

Chapter 1. Introduction

1.1. Purpose

The City of Los Angeles Bicycle Plan guides the development and implementation of bicycle policies, programs and infrastructure citywide. The Plan identifies goals, policies, and programs to improve the bicycling experience, make bicycling safer, increase bicycle ridership, as well as identify the possible location of facilities to be built. The technical design handbook advises how they should be built. The policy and program recommendations provide the City with direction regarding the development of bikeways and support activities for the bicycling community. Collectively, the policies, programs, projects and recommendations in this Plan will create an environment that fosters bicycling throughout the City for a community of bicyclists as diverse as the general population.

1.2. Setting

The City of Los Angeles is home to great geographic, cultural and socioeconomic diversity. The City covers 469.1 square miles spanning the area from the San Fernando Valley in the north to San Pedro and the Harbor in the south; and from the Pacific Palisades and Venice Beach in the west to the communities of Highland Park and Boyle Heights in the east.

Los Angeles has two distinct and inherent advantages for creating an environment that supports bicycling: climate and topography. While many cities have extreme temperatures and hilly terrain that limit year-round bicycling to only the very dedicated, Los Angeles is fortunate to have relatively flat terrain and a temperate climate that make for comfortable bicycling conditions year round for all levels of bicyclists.

1.2.1. Climate

With only 35 days per year with precipitation, 25 days per year with extreme heat, and zero days per year below freezing, favorable climatic conditions for bicycling in Southern California prevail over 300 days per year.¹ Average monthly high temperatures range from 67 to 83 degrees Fahrenheit. Average monthly low temperatures range from 49 to 64 degrees Fahrenheit.

1.2.2. Topography

With a few exceptions, the majority of roadways in Los Angeles traverse relatively flat terrain. Flat terrain makes traveling by bicycle pleasant and feasible for a wide range of individuals, regardless of their fitness levels. As indicated in the table below, almost 87% of all roads in Los Angeles have less than a 5% grade.²

¹ Sources: Average days with precipitation – NOAA; Extreme Heat Days (over 90° F) – NASA; Mean number of days below 32° F - NWS

² Sources: Thomas Brothers Topographical Data

Table 1-1. Topography of Los Angeles Streets

Street Grade	Percent of L.A. Roads
over 15%	2.0%
5-15%	11.3%
0-5%	86.7%

1.2.3. Transportation Infrastructure

The majority of Los Angeles has a grid-based street system, typically allowing for a variety of route possibilities between any given origin and destination. Fixed guideway transit corridors (Bus Rapid Transit, Light Rail Transit, Subway and Commuter Rail) and extensive municipal and regional bus services provide important opportunities for fostering symbiosis between bicycle transportation and mass transit. Within the city limits, there are 46 transit stations serving Metro Rail and the Metro Orange Line BRT. Two additional Metro Rail lines are currently under construction (Exposition Light Rail and Metro Gold Line Eastside Extension).

Challenges to developing the Citywide Bikeway System include very high traffic volumes, motorist speed, the allocation of roadway lanes to automobile traffic and parking, and physical barriers which break the continuity of the street grid such as flood control channels, freeways, and gated communities.

1.3. Relationship to Existing Plans

This Bicycle Plan is a part of the Transportation Element of the General Plan of the City of Los Angeles. The following pages describe the relationship between this Bicycle Plan and other relevant local planning documents.

1.3.1. City Plans

City of Los Angeles General Plan

The Los Angeles Bicycle Plan addresses the needs of bicyclists as an overall planning document, at the same level of analysis as the General Plan for the City of Los Angeles. The General Plan dictates long range policies and development in Los Angeles. In the same way, the Los Angeles Bicycle Plan contains a broad range of policies, programs and projects that combines both long term plans with immediate, actionable steps towards a more bicycle friendly Los Angeles.

City of Los Angeles General Plan - Transportation Element (1999)

The Transportation Element of the General Plan guides the development of a citywide transportation system which provides for the efficient movement of people and goods. It recognizes that the primary emphasis must be placed on maximizing the efficiency of existing and proposed transportation infrastructure through advanced transportation technology, through reduction of vehicle trips, and through focusing growth in proximity to public transit. To further the goal of vehicle reduction while providing additional mobility opportunities in the City, the Transportation Element calls for an integrated system of bikeways that provide “access to employment opportunities, essential services and open space.” Originally adopted as part of the Transportation

Element in 1996 and readopted in 2002 and 2007, the current Bicycle Plan provides the starting point for many of the policies, programs and infrastructure projects recommended in this new plan.

Community Plans

The Community Plans are intended to promote an arrangement of land uses, streets, and services which will encourage and contribute to the economic, social and physical health, safety, welfare and convenience of the people who live and work in each of the city's 35 communities. While the Los Angeles Bicycle Plan addresses the needs of bicyclists across the city, Community Plans provide the necessary focus for bicyclists at the community level. In this way, Community Plans are a tool to be used for specific, community-level planning.

The plans guide development in order to create a healthful and pleasant environment, and to coordinate development among the various parts of the City of Los Angeles and adjacent municipalities in a fashion both beneficial and desirable to the residents of the community. The Community Plans implement existing city policies as they relate to the unique and specific conditions of each community. While this Bicycle Plan provides a citywide approach to enhancing bicycle transportation, localized recommendations can be developed through the community plan process in a way that is consistent with and complimentary to this citywide Bicycle Plan.

Los Angeles River Revitalization Master Plan (2007)

The Los Angeles River Revitalization Master Plan (LARRMP) provides a vision for the 32 miles of the Los Angeles River within the City limits. This vision balances multiple goals including flood protection, water quality, open space, habitat, recreation and non-motorized transportation opportunities. Recommendation 4.12 of the LARRMP calls for the continued "development of non-motorized transportation and recreation elements including bicycle and pedestrian paths and multi-use trails in the River and tributary rights-of-way." Nearly 80 bridges cross the Los Angeles River in the City of Los Angeles. Of these 80 bridges, 10 have bicycle access and another seven have funds set aside for improving bicycle access. This plan recognizes the significant role that the Los Angeles River plays in Los Angeles' environmental, transportation and recreational identity. The Los Angeles Bicycle Plan incorporates the recommendation of the River Revitalization Master Plan to provide a continuous bicycle path along the south and west sides of the LA River and identifies connections to the River in order to enhance access to existing and future segments of the River path for transportation and recreation.

Los Angeles Department of Recreation and Parks Community-Wide Needs Assessment (2008)

The Los Angeles Department of Recreation and Parks' Community-Wide Needs Assessment (Needs Assessment) identifies, quantifies and prioritizes the residents' needs for recreation and open space throughout the City of Los Angeles. The Needs Assessment is the first step in a citywide park master plan and a five-year capital improvement plan. The Needs Assessment used both a community outreach process as well as a GIS analysis to gather data for the assessment. The extensive community outreach process included community leaders, stakeholders and other members of the public in interviews, focus groups, community forums and surveys. When asked which parks and recreation facilities residents experienced a need for, the majority of the community, 63%, identified the need for walking and biking trails. This Bicycle Plan supports the needs identified in the Needs Assessment by enhancing the access to existing and future bicycle paths for transportation and recreation.

1.3.2. Countywide Plans

Metro Bicycle Transportation Strategic Plan (2006)

The Bicycle Transportation Strategic Plan (BTSP), developed by the Los Angeles County Metropolitan Transportation Authority (Metro), informed the development of the Bicycle Plan in two key areas. First, it provides an inventory of existing and planned facilities in jurisdictions bordering the City of Los Angeles. This inventory assisted in the identification of routes that may eventually provide trans-jurisdictional continuity for bicyclists. Secondly, the BTSP outlines a strategy for prioritizing regional bikeway projects. As the Regional Transportation Planning Agency for Los Angeles County, Metro is the primary local funding source for bicycle transportation. The BTSP outlines a regional strategy to fund projects that improve bicycle access to transit or close gaps in the regional bikeway network.

Metro Enhanced Public Outreach Project (2005)

The primary focus of the Enhanced Public Outreach Project (EPOP) was to prepare for Metro's BTSP and also "gain a better understanding of the needs, perceptions and travel behavior of all bicyclists, focusing on those in communities with low income and high transit use." The EPOP expanded the concept of the typical bicycle commuter in the eyes of public officials. It also provided evidence that while the bicycling population is diverse, the needs and preferences of bicyclists, particularly in regards to infrastructure, are generally consistent. As a result, the Los Angeles Bicycle Plan provides policies, programs and facilities to serve a diverse population of existing and future bicyclists, and recommends that they are implemented in a geographically equitable manner.

Metro Eastside Light Rail Bike Interface Plan (2003)

The primary focus of the Eastside Light Rail Bike Interface Plan (BIP) was to create a community transportation plan that integrates the bicycling needs of residents with the future Metro Gold Line Eastside Extension. The plan identifies bikeway facilities and design options for the communities in the project area. This Bicycle Plan supports the needs identified in the BIP by enhancing accessibility to future transit stations in the area.

Los Angeles River Master Plan (1996)

The Los Angeles River Master Plan (LARMP) provides for the optimization and enhancement of aesthetic, recreational, flood control and environmental values by creating a community resource, enriching the quality of life for residents, and recognizing the river's primary purpose for flood control. The Los Angeles Bicycle Plan supports the goal of the LARMP to provide a continuous regional greenway and trail system along the Los Angeles River and identifies connections to the river in order to enhance the access to existing and future segments of the river path for transportation and recreation.

Los Angeles County Bicycle Plan (1976)

The Los Angeles County Bicycle Plan's main intent is to "guide the development of an interconnected network of countywide bicycle corridors." The Plan recognizes how a connected network supports both recreational and utilitarian bicycling. The Los Angeles County Bicycle Plan

is currently being updated and its primary relationship to the Los Angeles Bicycle Plan is its oversight of storm channels and coastal areas as existing, and potential bicycle paths.

1.3.3. Adjoining Jurisdiction Plans

A number of adjoining jurisdictions formulate their own bicycle plans. They typically describe existing and proposed bicycle facilities, policies and programs. Some also include recommendations for bicycle accommodations on transit systems and end-of trip facilities (i.e. bicycle parking and changing areas). The Los Angeles Bicycle Plan works in concert with these plans to create connections across jurisdictional boundaries. These include Burbank, Calabasas, Culver City, Glendale, Long Beach, Monterey Park, Pasadena, San Fernando, Santa Monica, and West Hollywood.

1.4. Existing Bicycle Facilities

The City of Los Angeles has over 7,200 miles of roads. The 1996/2002 Bicycle Plan designated approximately 526 miles of City roads as bikeways. Designated bike lanes and routes make up about five percent of all roads within city limits. To date, fifty-one miles of bicycle paths (Class I), 147 miles of striped bicycle lanes (Class II), and 156 miles of signed bicycle routes (Class III), have been constructed.

Based on the inventory of existing bicycle facilities in the City of Los Angeles and current cost assumptions, past expenditures on bicycle facilities for the City of Los Angeles are estimated at approximately \$65 million dollars from 1996 to 2009.

1.4.1. Bicycle Paths

Bicycle paths (Class I) in Los Angeles are located within or adjacent to flood control channels (Arroyo Seco, Ballona Creek, LA River), transit corridors (Orange

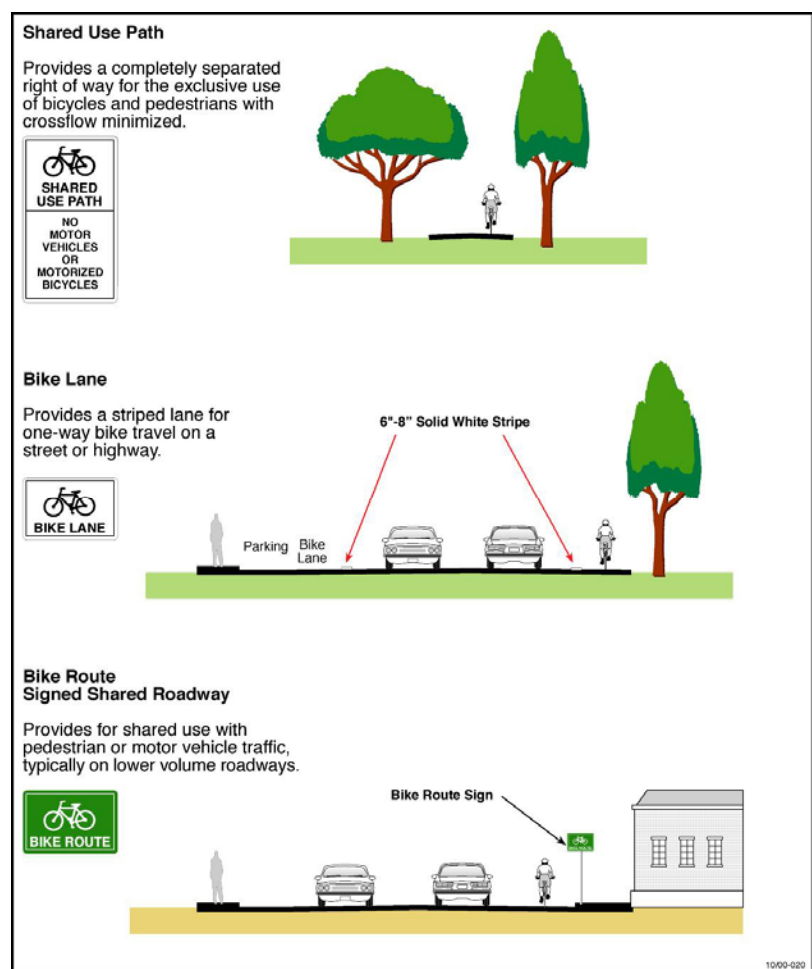


Figure 1-1. Bikeway Classification Types

Line), City parks (Balboa Park), or the coast (Venice Beach/Marvin Braude).³

Bicycle paths are popular for utilitarian and recreational riding.⁴ The addition of the Orange Line Bus Rapid Transit (BRT) bicycle path and the proposed bicycle path along the Expo Light Rail Transit Line (LRT), provide valuable connections to mass transit and facilitate easier, more comfortable commutes. Class I facilities are typically preferred by less experienced riders and bicycle commuters whose trips are longer than a few miles. In the public outreach survey, 35% of respondents answered that bicycle paths were their preferred facility. Although, only 16% responded that bike paths were needed to help reach their destinations.

Table 1-2. Mileage of Proposed and Built Facilities by Classification in 96/02 and 2009 Bicycle Plans

Facility Type	1996 (references 1996/2002 Plan)		2009 (references 2009 Plan)	
	Built-To-Date (as of 1996)	Proposed	Built-To-Date (as of 2009)	Proposed [Net Change From Old Plan]*
Bicycle Paths (Class I)	38	89	51	81 [+5]
Bicycle Lanes (Class II)	88	237	143	125[-57]
Bicycle Routes (Class III)	145	76	151	106 [+36]
Study Corridors	N/A	69	N/A	N/A
Potential Bicycle Lanes	N/A	N/A	N/A	404
Bicycle-Friendly Streets	N/A	N/A	N/A	384

* The Net Change from Old Plan shows the difference between the "Built-to-Date" + "Proposed" facilities in the two plans.

1.4.2. Bicycle Lanes

Bicycle lanes (Class II) are most commonly found on major arterials (Laurel Canyon Boulevard, Venice Boulevard, Central Avenue, Gaffey Street) and on wide collector streets (Chandler Boulevard, Griffith Park Boulevard, Grandview Boulevard, 30th Street). Bicycle lane widths can range anywhere from five to seven feet. Bicycle lanes along commercial corridors tend to provide access to destinations making them useful for utilitarian trips. In an online public outreach survey affiliated with this plan, respondents answered that bicycle lanes were the most preferred (43%) and most needed (63%) facility.

1.4.3. Bicycle Routes

Bicycle routes (Class III) can be found on both lower volume residential local and collector streets and sometimes along major arterials (51st Street, Wilbur Boulevard, Spring Street). Bicycle routes should be designated along streets with characteristics that are more favorable to bicycling than surrounding parallel streets. Favorable characteristics include low traffic volumes, signalized intersections at crossings or wide outside lanes. Because many of the City's bicycle routes were

³ Coastal paths such as the Marvin Braude/Venice Beach Path serve City of Los Angeles residents, and are owned and maintained by the County of Los Angeles and the City of Los Angeles.

⁴ A 2002 survey by Los Angeles County Department of Beaches and Harbors found that over 40% of bicyclists using the Marvin Braude Bicycle Path during weekday commute hours were engaged in a utilitarian trip (commuting or errands).

designated in the 1970s and 1980s, roadway conditions on these routes have changed significantly. The Department of Transportation is currently evaluating its existing bicycle routes to determine which facilities should maintain this designation under current conditions. This evaluation process and recommendations are included in this plan. In the public outreach survey, 9% of respondents answered that bicycle routes on major arterials were their most preferred facility, versus 12% of respondents who answered that bicycle routes on local streets were most preferred. For type of facility most needed to reach destinations, 15% answered bicycle routes on major arterials and 5% answered bicycle routes on local streets.

1.4.4. End-of-Trip Facilities

End-of-trip facilities include bicycle parking (racks, lockers), showers, changing rooms, areas to securely store bicycles and commuting equipment, etc. The City of Los Angeles provides bicycle parking facilities within the public right-of-way. Business owners and citizens can request the installation of bicycle racks on public sidewalks where right-of-way is available. Requests for bicycle racks are administered by the Department of Transportation. The program generally uses the standard “Inverted-U” bicycle rack. The City was also provided artist-designed bicycle racks for installations in downtown LA and the Vermont Corridor. These bicycle racks are intended to contribute to the identity of the local neighborhood or district. In addition, LADOT is testing a pilot program to install meter mounted bicycle racks in locations where “smart meters” are being installed.



Figure 1-2. Smart Meter Parking on 7th Street in Downtown

1.4.5. Bicycle-Transit Facilities

The City of Los Angeles currently provides front-mounted bicycle racks with capacity for two bikes each on its Commuter Express fleet. Other regional and municipal bus operators serving the City of Los Angeles also provide front-mounted bicycle racks. The City also provides bicycle lockers at park-and-ride lots and Metrolink stations in the San Fernando Valley. Bicycle lockers at light rail, BRT and subway stations within the City of Los Angeles are provided by Metro. Wherever possible, bicycle facilities are included with major transit projects such as the Metro Orange Line and the future Exposition Light Rail and Metro Gold Line Eastside Extension.

1.5. Existing Safety and Education Programs

Existing safety and education programs in the City of Los Angeles are conducted primarily through the Department of Transportation (DOT), the Police Department (LAPD), and the Los Angeles Unified School District (LAUSD).

1.5.1. School Bicycle Safety and Transit Education Program

Since 1983, the City of Los Angeles has provided bicycle safety education services to children through its School Bicycle Safety and Transit Education program. The program is managed by DOT and focuses on bicycle and pedestrian safety while also providing information about transit to its young participants. Since its inception, the project has served millions of children between the ages of four and thirteen and continues to reach children in the Los Angeles Unified School District and

some private schools. The annual project budget is approximately \$450,000 and is projected to provide bicycle safety education to another 200,000 children each school year.

1.5.2. Police Officer Bicycle Education Program

In an effort to educate adult bicyclists and encourage the enforcement of bicycling laws, a cooperative program between the Los Angeles Police Department (LAPD) and the Los Angeles Department of Transportation (LADOT) has been developed to provide additional bicycling education to LAPD officers as well as to produce materials regarding bicycling laws for distribution to the public. Materials include a roll call training module for LAPD officers, as well as a safety brochure and pocket guide to bicyclists' legal rights and responsibilities for the general public.

1.5.3. Bicycle Los Angeles Safety Training/Youth Education Sports

Originally funded through a transportation grant, the City of Los Angeles developed and provided funding for the Bicycle Los Angeles Safety Training program. Now completely sanctioned and supervised by the Los Angeles Unified School District through its police on-campus program, the project provides bicycle safety training and a citation diversion program for youth violators, as well as teaching riding skills to junior high and high school students.

1.5.4. Watch the Road Campaign

The City of Los Angeles is a member of Operation Traffic, a voluntary coalition of organizations committed to the Watch the Road Campaign. This collaboration is committed to increasing traffic safety and mobility in the Los Angeles region. The Watch the Road Program is a general traffic safety campaign intended to enhance safety for all users of the transportation system, including bicyclists. The program focuses on the top ten roadway user bad behaviors including: (1) speeding, (2) aggressive driving, (3) inattentive driving, (4) driving or cycling through red lights, (5) DUI, (6) not yielding to pedestrians, (7) walking without looking, (8) walking outside crosswalks, (9) bicycling against traffic, and (10) not wearing seat belts.

1.6. Estimates of Existing and Future Bicycle Commuters

A goal of this Bicycle Plan is to increase bicycling mode share to at least 5% of all daily trips and 5% of home-to-work trips by the year 2020. Regarding current ridership, analysis conducted in the 2001 LACMTA Long Range Plan developed a revised bicycle commuter/utilitarian trip share estimate of 2.4% for Los Angeles County. Local and national statistics are taken into account when estimating the demand for, and potential benefits of an improved and expanded bikeway network for Los Angeles.

1.6.1. Summary of Current and Potential Bicycle Commuter Estimates

Table 1-2 Commuter Estimates shows current and potential bicycle ridership estimates for trips to work. These figures show the distribution of Los Angeles bicycle commuters by Area Planning Commissions (APC). Estimates for current bicycle commuters rely on reported 2000 Census journey-to-work data.

Assuming a conservative average speed of 10 miles per hour in traffic, a bicyclist traveling for 23 minutes covers approximately four miles. The Southern California Association of Governments

(SCAG) approximated the average peak-hour traffic speed in Los Angeles at 20 mph.⁵ At this speed, a four to five mile automobile commute would take 14-minutes.

Census travel-time-to-work data is split into five minute intervals. Consequently, these estimates assume that the number of commuters with a 14-minute or shorter travel-to-work time is the baseline for potential bicycle commuters. The demand model suggests that Bicycle Plan implementation may only capture 25% of these potential bicyclists. In summary, of the over 1.5 million commuters in the City of Los Angeles, 5.01% are potential bicyclists.

Table 1-3. Commuter Estimates

Planning Area	Total Current Commuters	Current Bicycle Commuters	Potential Bicycle Commuters
North Valley	256,215	1,112	14,123
South Valley	307,131	1,693	16,089
East Los Angeles	141,933	474	8,257
Central	261,637	1,377	12,307
West Los Angeles	307,131	1,693	13,977
South LA	200,685	2,086	6,324
Harbor	72,330	577	6,448
All Los Angeles	1,547,062	9,012	77,524

While the figures give indications of varying bicycling levels throughout Los Angeles, it should also be noted that there are limitations to this analysis. First, these numbers are based on Census data that is nearly nine years old. Second, Census data is based upon participant response, which does not allow for or count the larger number of individuals who bicycle or combine bicycling with another mode such as rail or bus and are not captured in traditional Census reporting methods.

Finally, the numbers are limited to commuting trip purposes; they do not reflect additional linked bicycle-transit commute trips or other utilitarian bicycle trips. Some neighborhoods or communities in Los Angeles may lend themselves very well to short bicycle trips, but do not provide connectivity to jobs or access to the greater bicycle network.

Overall, these numbers constitute a conservative estimate and should be used as a starting point for understanding potential bicycle ridership in Los Angeles, knowing that bicycle commuting numbers may lie well beyond what was captured over nine years ago. For more detailed information concerning individual commuting levels within respective APC areas, please refer to Appendix B.

Potential bicycle commuter estimates are based on travel-time-to-work data.⁶ According to the National Household Travel Survey (NHTS), the average work commute time in Los Angeles has

⁵ *Los Angeles Times*. 9/19/2007

remained close to 20 minutes since 1983. In 2001, averaging all modes, the commute time was 23 minutes.

1.7. Public Participation

Public participation in the development of the Bicycle Plan included four public workshops in the early stages of plan development, a public survey/questionnaire, and a project website where participants were able to submit routing information and written comments. City staff attended and made presentations to various groups including Neighborhood Council meetings to provide information and an opportunity for input on the Bicycle Plan. In addition, four additional public meetings will be held to gather public input after the release of the draft plan.

1.7.1. Public Workshops

The first round of public workshops was held during the months of February and March 2008, at locations in the San Fernando Valley, Central Los Angeles, West Los Angeles and the Harbor Area. Public workshop materials were posted on the project website. An on-line comment form allowed those who were unable to attend a public workshop to view the presentation materials and to provide input using the same baseline information. A second round of public workshops was held in 2009 at the same locations, where participants provided input on the preliminary draft Bicycle Plan.

1.7.2. Public Comments

Over 1000 public comments were received by letter, comment card, email and via an on-line commenting form. The public could submit general comments or group their comments into categories based on the format of the first public workshops. A comprehensive list of public comments was compiled and made available via the project website.

1.7.3. Route Suggestions

Members of the public were able to submit route suggestions using existing on-line bicycle routing applications. The project team also researched local routing information submitted independently of this Bicycle Plan process. Over 100 unique route-based comments were received and reviewed. Route suggestions were compiled and made available via the project website. Public input on specific routes is also available in the Appendix.

1.7.4. Survey

An electronic survey was conducted to assess community preferences regarding bicycle infrastructure, policies and programs. The survey received over 1,000 responses. A summary of survey results is provided in the Appendix.

⁶ Estimates based on reported average journey to work data. See appendix A for more information.