit from the business license officer and an approved agreement with the City authorizing the use of City property. The City may charge a fee to the Bikeshare service for the use of City property, established by resolution of the City Council.</p> <p>(B) An application for a permit shall be filed with the business license officer on an application form</p> <p>(C) A permit application shall be accompanied by an inspection fee of \$5 for each bike rack installed by the permittee.</p> <p>(D) Issuance of a permit shall be contingent upon payment of the applicable business license tax set forth in Title 5 of this code. Failure to pay such tax will result in the revocation of existing permits.</p> <p>(F) The permittee shall maintain general commercial liability insurance covering personal injury and property damage arising out of the use, operation, ownership and maintenance of the Bikeshare service with limits of at least \$1 million per occurrence and \$2 million in the aggregate, with the city named as an additional insured. Evidence of such insurance shall be filed with the Business License Officer before issuance of a permit. The insurance shall provide that cancellation shall be effective only after 30 days written notice thereof delivered to the Business License Officer.</p>
Section 12.42.030 Placement, Design, and Maintenance	<p>(A) Bikeshare racks, bikes and facilities shall be placed and maintained so they do not:</p> <ol style="list-style-type: none"> <li>(1) Endanger the safety of persons or property;</li> <li>(2) Interfere with any governmental or other permitted use of the sidewalk;</li> <li>(3) Unreasonably interfere with pedestrians, including persons entering or leaving motor vehicles or businesses;</li> <li>(4) Interfere with ingress or egress to private property;</li> <li>(5) Interfere with the use of mail boxes or traffic signals;</li> <li>(6) Inhibit any designated path of travel for persons with disabilities.</li> </ol> <p>(B) Bikes shall not be parked and bike racks shall not be placed:</p> <ol style="list-style-type: none"> <li>(1) Within three feet of any marked crosswalk;</li> <li>(2) Within 15 feet of the curb return of any unmarked crosswalk;</li> <li>(3) Within five feet of any fire hydrant, fire call box, police call box or other emergency facility;</li> <li>(4) Within five feet of any driveway;</li> <li>(5) Within five feet ahead of, or 25 feet to the rear of any sign marking a designated bus stop;</li> <li>(6) Within six feet of any bus bench or bus shelter;</li> <li>(7) At any location where the clear space for the passageway of pedestrians is reduced to less than six feet;</li> <li>(8) So as to project onto or over any part of the roadway of any public street or alley open to vehicular traffic, or rest wholly or in part upon, along or over any portion of the roadway of any public street or alley open to vehicular traffic;</li> <li>(9) Within three feet of any display window of any building abutting a sidewalk or parkway, or in such manner as to impede or interfere with the reasonable use of such window for display purposes.</li> </ol>



Section	Regulation
	<p>(C) Any bike racks installed, used or maintained shall not exceed five feet in height, 30 inches in width or two feet in thickness. Mounting for bike racks shall be of a design and aesthetic approved by the City and bolted in place to the sidewalk. Equivalent designs shall be subject to the approval of the Development Review Committee.</p> <p>(E) Each bike rack installed, used or maintained pursuant to this chapter shall be identified with the name, address, telephone number and permit of the owner in a manner so as to be clearly visible. No bike rack shall carry any advertising except the name of the Bikeshare service or a public service message from the City of Monrovia.</p> <p>(F) Bike racks shall be maintained in good working order at all times, and in a clean and neat condition. No bike rack shall be placed or maintained on a sidewalk opposite another bike rack or news rack.</p>
Section 12.42.040 Removal of Bike Racks	<p>(A) Any bike rack or other Bikeshare facility installed, used or maintained in violation of the provisions of this chapter may be removed or stored in any convenient place by any officer of the city. Ten (10) calendar days prior to removal, written notice of the violation shall be given by attaching a notice of violation to the bike rack or facility and mailing such notice to the permittee. At any time within said 10-day period, an informal administrative hearing to challenge the existence of the alleged violation may be requested by the permittee or a representative of the permittee. The hearing shall be held before the Development Review Committee, whose decision in the matter shall be final and not subject to the appeal provisions set forth in Title 2 of this code. If the permittee fails to correct the violation during the 10-day period, or within five days following an adverse decision by the Development Review Committee, whichever is later, the bike rack or other structure shall be removed, held as evidence or disposed of as unclaimed property by the Police Department.</p> <p>(B) The cost of removal and/or storage by the city of any bike rack or other facility subject to this chapter shall be chargeable as a civil debt to the owner thereof and may be collected by the city in the same manner as it collects any other civil debt or obligation</p>
Section 17.24.170 Transportation Demand Management	The purpose of this section is to provide trip reduction and travel demand management standards in conformance with the adopted congestion management program for Los Angeles County as required by the State of California.

## Regional Plans and Policies

### County of Los Angeles Bicycle Master Plan (2012)

The County of Los Angeles Bicycle Master Plan (BMP) proposes to build on the existing 144 miles of bikeways throughout the unincorporated portions of the County, and install approximately 831 miles of new bikeways in the next 20 years. Proposed bikeways in the West San Gabriel Valley Planning Area that includes Monrovia are shown in **Figure A-1**, though the Plan mistakenly labels several bikeways as “existing” when they are in fact merely “proposed” as of March 2016. The following relevant goals and policies are included in the County BMP:

- Goal 1: Expanded, improved, and interconnected system of county bikeways and bikeway support facilities to provide a viable transportation alternative for all levels of bicycling abilities, particularly for trips of less than five miles.
  - IA. 1.6.1: Identify where bicycle parking facilities are needed, and identify the appropriate type.
- Goal 2: Increased safety of roadways for all users.
  - IA.2.2.1: Identify opportunities to remove travel lanes from roads where there is excess capacity in order to provide bicycle facilities.
  - Policy 2.3: Support traffic enforcement activities that increase the safety of people bicycling.
  - IA 2.5.1: Implement improvements that encourage safe bicycle travel to and from school.
- Goal 3: Develop education programs that promote safe bicycling.
  - Policy 3.1: Provide bicycle education for all road users, children and adults.
  - Policy 3.1.1: Offer bicycle skills trainings, bicycle safety classes, and bicycle repair workshops.

- Goal 4: Encouragement Programs.
  - Policy 4.1: Support organized rides or cycling events, including those that may include periodic street closures in the unincorporated areas.
  - Policy 4.2: Encourage non-automobile commuting.
- Goal 5: Community supported bicycle network.
- Goal 6: Funded bikeway plan.
  - Policy 6.1: Identify and secure funding to implement this Bicycle Master Plan.

More information on the County’s Bicycle Master Plan can be found at:

<http://dpw.lacounty.gov/pdd/bike/masterplan.cfm>

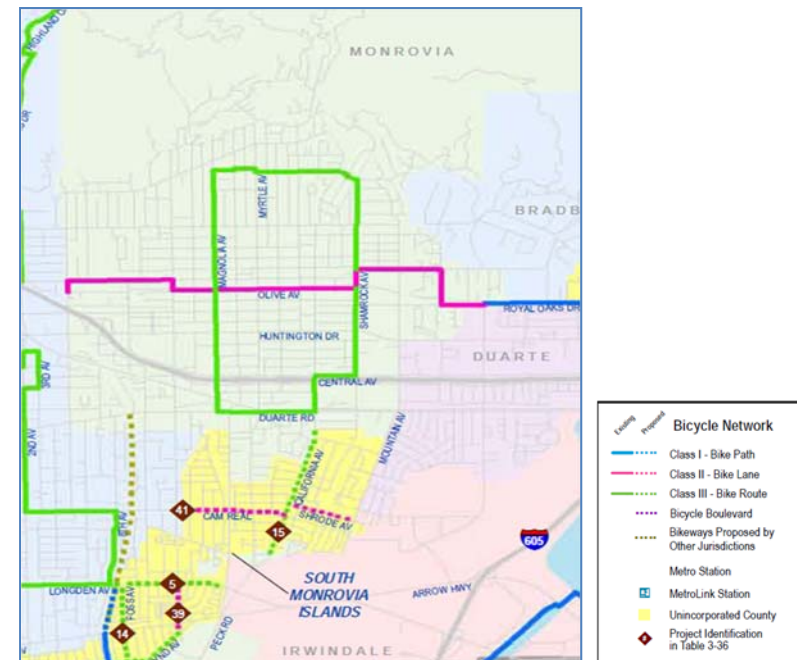


Figure A-1: Proposed Bicycle Facilities near Monrovia in the County of Los Angeles Bicycle Master Plan

## San Gabriel Valley Subregional Mobility Matrix (2015)

Metro and the San Gabriel Valley Council of Governments coordinated to develop a Mobility Matrix for the San Gabriel Valley Sub region that will evaluate the long-term needs of pedestrians, bicycle riders, transit users, and motorists and will serve as a starting point for the update of the Metro Long Range Transportation Plan. The Mobility Matrix includes a preliminary assessment of anticipated investment needs, along with project and program implementation measures categorized by short-term, mid-term and long-term timeframes.

Existing bicycle infrastructure in the San Gabriel Valley Mobility Matrix Subregion includes a range of facilities from shared roads to shared-use paths (**Figure A-2**). It should be noted that the map mistakenly labels several bikeways as “existing” when they are in fact merely “proposed” as of March 2016.

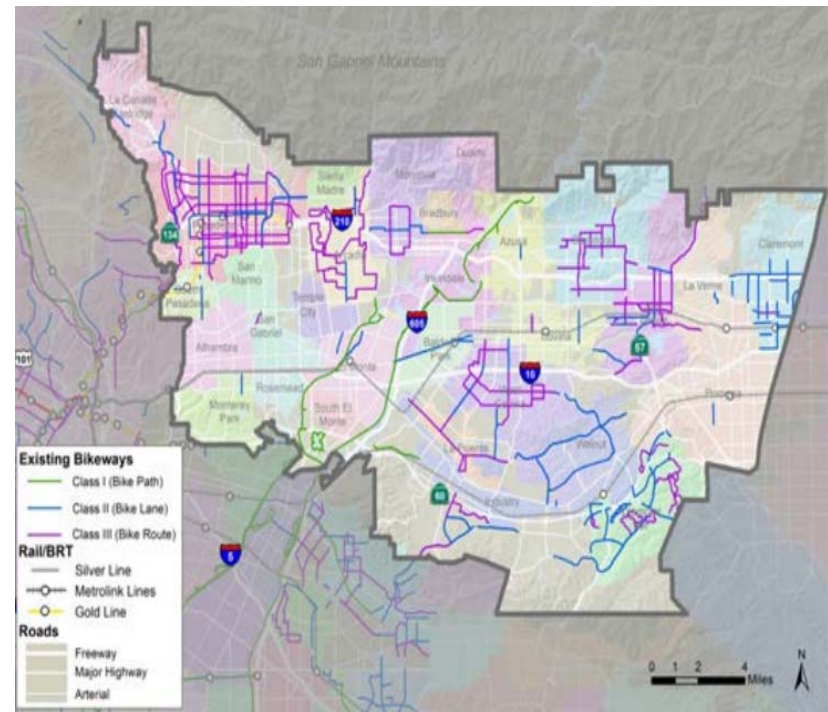


Figure A-2: Existing Bikeway Network in the San Gabriel Valley Mobility Matrix Subregion

## Metro First Last Mile Strategic Plan & Planning Guidelines (2014)

Metro's First Last Mile Strategic Plan, adopted by the Metro Board in April 2014, seeks to better coordinate infrastructure investments in rail station and bus stop areas to extend the reach of transit services, with the ultimate goal of increasing ridership. The Plan utilizes the concept of "the Pathway" to improve station access and extend access coverage to Metro Rail and BRT stations. The Pathway will be located along key access routes selected to shorten trip length and seamlessly connect transit riders with intermodal facilities, such as bus stops, bike hubs, parking lots, or regional bikeways.

Metro is currently supporting Pilot station areas in nearby locations to Monrovia, such as Arcadia and Duarte. Relevant stations in this bicycle master plan area that will be subject to the planning guidelines include the El Monte Bus Station, existing Metro Gold and Silver Transit Line stations, and future Metro Gold Line stations that will be included in the planned Eastside Transit Corridor Phase 2.

The First Last Mile Strategic Plan is available for download at:

[http://media.metro.net/board/Items/2014/04\\_april/20140424rbmitem7.pdf](http://media.metro.net/board/Items/2014/04_april/20140424rbmitem7.pdf).

## Metro Complete Streets Policy (2014)

In October 2014, the Metro Board of Directors adopted the agency's Complete Streets Policy that will require all future transportation improvements that Metro undertakes or funds to include the provision/consideration of active transportation elements. The Complete Streets guidelines establish active transportation improvements as integral elements of the countywide transportation system. The Policy will serve as a tool to help guide Metro to better coordinate within the various functions and departments of the agency and between partner organizations that have influence or jurisdiction over the public realm. It also identifies opportunities and actions where Metro can support local Complete Streets implementation. As part of the Policy's Implementation Strategy, Metro will:

- Design and evaluate projects using the latest design standards and innovative design options, and they will encourage partner agencies and fund recipients to also follow the latest design guidelines;
- Work with partner agencies and local jurisdictions to incorporate Complete Streets infrastructure into all transportation projects in a manner that expands the active transportation network and closes gaps/removes barriers;
- Plan, design, and maintain transportation facilities to be consistent with local bicycle, pedestrian, transit, multimodal, goods movement, and other relevant plans; and
- Develop additional performance metrics and track progress toward achieving sustainability policies and priorities, while also requiring Call for Projects grant recipients to collect and analyze active transportation performance measures before and after project implementation.

More information on Metro's Complete Streets Policy can be found at: <http://www.metro.net/projects/countywide-planning/complete-streets/>.

## Metro Bicycle Transportation Strategic Plan (2006)

The goal of Metro's Bicycle Transportation Strategic Plan (BTSP) is to integrate bicycle use in transportation projects. The document intends to improve mobility in the region through the use of bicycles. By promoting the bicycle as a viable transportation mode, the BTSP offers a vision of a Los Angeles region with improved overall mobility, air quality, and access to opportunities and resources.

A total of 167 Bike-Transit Hubs were identified in Los Angeles County. These Bike-Transit hubs are locations where different components—access to transit, activity, and surrounding demographics—make them prime candidates to improve bicycle access. The Arcadia Bike Transit Hub was selected as a location that is in proximity to the City of Monrovia.

The BTSP recommends that Class II bike lanes be added to Brockway Street between Meeker Road and Santa Anita Avenue. Additional suggestions include providing more access to the Rio Hondo River Path and providing bicycle-sensitive loop detectors and bicycle detection markings on roadway pavement can improve the overall connectivity and quality of bicycle use.

For more information on Metro's bicycle-related policies, visit:

<http://www.metro.net/bikes/>.

## Metro Active Transportation Strategic Plan (In Progress)

Metro is developing an Active Transportation Strategic Plan that will identify strategies to improve and expand the active transportation network; provide guidance to Metro and partner organizations in setting regional active transportation policies and guidelines to meet transportation goals and targets in support of the Regional Transportation Plan/Sustainable Community Strategy and future planning efforts; and to engage local government and other stakeholders to identify key regionally significant active transportation projects and programs within Los Angeles County and each subregion.

## Metro Safe Routes to School Initiative (In Progress)

Metro is leading an effort to develop a Countywide Safe Routes to School Initiative to help communities start Safe Routes to School programs or sustain, enhance and improve existing efforts. This effort involves assessing needs and identifying opportunities, collecting data, and convening an advisory committee to guide Metro's initiative. Currently, the Safe Routes to School Pilot Program includes ten pilot schools located within the county.



## SCAG Regional Transportation Plan/ Sustainable Communities Strategy (2012)

The Regional Transportation Plan (RTP) has the primary goal of increasing mobility for the region's residents and visitors. The Sustainable Communities Strategy (SCS), part of the RTP, demonstrates the region's ability to attain and exceed the GHG emission-reduction targets set forth by the Air Resources Board. The 2012-2035 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, the Sustainable Communities and Climate Protection Act of 2008, improve public health, and meet the National Ambient Air Quality Standards as set forth by the federal Clean Air Act. Its emphasis on transit and active transportation will allow residents to lead a healthier and more active lifestyle.

The RTP/SCS contains a host of improvements to the region's multimodal transportation system, including increasing bikeways from 4,315 miles to 10,122 miles. The RTP/SCS commits \$6.7 billion to active transportation, which will expand bikeways, improve local streets, and address ADA requirements. Additional strategies include traffic calming and Complete Streets strategies, particularly near transit stations and schools, to further reduce vehicle trips by improving safety and desirability of active transportation.

The following policies and goals included in the plan relate to preparation of the Monrovia Bicycle Master Plan:

- Policy 1: Transportation investments shall be based on SCAG's adopted regional Performance Indicators
- Policy 4: Transportation demand management (TDM) and non-motorized transportation will be focus areas, subject to Policy 1
- Goal: Encourage land use and growth patterns that facilitate transit and non-motorized transportation

The entire RTP/SCS can be found at:

<http://rtpscs.scag.ca.gov/Pages/default.aspx>.

## Statewide Plans and Policies

### AB 32 – Global Warming Solutions Act (2006) & SB 375 – Sustainable Communities and Climate Protection Act (2009)

The past five years have seen an expansion of legislative and planning efforts in California to reduce emissions of greenhouse gases (GHGs) in order to mitigate climate change. Assembly Bill 32, the California Global Warming Solutions Act of 2006, aims to reduce the state's GHG emissions to 1990 levels by 2020 and to 80 percent below 1990 levels by 2050. Meanwhile, Senate Bill 375, passed into law in 2008, is the first in the nation that will attempt to control GHG emissions by directly linking land use to transportation. The law required the state's Air Resources Board to develop regional targets for reductions in GHG emissions from passenger vehicles for 2020 and 2035 as a way of supporting the targets set forth in AB 32.

### AB 1358 – California Complete Streets Act of 2008

The 2008 California Complete Streets Act requires that municipalities, “upon any substantive revision of the circulation element of the general plan, modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, people bicycling, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan.”

For more information:

[https://www.opr.ca.gov/docs/Update\\_GP\\_Guidelines\\_CompleteStreets.pdf](https://www.opr.ca.gov/docs/Update_GP_Guidelines_CompleteStreets.pdf)

### SB 99 – Active Transportation Program Act (2013)

The Active Transportation Program was established by this legislation in 2013, and serves as the mechanism for distributing federal funds for local and regional efforts to promote walking and bicycling. It specifies goals that the funding will be disbursed to help meet, including increasing the mode shares of biking and walking trips, increasing safety for non-motorized users, and providing support to disadvantaged communities to promote transportation equity.

### Caltrans Complete Streets Policy (2001) and Deputy Directive 64 (2008)

In 2001, the California Department of Transportation (Caltrans) adopted Deputy Directive 64, “Accommodating Non-Motorized Travel,” which contained a routine accommodation policy. The directive was updated in 2008 as “Complete Streets – Integrating the Transportation System.” The new policy includes the following language:

The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system.

The Department develops integrated multimodal projects in balance with community goals, plans, and values. Addressing the safety and mobility needs of bicyclists, pedestrians, and transit users in all projects, regardless of funding, is implicit in these objectives. Bicycle, pedestrian and transit travel is facilitated by creating “complete streets” beginning early in system planning and continuing through project delivery and maintenance operations.

The directive establishes Caltrans' own responsibilities under this policy. The responsibilities Caltrans assigns to various staff positions under the policy include the following:

- Ensure bicycle, pedestrian, and transit interests are appropriately represented on interdisciplinary planning and project delivery development teams.
- Ensure bicycle, pedestrian, and transit user needs are addressed and deficiencies identified during system and corridor planning, project initiation, scoping, and programming.
- Ensure incorporation of bicycle, pedestrian, and transit travel elements in all Department transportation plans and studies.
- Promote land uses that encourage bicycle, pedestrian, and transit travel.
- Research, develop, and implement multimodal performance measures.

In part to address these issues, Caltrans adopted the Complete Streets Implementation Action Plan in 2010. The plan sets forth actions under seven categories to be completed by various Caltrans districts and divisions within certain timelines to institutionalize complete streets concepts and considerations within the department. The action categories include updating departmental plans, policies, and manuals; raising awareness; increasing opportunities for training; conducting research projects; and implementing actions related to funding and project selection. As one of its implementation activities, Caltrans updated the Highway Design Manual in large part to incorporate multimodal design standards.

## California Transportation Plan 2025 (2006)

The California Transportation Plan 2025 seeks to provide for mobility and accessibility of people, goods, services, and information throughout California. It encourages consideration of bicycle and pedestrian facilities in capacity improvement projects, and promotes integration of active transportation into modeling and projection efforts.

The Plan also speaks to the public health benefits of active transportation, urging better education of youth on personal health benefits and air quality impacts of making trips by bicycle or on foot.

## California Green Building Code (2011)

The California Green Building Code includes standards for bicycle parking requirements for new development. The California Green Building Code requirements are presented in **Table A-3**.

Table A-3: California Green Building Code Bicycle Parking Requirements

Category	Description
Bicycle Parking and Changing Rooms	Comply with sections 5.106.4.1 and 5.106.4.2; or meet local ordinance or the University of California Policy on Sustainable Practices, whichever is stricter.
Short-Term Bicycle Parking	If the project is expected to generate visitor traffic, provide permanently anchored bicycle racks within 100 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.
Long-Term Bicycle Parking	For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of motorized vehicle parking capacity, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and may include: Covered, lockable enclosures with permanently anchored racks for bicycles Lockable bicycle rooms with permanently anchored racks Lockable, permanently anchored bicycle lockers

## Federal Plans and Policies

### US DOT Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations (2010)

The United States Department of Transportation (US DOT) issued this Policy Statement to support and encourage transportation agencies at all levels to establish well-connected walking and bicycling networks. The following Policy Statement and recommended actions are relevant to the Monrovia Bicycle Master Plan.

#### Policy Statement

The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide – including health, safety, environmental, transportation, and quality of life – transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes.

#### Recommended Actions

The DOT encourages States, local governments, professional associations, community organizations, public transportation agencies, and other government agencies, to adopt similar policy statements on bicycle and pedestrian accommodation as an indication of their commitment to accommodating bicyclists and pedestrians as an integral element of the transportation system. In support of this commitment, transportation agencies and local communities should go beyond minimum design standards and requirements to create safe, attractive,

sustainable, accessible, and convenient bicycling and walking networks.

Such actions should include:

- Considering walking and bicycling as equals with other transportation modes: The primary goal of a transportation system is to safely and efficiently move people and goods. Walking and bicycling are efficient transportation modes for most short trips and, where convenient intermodal systems exist, these non motorized trips can easily be linked with transit to significantly increase trip distance. Because of the benefits they provide, transportation agencies should give the same priority to walking and bicycling as is given to other transportation modes. Walking and bicycling should not be an afterthought in roadway design.
- Ensuring that there are transportation choices for people of all ages and abilities, especially children: Pedestrian and bicycle facilities should meet accessibility requirements and provide safe, convenient, and interconnected transportation networks. For example, children should have safe and convenient options for walking or bicycling to school and parks. People who cannot or prefer not to drive should have safe and efficient transportation choices.
- Going beyond minimum design standards: Transportation agencies are encouraged, when possible, to avoid designing walking and bicycling facilities to the minimum standards. For example, shared-use paths that have been designed to minimum width requirements will need retrofits as more people use them. It is more effective to plan for increased usage than to retrofit an older facility. Long-term planning projects should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.

- Integrating bicycle and pedestrian accommodation on new, rehabilitated, and limited-access bridges: DOT encourages bicycle and pedestrian accommodations on bridge projects including facilities on limited-access bridges with connections to streets or paths.
- Collecting data on walking and biking trips: The best way to improve transportation networks for any mode is to collect and analyze trip data to optimize investments. Walking and bicycling trip data for many communities are lacking. This data gap can be overcome by establishing routine collection of nonmotorized trip information. Communities that routinely collect walking and bicycling data are able to track trends and prioritize investments to ensure the success of new facilities. These data are also valuable in linking walking and bicycling with transit.
- Setting mode share targets for walking and bicycling and tracking them over time: A by-product of improved data collection is that communities can establish targets for increasing the percentage of trips made by walking and bicycling.
- Improving nonmotorized facilities during maintenance projects: Many transportation agencies spend most of their transportation funding on maintenance rather than on constructing new facilities. Transportation agencies should find ways to make facility improvements for pedestrians and bicyclists during resurfacing and other maintenance projects.



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## Appendix B. Additional Existing Conditions Data

### Demographics

#### Population

Monrovia has a population of 37,035. Monrovia has not experienced significant population growth since the 1980s, a decade during which the city grew by 14.3 percent and added nearly 4,500 new residents.

In terms of future growth trends, the Southern California Association of Governments (SCAG) forecasts that Monrovia's population growth will continue to be well below the County as a whole. By the year 2035, Monrovia's population is projected to grow to 39,400, a modest increase in approximately 3,000 residents above 2008 levels.

Table B-1: Population

	2008	2020	2035
Monrovia	36,300	37,700	39,400
% Change		3.9%	4.5%
LA County	9,778,000	10,404,000	11,353,000
% Change		6.4%	9.1%

Source: SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy

#### Age

The age distribution of Monrovia is fairly consistent with that of Los Angeles County as a whole, shown in **Figure B-1**. Monrovia has slightly larger proportions of individuals between 25 and 34 and between 45 and 64.

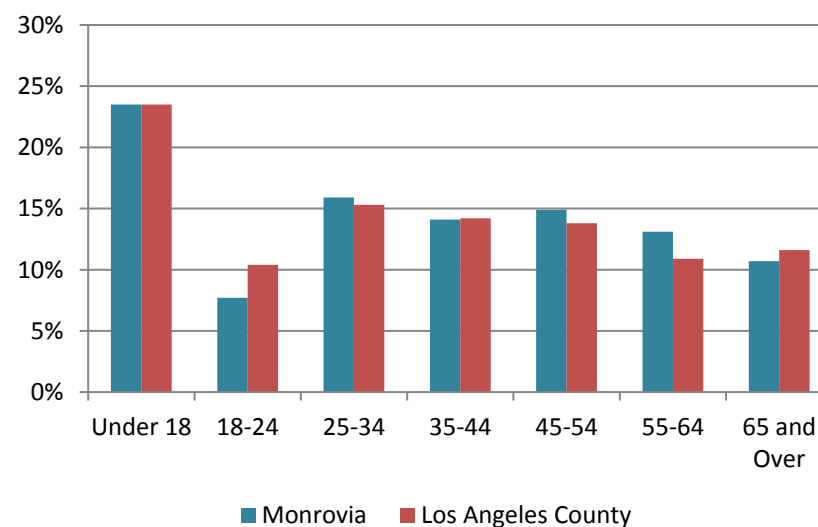


Figure B-1: Age Distribution

## Access to Automobiles

Households without a private automobile likely rely on other modes of transportation for their daily travel needs. As shown in **Figure B-2**, 1.2 percent of Monrovia households do not have access to a private automobile (223 households). Based on the Monrovia average household size of 2.65 people, this means as many as 591 residents may walk, bicycle, or take transit for their daily transportation.

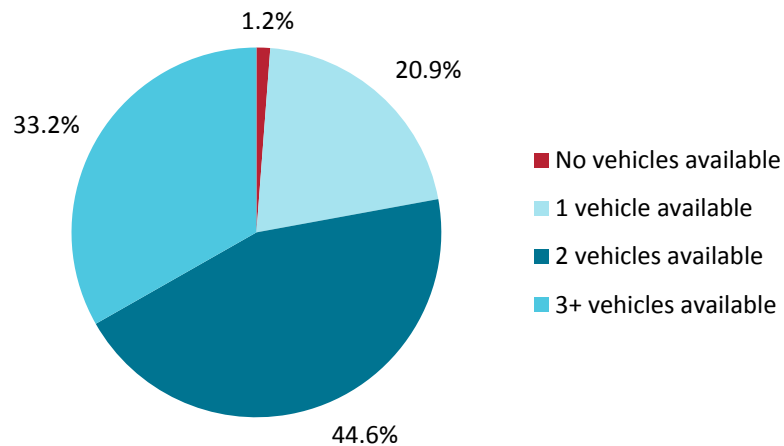


Figure B-2: Automobiles Available by Household

## Commuter Travel

This Plan presents commute data from the American Community Survey (ACS) 5-year estimates from 2010 through 2014. While this provides important data about commute trips that is collected reliably on an annual basis, these data only tell us about employed residents over 16 years of age and their typical primary mode of travel to work.

Nearly 80 percent of Monrovia residents currently drive alone to work. Less than one percent of residents bicycled to work and 2.5 percent walked, as shown in **Table B-2**.

Table B-2: 2014 Mode of Transportation to Work

Mode	Percent of Employed Residents
Drove Alone	79.0%
Carpool	8.1%
Transit	2.2%
Bicycle	0.6%
Walk	2.5%
Other	7.61%

Over the study period, walking commutes have increased slightly, from 2.4 percent in 2010 to 2.5 percent in 2014. Bicycling commutes decreased slightly over the same period, from 0.7 percent to 0.6 percent, as shown in **Figure B-3**.

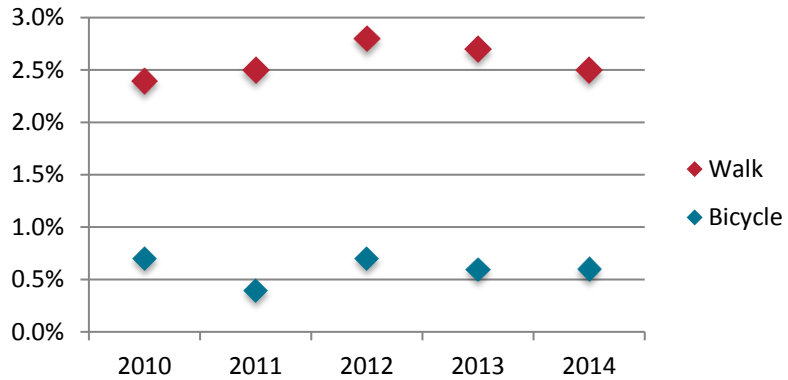


Figure B-3: Monrovia Walking and Bicycling Commutes

Monrovia has lower levels of walking when compared to regional, statewide, and national travel data. Monrovia has the same percentage of bicycle commuters as the United States but a lower bicycle mode share than California. See **Figure B-4**.

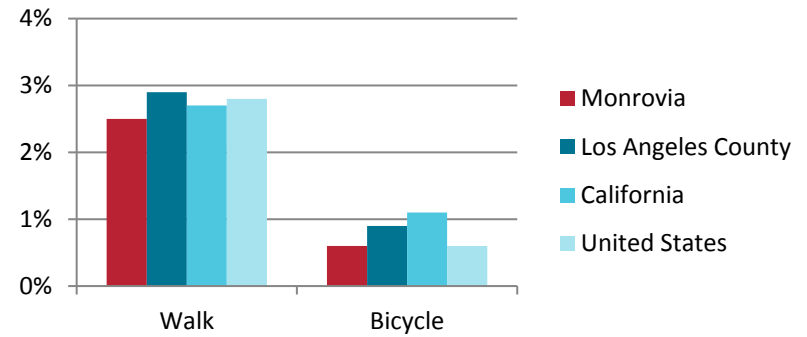


Figure B-4: Walking and Bicycling to Work – Geographic Comparison

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## Appendix C. Detailed Survey Results

### Community Survey

A community survey was developed to gather input on walking and bicycling challenges and opportunities throughout Monrovia. The survey was made available online from November 16, 2015 through February 8, 2016, and was distributed to community members in hard copy at a community workshop on February 3, 2016. Two-hundred and twelve responses to the survey were received, and are summarized below.

#### How would you rate overall bicycling conditions in Monrovia?

A little more than a quarter of respondents rated the overall bicycling conditions in Monrovia as either excellent or good while nearly three-quarters of respondents rated bicycling conditions as fair or poor.

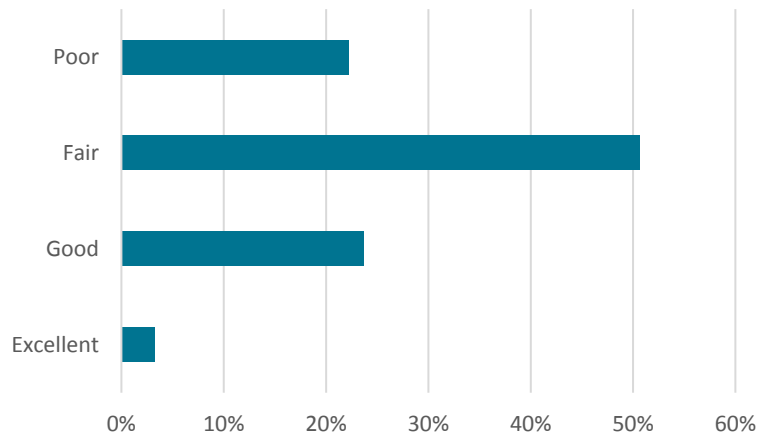


Figure C-1: Bicycling Conditions in Monrovia

#### Do you know how to ride a bicycle?

Nearly all survey respondents indicated that they know how to ride a bicycle. See **Figure C-2**.

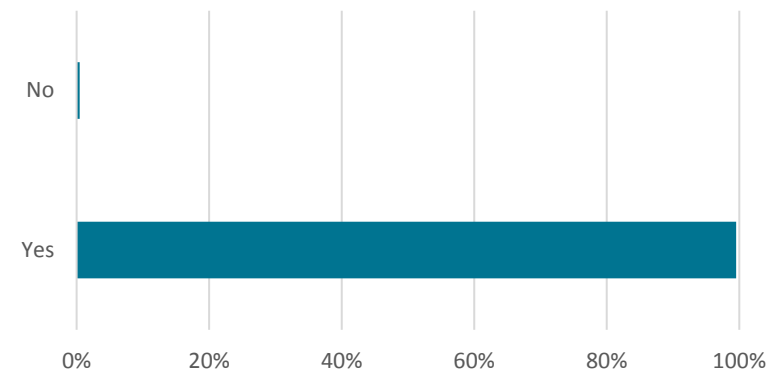


Figure C-2: Knowledge of riding a bicycle

## How often do you ride a bicycle for any purpose?

Survey responses varied when respondents were asked how frequent they ride a bicycle. Only 14.2% of respondents indicated that they never ride a bicycle for any purpose. See **Figure C-3**.

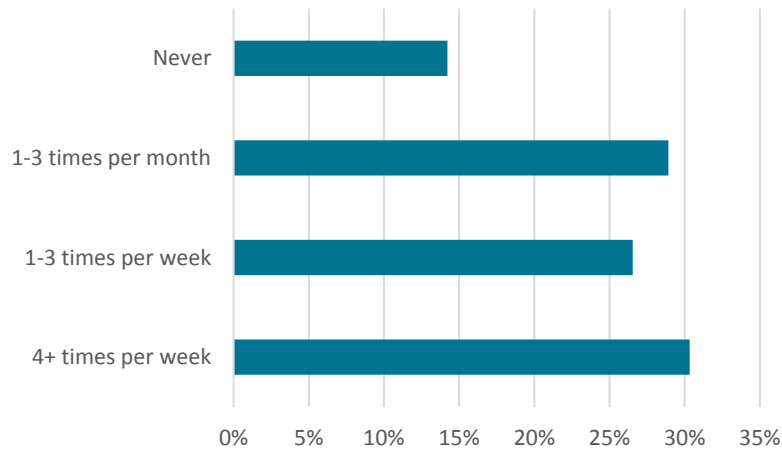


Figure C-3: Frequency of Riding a Bicycle

## To which destinations do you or would you like to walk or ride a bicycle in Monrovia?

In **Figure C-4** survey responses indicate that a majority of respondents do not have a particular destination in mind when they are biking but instead bike or walk for fitness or leisure. Destinations that were indicated by the highest percentage of respondents include bus stop or train stations, paved, off-street paths, and shopping. For survey respondents that indicated that they bicycle to other destinations that were not listed as response options, common destinations include Old Town restaurants and bars as well as group bicycle rides.

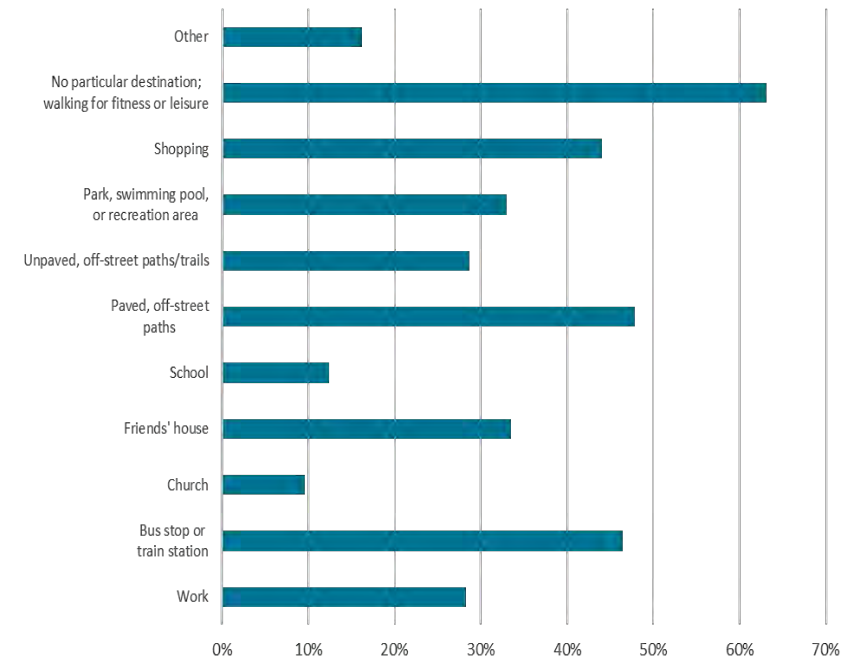


Figure C-4: Bicycling Destinations

## If you have children, do you ride your bicycle with them?

For survey respondents who have children, more respondents ride with their children than those who do not ride with their children. See **Figure C-5**.

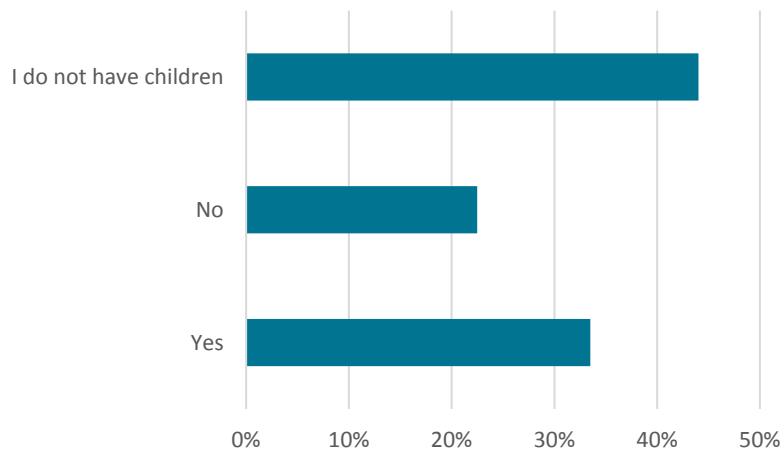


Figure C-5: Bicycling with Children

## Why do you ride a bicycle?

The most prominent reasons for riding a bicycle focused on fitness and recreation. Other popular responses were to reduce stress and to help the environment. For respondents who wrote in other comments, common reasons were to commute to work or that respondents wanted to indicate that they do not ride a bicycle. See **Figure C-6**.

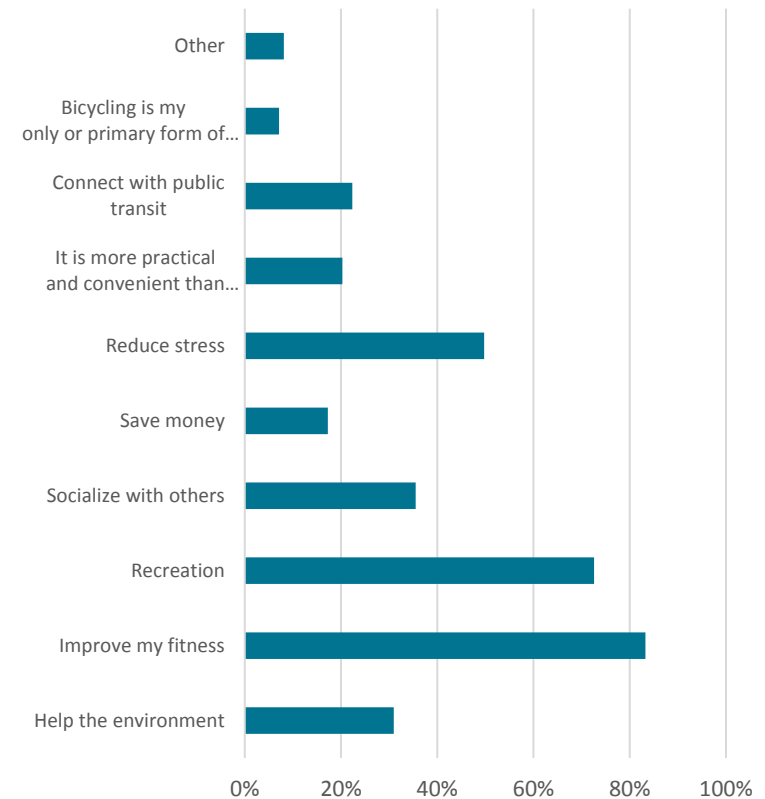


Figure C-6: Reasons for Bicycling

## If you were to prioritize improvements for bicycling in Monrovia, which would be your top three?

The priority bicycle improvement that overwhelmingly garnered the highest percentage of responses was new or improved crossings, bicycle lanes, and off-street shared-use paths. See **Figure C-7**. For those who wrote in other improvements, common responses included dedicated bike lanes, better connectivity to existing trails, and traffic enforcement.

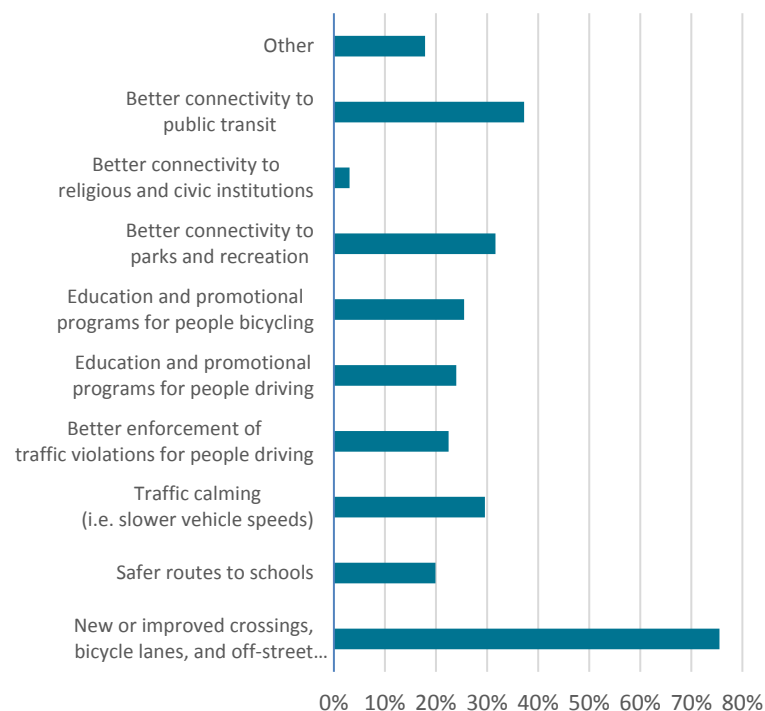


Figure C-7: Priority Improvements for Bicycling

## What prevents you from riding your bicycle more often?

Survey respondents indicated that the most common reasons for not bicycling more often were heavy traffic or dangerous behavior by people driving and lack of or incomplete bicycle lanes. See **Figure C-8**.

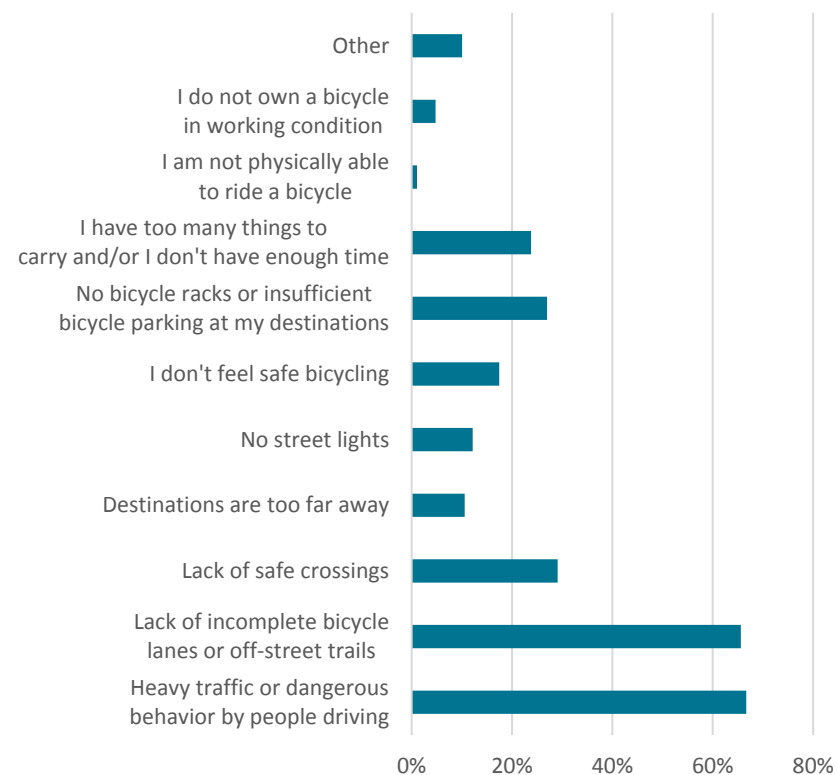


Figure C-8: Reasons for Not Bicycling More Often

## Please rank your preferred terrain for riding a bicycle

This survey question asked respondents to rank their preferred terrain for riding a bicycle on a scale between 1 and 3 where 1 equals the most useful and/or most enjoyable and 3 equals least useful and/or enjoyable. Off-street paths completely separated from traffic received the highest percentage of number 1 ranking whereas low-traffic neighborhood routes received the least percentage of number 1 ranking. See **Figure C-9**.

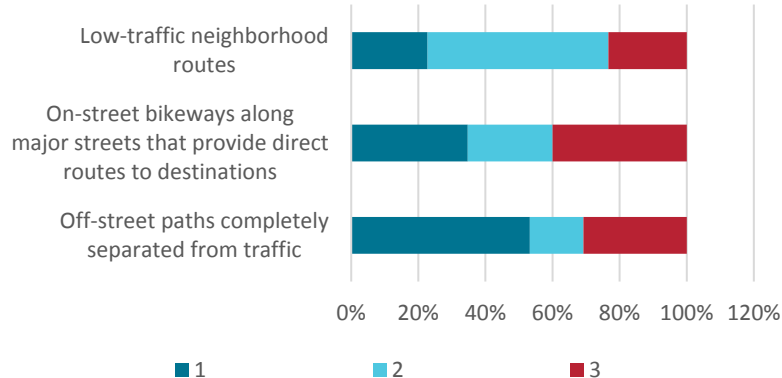


Figure C-9: Preferred Terrain for Bicycling

## Additional Comments

Respondents were provided an opportunity at the end of the survey to include any other comments or concerns related to bicycling in Monrovia. Common themes included:

- Need for traffic calming
- Need for bicycle parking
- Need for pavement repairs
- Need for more programs that promote bicycling
- Need for separated bicycle infrastructure on major roads
- Need for infrastructure improvements on Foothill Blvd
- Need for bicycle infrastructure to connect Old Town Monrovia with Station Square at the Metro Gold Line

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## Appendix D. Funding Opportunities

A variety of options exist to further plan, design, and construct bicycle transportation projects, including funding from federal, state, regional, local, and private sources. This section provides potential funding streams for projects within the City of Monrovia.

### Federal Sources

#### Fixing America's Surface Transportation Act (FAST Act)

The FAST Act, which replaced Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) in 2015, provides long-term funding certainty for surface transportation projects, meaning States and local governments can move forward with critical transportation projects with the confidence that they will have a Federal partner over the long term (at least five years).

The law makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects and providing new safety tools. It also allows local entities that are direct recipients of Federal dollars to use a design publication that is different than one used by their State DOT, such as the *Urban Bikeway Design Guide* by the National Association of City Transportation Officials.

More information: <https://www.transportation.gov/fastact>

#### Surface Transportation Block Grant (STBGP)

The FAST Act expanded the existing Surface Transportation Program (STP) into the Surface Transportation Block Grant Program (STBGP) which places more decision-making power in the hands of state and local governments. The FAST Act simplifies the list of uses eligible for program funds and increases the ways that funds can be used for local roads and rural minor collectors. The Transportation Alternatives Program (TAP) is a set-aside program of this block grant.

The new program requires 55 percent of program funds be distributed within each state on the basis of population, compared to 50 percent under STP.

In California, STBGP is allocated through the Regional Surface Transportation Program (RSTP). The TAP program is allocated through the Active Transportation Program (ATP).

More information:

[http://www.dot.ca.gov/hq/transprog/federal/rstp/Official\\_RSTP\\_Web\\_Page.htm](http://www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm)

## Highway Safety Improvement Program

The FAST Act eliminates the ability of states to shift funds designated for infrastructure safety programs to behavioral or educational activities, ensuring resources remain in construction-related programs. It also designates several new safety improvements eligible for funding including vehicle-to-infrastructure communication and roadway improvements that provide separation between pedestrians and motor vehicles.

With regards to unpaved roads, the FAST Act allows states to “opt out” of collecting safety inventory data for unpaved/gravel roads if certain conditions are met, as long as the states continue to collect data related to serious crashes and fatalities. It also requires that U.S. DOT to review data and report to Congress on best practices for roadway infrastructure improvements that enhance commercial motor vehicle safety.

HSIP is a data-driven funding program, and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state’s Strategic Highway Safety Plan. In California, HSIP is administered by Caltrans.

*More information:*  
<http://dot.ca.gov/hq/LocalPrograms/hsip.html>

## Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to “improve access to affordable housing, provide more transportation options, and lower transportation costs while protecting the environment in communities nationwide.” The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure - “Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.” The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants). The San Gabriel Valley Council of Governments and Caltrans should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

*More information:* <http://www.epa.gov/smartgrowth/partnership/>

## Rivers, Trails, and Conservation Assistance Program

The Rivers, Trails and Conservation Assistance Program (RTCA) 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 conversation and outdoor recreation projects.

More information: <http://www.nps.gov/pwro/rtca/who-we-are.htm>

## Community Development Block Grants

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may “use Community Development Block Grant funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grant funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs.” Trails and greenway projects that enhance accessibility are the best fit for this funding source.

More information: [www.hud.gov/cdbg](http://www.hud.gov/cdbg)

## Community Transformation Grants

Community Transformation Grants administered through the Centers for Disease Control (CDC) support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if such improvements benefit groups experiencing the greatest burden of chronic disease.

More information: <http://www.cdc.gov/communitytransformation/>

## National Scenic Byways Program

The Federal Highway Administration (FHWA), part of the USDOT manages the National Scenic Byways Grant Program, which recognizes roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities by providing grants that support projects that manage and protect these roads and improve visitor facilities.

More information: <http://www.fhwa.dot.gov/discretionary/2012nsbp.cfm>

## State Sources

### Active Transportation Program

With the consolidation of federal funding sources in MAP-21 and again under the FAST Act, the California State Legislature has consolidated a number of state-funded programs centered on active transportation into a single program. The resulting Active Transportation Program (ATP) consolidated the federal programs, Bicycle Transportation Account, the Safe Routes to Schools Program, and the Recreational Trails Program. The ATP's authorizing legislation (signed into law by the Governor on September 26, 2013) also includes placeholder language to allow the ATP to receive funding from the newly established Cap-and-Trade Program in the future. The Statewide Competitive ATP has \$180 million available statewide for the 2014/2015 and 2015/2016 fiscal cycles. The Regional Competitive ATP will have additional funding available for the SCAG region in the 2014/2015 and 2015/2016 fiscal cycles. The California Transportation Commission writes guidelines and allocates funds for the ATP, while the ATP will be administered by the Caltrans Division of Local Assistance. Goals of the ATP are currently defined as the following:

- Increasing the proportion of trips accomplished by biking and walking;
- Increasing safety and mobility for active transportation users;
- Advancing active transportation efforts of regional agencies to achieve the greenhouse gas reduction goals;
- Enhancing public health;
- Ensuring that disadvantaged communities fully share in the benefit of the program; and,
- Providing a broad spectrum of projects to benefit many types of active transportation users.

More information:

<http://www.dot.ca.gov/hq/LocalPrograms/atp/index.html>

### State Transportation Improvement Program (STIP)

Funds new construction projects that add capacity to the transportation network. STIP consists of two components, Caltrans' Interregional Transportation Improvement Program (ITIP) and regional transportation planning agencies' Regional Transportation Improvement Program (RTIP). STIP funding is a mix of state, federal, and local taxes and fees. Bicycle and pedestrian projects may be programmed under ITIP and RTIP.

More information: <http://www.catc.ca.gov/programs/stip.htm>

### Caltrans Planning Grants

Caltrans also administers the Transportation Planning Grant Program that funds projects to improve mobility and lead to the planning, programming, and implementation of transportation improvement projects. Most recently, Caltrans awarded \$10.0 million in grant funding to 70 applicants, in two sub-categories: Environmental Justice grants and Community Based Transportation Plan grants.

More information: <http://www.dot.ca.gov/hq/tpp/grants.html>

### Environmental Justice Grant Program

The Environmental Justice (EJ) Grant Program promotes the involvement of low-income, minority communities, and Native American tribal governments in the planning for transportation projects. EJ grants have a clear focus on transportation and community development issues to prevent or mitigate disproportionate, negative impacts while improving mobility, access, safety, and opportunities for affordable housing and economic development. Grants are available to cities, counties, transit districts, and tribal governments.

More information:

[http://www.dot.ca.gov/hq/tpp/offices/ocp/completed\\_projects\\_ej.html](http://www.dot.ca.gov/hq/tpp/offices/ocp/completed_projects_ej.html)

### Community Based Transportation Planning Grant Program

The Community Based Transportation Planning (CBTP) grant program promotes transportation and land use planning projects that encourage community involvement and partnership. These grants include community and key stakeholder input, collaboration, and consensus building through an active public engagement process. CBTP grants support livable and sustainable community concepts with a transportation or mobility objective to promote community identity and quality of life.

More information:

[http://www.dot.ca.gov/hq/tpp/offices/ocp/completed\\_projects\\_cbtp.html](http://www.dot.ca.gov/hq/tpp/offices/ocp/completed_projects_cbtp.html)

### Petroleum Violation Escrow Account

In the late 1970s, a series of federal court decisions against selected United States oil companies ordered refunds to the states for price overcharges on crude oil and refined petroleum products during a period of price control regulations. To qualify for Petroleum Violation Escrow Account (PVEA) funding, a project must save or reduce energy and provide a direct public benefit within a reasonable time frame. In the past, the PVEA has been used to fund programs based on public transportation, computerized bus routing and ride sharing, home weatherization, energy assistance and building energy audits, highway and bridge maintenance, and reducing airport user fees. In California, Caltrans Division of Local Assistance administers funds for transportation-related PVEA projects. PVEA funds do not require a match and can be used as match for additional federal funds.

More information:

[www.dot.ca.gov/hq/LocalPrograms/lam/prog\\_g/g22state.pdf](http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_g/g22state.pdf)

## Office of Traffic Safety (OTS) Grants

The Office of Traffic Safety (OTS) distributes grants statewide to establish new traffic safety programs or fund ongoing safety programs. OTS grants are supported by federal funding under the National Highway Safety Act and MAP-21. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. Eligible grantees are governmental agencies, state colleges, state universities, local town and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants. The California application deadline is January of each year. There is no maximum cap to the amount requested; however, all items in the proposal must be justified to meet the objectives of the proposal.

*More information:* <http://www.ots.ca.gov/Grants/Apply/default.asp>

## Environmental Enhancement and Mitigation Funds

The Environmental Enhancement Mitigation Program (EEMP) provides grant opportunities for projects that indirectly mitigate environmental impacts of new transportation facilities. Projects should fall into one of the following three categories: highway landscaping and urban forestry, resource lands projects, or roadside recreation facilities. Funds are available for land acquisition and construction. The local Caltrans district must support the project. The average award amount is \$250,000.

*More information:*

<http://www.dot.ca.gov/hq/LocalPrograms/EEM/homepage.htm>

## Land and Water Conservation Fund

The Land and Water Conservation Fund is a federal program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The fund is administered by the California State Parks Department. Cities, counties, and districts authorized to acquire and develop park and recreation space are eligible for grant funding. While non-profits are ineligible, they are allowed to apply in partnerships with eligible agencies. Applicants must fund the project entirely and will be reimbursed for half of the cost. Up to \$2.0 million was available in California in the 2012 round of grant funding.

*More Information:* [http://www.parks.ca.gov/?Page\\_id=21360](http://www.parks.ca.gov/?Page_id=21360)



## California Strategic Growth Council

The Strategic Growth Council is a state agency that manages the Sustainable Communities Planning Grant and Incentives Program, as well as the Affordable Housing and Sustainable Communities (AHSC) program. The first program provides grants for development and implementation of plans that lead to significant reductions in greenhouse gas emissions, improve air and water quality, promote public health, promote equity, increase housing affordability, increase infill and compact development, revitalize urban and community centers, protect natural resources and agricultural lands, reduce automobile usage and fuel consumption, improve infrastructure systems, promote water conservation, promote energy efficiency and conservation, and strengthen the economy. The second program provides funding for land use, housing, transportation, and land preservation projects to support infill and compact development that reduces greenhouse gas emissions.

*More information:* [http://sgc.ca.gov/m\\_grants.php](http://sgc.ca.gov/m_grants.php)

## Regional & Local Sources

### Clean Air Fund (AB 434/2766 – Vehicle Registration Fee Surcharge)

Administered by SCAQMD. Local jurisdictions and transit agencies can apply. Funds can be used for projects that encourage biking, walking, and/or use of public transit. For bicycle-related projects, eligible uses include: designing, developing and/or installing bikeways or establishing new bicycle corridors; making bicycle facility enhancements/improvements by installing bicycle lockers, bus bicycle racks; providing assistance with bicycle loan programs (motorized and standard) for police officers, community members and the general public. Matching requirement: 10-15 percent.

More information at: <http://www.aqmd.gov/home/programs/local-government/local-government-detail?title=ab2766-motor-vehicle-subvention-program>

### Measure R Sales Tax Revenue Local Return

Fifteen percent (15%) of the Measure R county sales tax is designated for use by local cities and the County of Los Angeles for transportation purposes, including bicycle-related uses such as infrastructure, signage, bicycle sharing, and education efforts.

Guidelines for the Local Return program can be found at: [http://ebb.metro.net/projects\\_studies/local\\_return/images/measure-r-Local-Return-Guidelines.pdf](http://ebb.metro.net/projects_studies/local_return/images/measure-r-Local-Return-Guidelines.pdf)

## Metro Call for Projects

Every other year, Metro accepts Call for Projects applications in eight modal categories. The Call is a competitive process that distributes discretionary capital transportation funds to regionally significant projects. Capital funds are programmed 5 years out and typically provided, and design and right-of-way acquisition are eligible expenses as long as they are directly related and part of construction. So, a project awarded Call for Projects funds in 2016 would not be implemented until 2021.

More information at: [https://www.metro.net/projects/call\\_projects/](https://www.metro.net/projects/call_projects/)

### Metro Open Streets Program

Metro will allocate up to \$2 million annually, through a competitive application process, to fund local Open Streets events in Los Angeles County cities. The first cycle announced in 2014 funded 12 open streets events to occur in 2015 and 2016.

More information at: <https://www.metro.net/projects/active-transportation/metro-open-streets-grant-program/>

### Metro Transit-Oriented Development Planning Grants

\$5 million fund to spur the adoption of transit-supportive land use and other regulatory plans around station areas in order to increase access to and utilization of public transit. Eligibility is for Los Angeles County jurisdictions with land use authority within one-half mile of existing, planned, or proposed transit stations. The most recent cycle of application funding was approved in January 2015.

More information at: <https://www.metro.net/projects/tod/>

## SCAG Sustainability Program

SCAG provides financial and technical assistance to member agencies for integrated land use and transportation planning. The 2013-2014 Sustainability Program emphasized:

- Projects that make measurable progress toward implementation
- Assistance to communities for updating General Plans
- Inter-jurisdictional and multi-stakeholder partnerships
- Outreach and education to the community and stakeholders on sustainable development
- Past Compass Blueprint partner jurisdictions may propose work that will move their plans closer to implementation.

More information at: <http://sustain.scag.ca.gov/Pages/default.aspx>

## Transportation Development Act (TDA)

The TDA provides local agencies with two major sources of funding: the Local Transportation Fund (LTF) and the State Transit Assistance fund (STA). These funds contribute to the development and support of public transportation and are allocated to areas of each county based on population, taxable sales, and transit performance.

Administered by Metro in Los Angeles County, TDA Article 3 funds are allocated annually on a per capita basis to both cities and the County of Los Angeles for the planning and construction of bicycle and pedestrian facilities. Local agencies may either draw down these funds or place them on reserve. Agencies must submit a claim form to Metro by the end of the fiscal year in which they are allocated. Failure to do so may result in the lapse of these allocations.

More information at: <http://www.metro.net/projects/tda/>

## Developer Impact Fees

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

## Roadway Construction, Repair, and Upgrade

Planned resurfacing and road diets are one means of combining motor vehicle, transit, bicycle, and pedestrian projects into one, multimodal construction project. To ensure that planned roadway construction projects considers ways to combine multiple multimodal projects, it is important to adopt a complete streets policy that includes a review of all facility types during each phase of the project. This policy and review process should follow California's 2008 Complete Streets Act and Caltrans' 2014 Deputy Directive 64-R2, which require that the needs of all roadway users be considered during "all phases of state highway projects, from planning to construction to maintenance and repair."

More information:

[http://www.dot.ca.gov/hq/tpp/offices/ocp/complete\\_streets.html](http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html)

## Utility Projects

By monitoring the capital improvement plans of local utility companies, it may be possible to coordinate upcoming utility projects with the installation of motor vehicle, transit, bicycle, and pedestrian infrastructure within the same area or corridor. Often times, utility companies will mobilize the same type of forces required to construct transportation projects, resulting in the potential for a significant cost savings. These types of joint projects require a great deal of coordination, a careful delineation of scope items and some type of agreement or memorandum of understanding, which may need to be approved by multiple governing bodies.

## Cable Installation Projects

Cable television and telephone companies sometimes need new cable routes within public right-of-way. Recently, this has most commonly occurred during expansion of fiber optic networks. Since these projects require a significant amount of advance planning and disruption of travel lanes, it may be possible to request reimbursement for affected bicycle and pedestrian facilities to mitigate construction impacts. In cases where cable routes cross undeveloped areas, it may be possible to provide for new transportation facilities following completion of the cable trenching.

## Private Sources

### PeopleForBikes Community Grant Program

PeopleForBikes is a coalition of bicycle suppliers and retailers that has awarded \$2.9 million in community grants and leveraged an additional \$670 million since its inception in 1999. The community grant program funds bicycle paths and rail trails, as well as mountain bicycle trails, bicycle parks, BMX facilities, and large-scale bicycle advocacy initiatives. Spring 2015 grant awards ranged between \$800 and \$10,000 and contributed to greenway and other infrastructure projects, as well as bicycle parking and bicycle-related programming.

More information: <http://www.peopleforbikes.org/pages/community-grants>

### The Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation was established as a national philanthropy in 1972, and today, it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas:

- To assure that all Americans have access to basic health care at a reasonable cost
- To improve care and support for people with chronic health conditions
- To promote healthy communities and lifestyles
- To reduce the personal, social and economic harm caused by substance abuse: tobacco, alcohol, and illicit drugs

More information: <http://www.rwjf.org/applications/>

## The Wal-Mart Foundation

The Wal-Mart Foundation offers a Local, State, and National Giving Program. The Local Giving Program awards grants of \$250 to \$5,000 through local Wal-Mart and Sam's Club Stores. Application opportunities are announced annually in February with a final deadline for applications in December. The State Giving Program provides grants of \$25,000 to \$250,000 to 501c3 nonprofits working within one of five focus areas: Hunger Relief & Nutrition, Education, Environmental Sustainability, Women's Economic Empowerment, or Workforce Development. The program has two application cycles per year: January through March and June through August. The Wal-Mart Foundation's National Giving Program awards grants of \$250,000 and more, but does not accept unsolicited applications.

More information: <http://foundation.walmart.com/apply-for-grants>

### The Kodak American Greenways Program

The Conservation Fund's American Greenways Program has teamed with the Eastman Kodak Corporation and the National Geographic Society to award small grants (\$250 to \$2,000) to stimulate the planning, design, and development of greenways. These grants can be used for activities such as mapping, conducting ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, and building trails. Grants cannot be used for academic research, institutional support, lobbying, or political activities.

More information: <http://www.conservationfund.org>

## Community Action for a Renewed Environment (CARE)

CARE is a competitive grant program that offers an innovative way for a community to organize and take action to reduce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them. By providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and "smart-growth" types of projects are eligible. Grants range between \$90,000 and \$275,000.

More information: <http://www.epa.gov/care/>

## Corporate Donations

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Employers recognize that creating places to bicycle and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

## The Knight Cities Challenge

From a pool of \$5 million, The Knight Cities Challenge looks to award grant at the city, neighborhood, and block level that attract and keep talented employees in a city, ideas that attempt to improve economic prospects for individuals, and ideas that encourage civic involvement. The grant program is funded by the Knight Foundation and the funds are distributed over an 18 month period.

## Plan4Health Coalitions

The American Planning Association (APA) and the American Public Health Association (APHA) received funding from the Centers for Disease Control and Prevention (CDC) to build local capacity in addressing population health goals and promoting the inclusion of health in non-traditional sectors such as transportation. Each proposal must address inactivity, unhealthy diets, and/or health equity. Awards will average \$150,000, and no more than two awards will be granted in a single state.

## Other Sources

Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly shared-use paths. For example, a local college design class may use such a shared-use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right of way for the route. A local construction company may donate or discount services beyond what the volunteers can do. And a challenge grant program with local businesses may be a good source of local funding, in which the businesses (or residents) can "adopt" a route or segment of one to help construct and maintain it.