



Bicycle, Pedestrian, and Multimodal Plan

PREPARED FOR:
THE CITY OF BRIGHTON
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FEHR & PEERS



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INTRODUCTION

What is a Bicycle and Pedestrian Plan?

The Bicycle, Pedestrian, and Multimodal Plan will provide a vision for the future pedestrian and bicycle network in Brighton. The plan will identify prioritized investments that the city will gradually implement over time to make Brighton a more comfortable and welcoming place for people walking, rolling, and biking.

As envisioned by Bike Brighton, “This plan provides the framework to create a connected network of low-stress bicycle facilities and supporting programs that will encourage the untapped potential for bicycling in Brighton, making bicycling for transportation as easy and comfortable as recreational riding.”

What is “Multimodal”?

This plan is not only a bicycle and pedestrian plan, but also a multimodal plan. While this plan seeks to expand access and comfort of the transportation system for people walking, rolling, and biking, the goal of this effort is to design complete streets that support all users.

Through this plan, the City of Brighton aims to provide residents and visitors of all ages and abilities abundant options to travel locally and regionally. These options include driving, taking transit, biking, walking, traveling with assisted mobility devices, and everything from skateboarding to driving a golf cart. By designing safe streets for all, people have more freedom to move in a wheelchair or roll their children in a stroller, because they will feel comfortable doing so.



FIGURE 1: TRANSIT ACCESS



While this plan does not address transit operations or frequency (transit service recommendations are housed within the full Transportation Master Plan), it does seek to improve first-and-last-mile connections to transit. This plan seeks to improve access to transit in Brighton by improving connections for people walking, rolling, or biking to bus stops. Completing sidewalk and bike network gaps or upgrading deficient sidewalks can make a considerable difference for people reliant on transit and tap into latent transit demand.

Why Develop This Plan?

In recent years, the city has invested over five million dollars to improve upon and expand its bicycle network and trails. The network has grown through projects like the Ken Mitchell Park, Front Range Trail, and on-street bike lanes implemented through routine street maintenance.

The Active Transportation section of the *2016 Transportation Master Plan (TMP)* developed key local and regional connections in the bicycle and pedestrian network and illustrated design guidelines for the implementation of new facilities. The *2021 Parks and Recreation Master Plan* identified pedestrian barriers and gaps, particularly to accessing recreational amenities.

Despite these important advances, many barriers and gaps in the street network remain, making it challenging and/or uncomfortable to travel by foot, wheelchair, or bicycle in many areas. Because of these gaps, the city does not reach the full potential of economic, health, and quality of life benefits that come with a well-connected bicycle and pedestrian network.

It is an opportune moment to align with related regional and national efforts to improve multimodal transportation options. This type of plan can make the city competitive in applications for regional, state, and federal funding opportunities for bicycle and pedestrian projects.

Brighton's gridded street system and existing network of multiuse trails provide a strong

foundation for the city to be a truly walkable and bikeable community. The *Bicycle, Pedestrian, and Multimodal Plan* provides a vision for the future bicycle and pedestrian network, identifying investment priorities that will most elevate Brighton toward becoming a more pedestrian and bicycle-friendly city.

The League of American Bicyclists designated Brighton an Honorable Mention level Bicycle Friendly Community in 2019. One of the motivations for the city to develop this plan is to become a Bicycle Friendly Community, in name and in actuality. The plan provides guidance for the city to make improvements and address network gaps more quickly and strategically, incorporating national best practices in bicycle and pedestrian planning and design.

The benefits of such investments extend throughout the community. This plan will lead to improved local and regional access to jobs, services, and education, and support a healthy lifestyle for all ages and abilities. Brighton's population has nearly doubled over the last two decades. Improving the safety and convenience of walking and biking will provide more travel choices for residents, increase access to transit, and encourage economic development.

Finally, a key goal of this plan is to improve safety and reduce serious injury crashes on Brighton's roads. Pedestrians and bicyclists are much more susceptible to crashes resulting in severe injury. This plan revisits findings of the *2018 Vision Zero Action Plan*, considering frequent and severe crash locations while prioritizing investments and providing strategies to improve safety.

Investing in bicycle and walking environments will particularly benefit vulnerable populations of the community, including those without reliable access to a vehicle. This includes school-aged children, older adults, people with disabilities, and low-income populations. By tailoring active transportation design and solutions to the most vulnerable populations, this plan lays the foundation for a more equitable transportation system for future generations.



Vision, Goals, and Objectives

VISION

The Brighton community will have abundant transportation options and a pleasant network of sidewalks, trails, and bike infrastructure.

GOALS

SAFE

The active transportation network will be comfortable for all ages and abilities, offering pedestrians and cyclists well-lit spaces separate and protected from vehicle traffic on higher-stress streets. The city will reduce, and eventually eliminate serious crashes involving people walking, rolling, and biking.

OBJECTIVES

OBJECTIVE S1: Explore opportunities to reduce the speed and/or number of lanes as part of a corridor project, before identifying the appropriate low-stress bike facility.

OBJECTIVE S2: Implement bike facilities according to the design guidance in the Bikeway Types section.

OBJECTIVE S3: When performing corridor upgrades, incorporate suggested intersection treatments to reduce stress of bicycle crossings, and ensure continuity of high-comfort facilities.

OBJECTIVE S4: Implement sidewalks and trails according to the design guidance in the Pedestrian Facility Types section.

OBJECTIVE S5: When performing corridor upgrades, incorporate suggested intersection treatments to reduce stress of pedestrian crossings, and ensure continuity of high-comfort facilities.

OBJECTIVE S6: When performing corridor upgrades, concurrently plan for the upgrade of lighting in the project area.

OBJECTIVE S7: Work with the 27J school district, interested parents, Bike Brighton, and other school community members to establish a robust Safe Routes to School (SRTS) program that incorporates elements from all of the “six Es” – Education, Encouragement, Engineering, Enforcement, Evaluation, and Equity.

OBJECTIVE S8: City law enforcement should work with local driving schools to expand the curriculum on laws governing interactions with people walking, rolling, and biking.

OBJECTIVE S9: Partner with law enforcement to increase enforcement of speeding and reckless driving in areas with high pedestrian volumes and/or safety issues and consider automated enforcement. Consider expanding the police bike patrol unit.

OBJECTIVE S10: Formally adopt the 2018 *Vision Zero Action Plan*, complete the top five priority projects identified in the plan, join the statewide Moving Towards Zero Deaths program, and publicize Vision Zero efforts through a marketing campaign.

OBJECTIVE S11: Encourage developers to incorporate access management strategies on their property to reduce conflict points with people walking and biking.

CONNECTED

The active transportation network will provide direct north-south and east-west connections to key destinations in the city, signed with clear wayfinding. The city will complete network gaps along streets and ensure comfortable crossings.

OBJECTIVE C1: Implement bike facilities on the active transportation network as shown in Figure 50: Future Bicycle Network.

OBJECTIVE C2: Codify the Complete Streets Policy and follow it on all roadway projects.

OBJECTIVE C3: Consider adopting a construction zones policy that requires developers/construction companies to provide sidewalks and bicycle facilities during construction.

OBJECTIVE C4: Ensure that all public facilities and spaces, especially schools, are accessible by walking, biking, and rolling. Whenever a new street is constructed or an existing street is reconstructed, sidewalk and bicycle facilities should be included as guided by this plan.

OBJECTIVE C5: Collaborate with nearby governments and jurisdictions through bi-annual meetings to achieve better regional connectivity of the system.

OBJECTIVE C6: Concentrate new development in areas of Brighton with existing transportation infrastructure to reduce construction and maintenance burden for the city and so that residents can more easily access popular destinations on foot or by bike.

OBJECTIVE C7: Require developers to construct or contribute funding to construct missing or deficient sidewalks, trails, or bike facilities on their property that are recommended in the plan, regardless of the facility priority.

OBJECTIVE C8: Encourage developers to increase street connectivity and “griddedness” to facilitate shorter trips – or at minimum provide bicycle and pedestrian connections from planned neighborhoods. Create these connections in established neighborhoods by finding existing easements or right-of-way or by acquiring new right-of-way or easements if none currently exists.

OBJECTIVE C9: Prioritize locations for sidewalk gap completion or rehabilitation according to the strategy outlined in the Prioritized Pedestrian Network section. Dedicate additional funding to the sidewalk links program to complete and rehabilitate priority sidewalks.

OBJECTIVE C10: Prioritize bike project locations according to the tiers established in the Bikeway Project Prioritization Map.



Transportation and recreation choices, with a safe, connected, infrastructure welcoming all residents and visitors.

WELCOMING

The active transportation network will foster a sense of community by welcoming people of all ages, abilities, and incomes. Affordable, convenient travel options and ADA-accessible infrastructure will be available in all areas of the city.

OBJECTIVE W1: Design low-stress, high-comfort bikeways that support all ages and abilities.

OBJECTIVE W2: Design low-stress, high-comfort sidewalks that support all ages and abilities.

OBJECTIVE W3: Construct all new streets and retrofit existing corridors to be accessible to wheelchair users or people who move with assisted mobility devices and comply with the 1990 Americans with Disabilities Act.

OBJECTIVE W4: Begin a bicycle count program by placing initial counters in known bicycle activity hotspots, and expanding counters to new areas where the city is planning major corridor projects with new bikeways to be able to track the difference in bicycle activity before and after projects are implemented.

OBJECTIVE W5: Explore potential locations and partners to develop a bike library.

OBJECTIVE W6: Increase the number of local League Cycling Instructors (LCIs) either by hosting an LCI seminar or sponsoring a city staff member, police officer, and/or local bike advocate to attend an existing seminar elsewhere.

OBJECTIVE W7: Pursue new educational programs to grow awareness of active transportation options in the community.

OBJECTIVE W8: Partner with large employers to implement a voluntary incentive program to support walking and biking to work.

OBJECTIVE W9: Plan and host three Bike Month events and a Bike to Work event each year.

OBJECTIVE W10: Clearly communicate where electric scooters, electric bicycles, motorized wheelchairs, golf carts, and other future mobility devices are permitted to operate.

OBJECTIVE W11: Establish a city bicycle coordinator position to facilitate implementation of plan recommendations.

OBJECTIVE W12: Improve reach of Bike Brighton to underrepresented communities so that the committee reflects the diversity and ability levels of cyclists in the community, and is inclusive of those who ride most often and are most familiar with biking conditions in Brighton.

PLEASANT

The active transportation network will be high-quality, well-maintained, and draw users by creating an enjoyable and leisurely space to appreciate Brighton's natural beauty and access local businesses.

OBJECTIVE P1: When improving the active transportation network with new trails, install accessible trailheads as shown in Figure 64: Potential Trailheads.

OBJECTIVE P2: Provide funding for the Streets Operations and Parks and Open Space Divisions in alignment with trail and bikeway expansion.

OBJECTIVE P3: Explore and pursue new funding sources to support maintenance of the expanded system.

OBJECTIVE P4: Prioritize installation of APBP-compliant bike and micromobility parking in key destinations downtown, outside of city properties, and near major transit hubs, parks, schools, employment centers, and shopping areas.

OBJECTIVE P5: Encourage new and existing developments to provide secure bike parking and amenities through requirements and incentives.

OBJECTIVE P6: When performing corridor upgrades, design high-quality landscaped or hardscaped buffers with street furniture and pedestrian amenities.

OBJECTIVE W7: Install gateway signage that signals visitors and residents that they are entering town and highlights the downtown core.

OBJECTIVE W8: Install wayfinding signage along the trail system, especially at key junctures to draw trail users into town to stop for a drink, a meal, or to explore local shops.

OBJECTIVE W9: Install wayfinding signage with consistent standards as part of new trails and bike facility projects.

OBJECTIVE W10: Consider initiating a comprehensive wayfinding and signage study to create a consistent strategy for connecting people walking, biking, and driving to downtown and other key destinations.

OBJECTIVE P11: Partner with the Greater Brighton Area Chamber of Commerce to establish a Bicycle Friendly Business program.

OBJECTIVE P12: Establish a dedicated, reliable funding source for construction and maintenance of active transportation infrastructure recommended in the plan.

OBJECTIVE P13: Right-size the amount of off-street parking by reducing or relieving parking requirements, offering developers to pay a fee-in-lieu, and considering time-restricted or paid parking in high-demand areas.

OBJECTIVE P14: Explore and pursue funding opportunities to support continual capital construction and maintenance of the projects listed in this plan.



Building Upon Previous Planning Efforts

There have been several previous plans locally and regionally that set the foundation for this plan. This document summarizes these previously developed planning documents that are relevant to Brighton's bicycle and pedestrian networks. These reviewed plans include the following:

- *Adams County Open Space, Parks & Trails Master Plan (2012)*
- *Be Brighton Comprehensive Plan Update (2016)*
- *Brighton Transportation Master Plan (2016)*
- *Brighton Vision Zero Action Plan (2018)*
- *Parks and Recreation Master Plan (2021)*
- *Advancing Adams Transportation Master Plan (2022)*

The *Brighton Bicycle, Pedestrian, and Multimodal Transportation Plan* was developed to be consistent with other regional planning efforts and build off previous work completed in Brighton.

ADAMS COUNTY OPEN SPACE, PARKS & TRAILS MASTER PLAN (2022)

The *Adams County Open Space, Parks & Trails Master Plan* builds upon the previous 2012 plan and guides the management and development of parks, open spaces and trails, while sustaining and conserving natural elements. The plan focuses on ensuring the parks, trails, and open spaces meet the changing community needs; enhancing the quality of life for residents and visitors; and ensuring the protection of natural resources and special county characteristics. The plan is organized around the following themes:

1. Natural Resource and Wildlife Habitat Protection & Riparian Enhancement
2. Agricultural Lands, Rural Character, and Places of Cultural Significance
3. Diverse Park and Recreation Enhancement
4. Partnerships, Regional Coordination and Stewardship
5. Dynamic Trail Connections

The plan's big ideas include the following:

1. Providing recreational resources and services that adapt to the changing needs of the community
2. Enriching communities through access to nature and an understanding of environmental stewardship
3. Conserving the county's rural character with progressive approaches to sustaining agriculture
4. Protecting and celebrating the South Platte River and Clear Creek corridors
5. Connecting people through placemaking, arts, and culture
6. Responding to environmental stressors, social, and financial considerations through adjusted maintenance practices and policies
7. Making the most out of remnant lands

The plan identifies priority plan areas and priority trails throughout the County by layering the recommendations related to the plan's themes and input from stakeholders and the existing conditions analysis.

BE BRIGHTON COMPREHENSIVE PLAN UPDATE (2016)

The 2016 *Be Brighton Comprehensive Plan Update* is Brighton's guide to its physical world. The plan details where Brighton will grow, what land uses are best for build-out and redevelopment, when investments need to be leveraged both publicly and privately, and how growth should occur based on zoning and development standards. The plan intentionally collaborates with the efforts of the Transportation Master Plan, Water Master Plans, and the Adams County District Plan to ensure goals and strategies on all topics are coordinated and integrated.

The plan vision is to establish the City of Brighton as:

- The Regional Leader for the Northeast Metro Area
- Inclusive Community Where We Collaborate & Share
- A Sustainable & Complete Community
- A Future Rooted & Growing in a Farming Heritage and Small Town Feel



This community vision helps establish citywide principles, policies, and strategies used in guiding all development and renovation, public and private. **Table 1** shows the principles and policies that guide the strategies that specifically apply to the bicycle and pedestrian network.

TABLE 1: BE BRIGHTON BICYCLE & PEDESTRIAN NETWORK PRINCIPLES & POLICIES

Principle	Policy	Strategies
Support Pedestrian and Bicycle Mobility and the Visibility of High-Frequency Transit to Reduce Automobile Dependency through Land Use Planning and Design	Encourage Development Patterns that Support All Modes	<ul style="list-style-type: none"> • Direct future high-density neighborhoods toward urban centers and major arterials, which will place residents either close to a train or bus station or within an easy walk or bike to a local transit connector. • Encourage senior housing to locate within walking distance of transit stops. • Maintain adequate land in development projects that are near Bridge Street and the rail line for the possibility of transit parking. Encourage Transit Oriented Development (TOD) to locate along future commuter rail lines. • Seek to decrease the number of automobile trips per person and per job as Brighton grows. • Establish road standards that improve the pedestrian and multi-modal environment to achieve a parkway character with specific attention to street furniture, urban forestry, landscaping, and off-street sidewalks and trails. • Facilitate employment opportunities near existing and planning transit facilities. • Ensure that all public facilities and spaces, especially schools, are accessible by alternative modes of transportation. • Require new developments to frontload infrastructure construction into phasing plans that prevents isolation or disconnection.
Promote Neighborhoods that Have Distinctiveness and Character	Create and Maintain Inviting, Safe, Walkable and Bikeable Streetscapes	<ul style="list-style-type: none"> • Employ a “Safe Routes to Everywhere” philosophy. Ensure that all neighborhoods have a well-connected, accessible pedestrian and bicycle network, including detached sidewalks, bike lanes, and off-street trails, especially to schools. • Promote a well-maintained, drought-tolerant landscaping native to Colorado, including street trees, shrubs, perennials, and grasses, and integrate small parks and natural spaces into the streetscape. • Encourage the provision and maintenance of street furniture, such as benches and bike racks, that increase pedestrian comfort and allow people to stop and rest. • Integrate traffic calming measures, including narrow streets, neckdowns, varied pavement surfaces, roundabouts, and other neighborhood scaled street features that increase pedestrian and bicyclist safety, decrease car speeds and make a more pleasing and interesting physical environment. • Require all new or developed streets to conform to City street standards.
Place a High Priority on Sustainable and High-Quality Design that is Compatible with the City’s Unique Character	Design the Streets, Pedestrian Environments and Gateways of Brighton With Consideration to the Visual Character and Experience of Users and Adjacent Development	<ul style="list-style-type: none"> • Revise the street standards to reflect a greater diversity of street classifications that can be used in the environments described in this Plan. • If a center is designed via a Planned Unit Development (PUD), ensure that buildings and streetscape design work harmoniously together and exceed the community’s expectations. • Identify gateways at key entrances into the City to be developed that draw attention to, and convey the character of, Brighton. • Identify and celebrate gateways and community edges. Seek a physical design that enhances gateway locations and provides a distinctive transition into the City.



BRIGHTON TRANSPORTATION MASTER PLAN (2016)

The 2016 *Brighton Transportation Master Plan* guides development and expansion of the local and regional multimodal transportation networks through the expected growth of the following 25 years. To do so, the plan employs a transportation growth management system and a strategic, map-based transportation capital investment program. The plan also serves as the transportation component of the 2016 *Be Brighton Comprehensive Plan*, so the goals for both plans are coordinated to work with one another. The goals included in the *Brighton Transportation Master Plan* are the following:

- Brighton will prioritize safety in transportation planning and design
- Brighton will be well-connected to regional multimodal transportation networks
- Brighton's streets will accommodate all modes (pedestrian, bicycle, vehicle, transit)
- Brighton will be served by a well-connected streets and highways network
- Brighton's land development will occur in walkable, complete neighborhoods
- Brighton's transportation system will expand concurrently with development

As it relates to active modes of transportation, the *Brighton Transportation Master Plan* focuses on providing opportunities for Brighton residents to safely and enjoyably use non-motorized modes for running errands, traveling to work or school, completing the last-mile of transit trips, and expanding recreation opportunities for all demographics of the community. **Figure 2** shows the active transportation plan, and **Table 2** shows the strategies in network planning, core area connectivity, and pedestrian needs that are recommended for implementing the multimodal transportation network in the active transportation plan.

The plan also provides an implementable Active Transportation Action Plan with steps to be completed by 2020. Further, the transit and the thoroughfare parts of the plan focus on ensuring that the bicycle and pedestrian networks are integrated with the transit and street networks to provide seamless connections between all transportation modes.

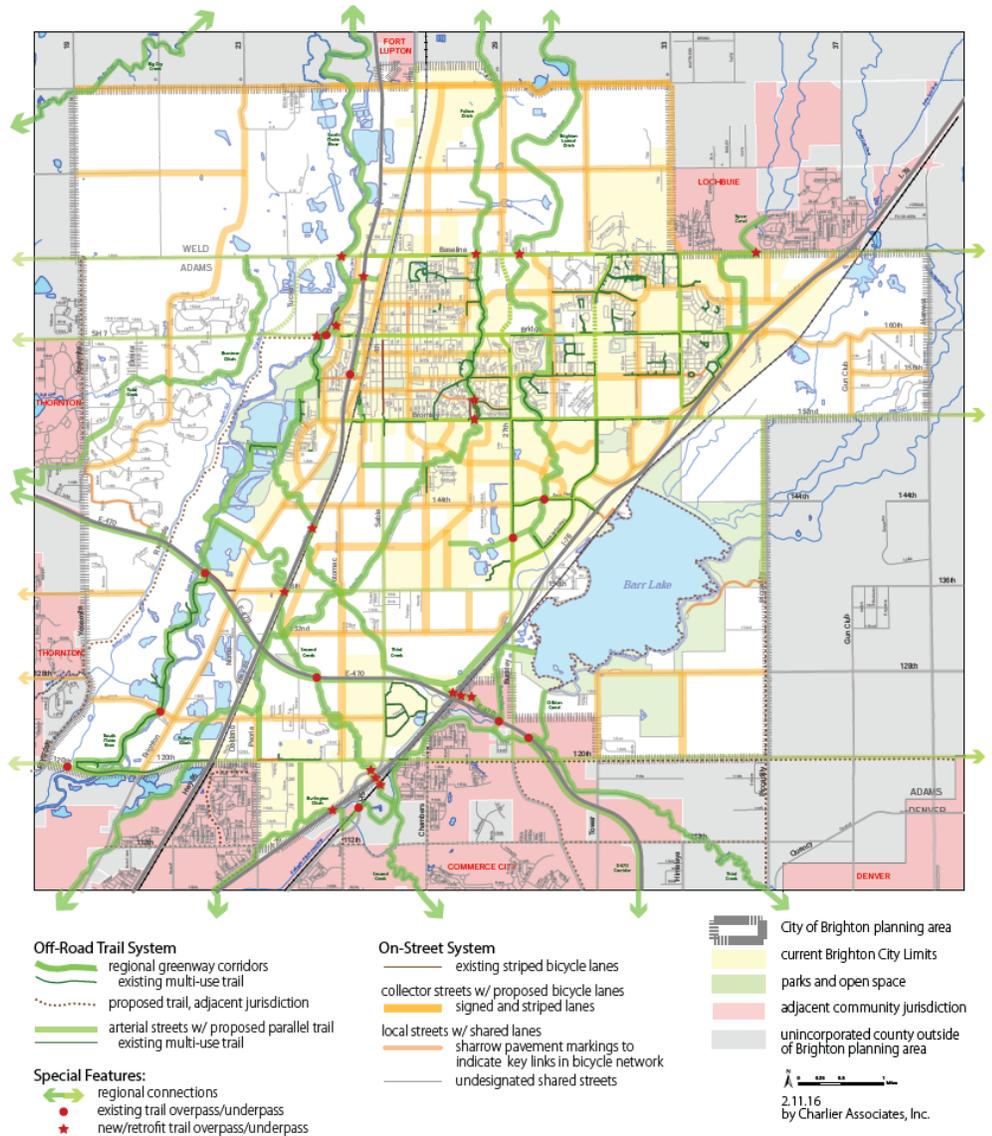


FIGURE 2: BRIGHTON ACTIVE TRANSPORTATION PLAN



TABLE 2: BRIGHTON TRANSPORTATION MASTER PLAN ACTIVE TRANSPORTATION STRATEGIES & ACTIONS

Strategy	Action
<p>Routinely incorporate bicycle and pedestrian facilities into the design of all new streets and major capital reconstruction projects</p>	<p>Bicycle accommodation with street right-of-ways based upon:</p> <ul style="list-style-type: none"> • Street classification • Context of the street as it related to adjacent land use and development patterns <p>Following design standards for implementing shared roadways, off-street bike paths, on-street bike lanes, and sidewalks on arterial streets, collector streets, and local streets.</p>
<p>Retrofit existing streets within the core area of Brighton to include bicycle accommodation</p>	<p>Key design treatments for completing missing links in Brighton's existing bicycle infrastructure including:</p> <ul style="list-style-type: none"> • Sharrows • Bicycle Lanes • Trails within Street Corridors • Cycle Tracks and Protected Bicycle Lanes
<p>Complete Brighton's multi-use trail system and ensure seamless transitions between on-road and off-road facilities</p>	<p>Expansion of the Brighton trails system, specifically within open space corridors. Improvements to consider:</p> <ul style="list-style-type: none"> • Trail tread • Trail shoulders • Appropriate clear zones • Transitions to on-street bicycle facilities
<p>Adopt elements of the Northern Colorado bikeway signage program for application within Brighton</p>	<p>Implementation of signage that promotes the community as a hub along the developing Colorado Front Range Trail. Signage to include the following elements:</p> <ul style="list-style-type: none"> • Confirmation signs for community identification • Decision signs with time and distance to local destinations • Supplemental plaques to convey additional information
<p>Implement programs of the Bike Brighton Subcommittee to attain recognition as a Bicycle Friendly Community</p>	<p>Achieving Bronze status, followed by levels to Platinum status to ultimately be named a Bicycle Friendly Community. Action items include:</p> <ul style="list-style-type: none"> • Engineering – creating safe and convenient places to ride and park • Education – giving people of all ages and abilities the skills and confidence to ride • Encouragement – creating a strong bike culture that welcomes and celebrates bicycling • Enforcement – ensuring safe roads for all users • Evaluation and Planning – planning for bicycling as a safe and viable transportation option
<p>Construct all new streets and retrofit existing street corridors within Brighton to include pedestrian accommodation and meet the accessibility needs of the 1990 Americans with Disabilities Act</p>	<p>Following design elements for detached sidewalks, attached sidewalks, and intersections. Improvements to also include corners, crosswalks, and signals.</p>
<p>Develop walkable, complete neighborhoods that incorporate small blocks, mixed uses, continuous sidewalk networks, and traffic-calmed streets</p>	<p>Focus on how urban form, intensity and design character by:</p> <ul style="list-style-type: none"> • Prioritizing the development of mixed-use neighborhoods with multiple transportation options for a sustainable and complete community • Focusing on the following walkability components: small blocks, site layouts, mix of land uses, continuous sidewalk networks, traffic-calmed streets, and placemaking



BRIGHTON VISION ZERO ACTION PLAN (2018)

The 2018 *Brighton Vision Zero Action Plan* identifies strategies and an implementation framework to eliminate fatal and severe injury traffic crashes in the City of Brighton. The plan strategizes elaborate recommendations related to guiding principles, policy changes, collaboration, infrastructure design, traffic operations, enforcement, education, and evaluation. The work is based on the identified high injury network, illustrated in **Figure 3**.

The plan identifies five top crash profiles that represent the crashes that occur in Brighton: distracted or inattentive driving, pedestrian-involved or bicyclist-involved, left-turn movements, speeding, and red light & stop sign running. While crashes involving bicyclists and pedestrians only account for about 3% of all crashes, they account for 21% of crashes in which someone was killed and/or seriously injured (KSI crashes).

Their disproportionate share of serious and fatal crashes reflects the vulnerability of people walking and biking. When a bicyclist or pedestrian is involved the likelihood of the

crash resulting in a severe injury or death is much higher than a motor vehicle-only crash. Vehicle speeds factor into these outcomes. A pedestrian has about a 5% chance of dying when hit by a motor vehicle traveling 20 mph, compared to a 40% chance of dying when hit by a motor vehicle traveling 30 mph and a near 100% chance of dying when hit by a motor vehicle traveling 50 mph.

The key countermeasures the plan recommends for these types of crashes including the top five priority project locations illustrated in **Figure 3** include:

- High visibility crosswalks
- Protected-only left-turns
- No right on red
- Leading pedestrian interval
- Roadway reconfiguration
- Appropriate traffic control devices
- Geometric elements
- On-street bikeways or multiuse paths
- Sidewalks
- Access management



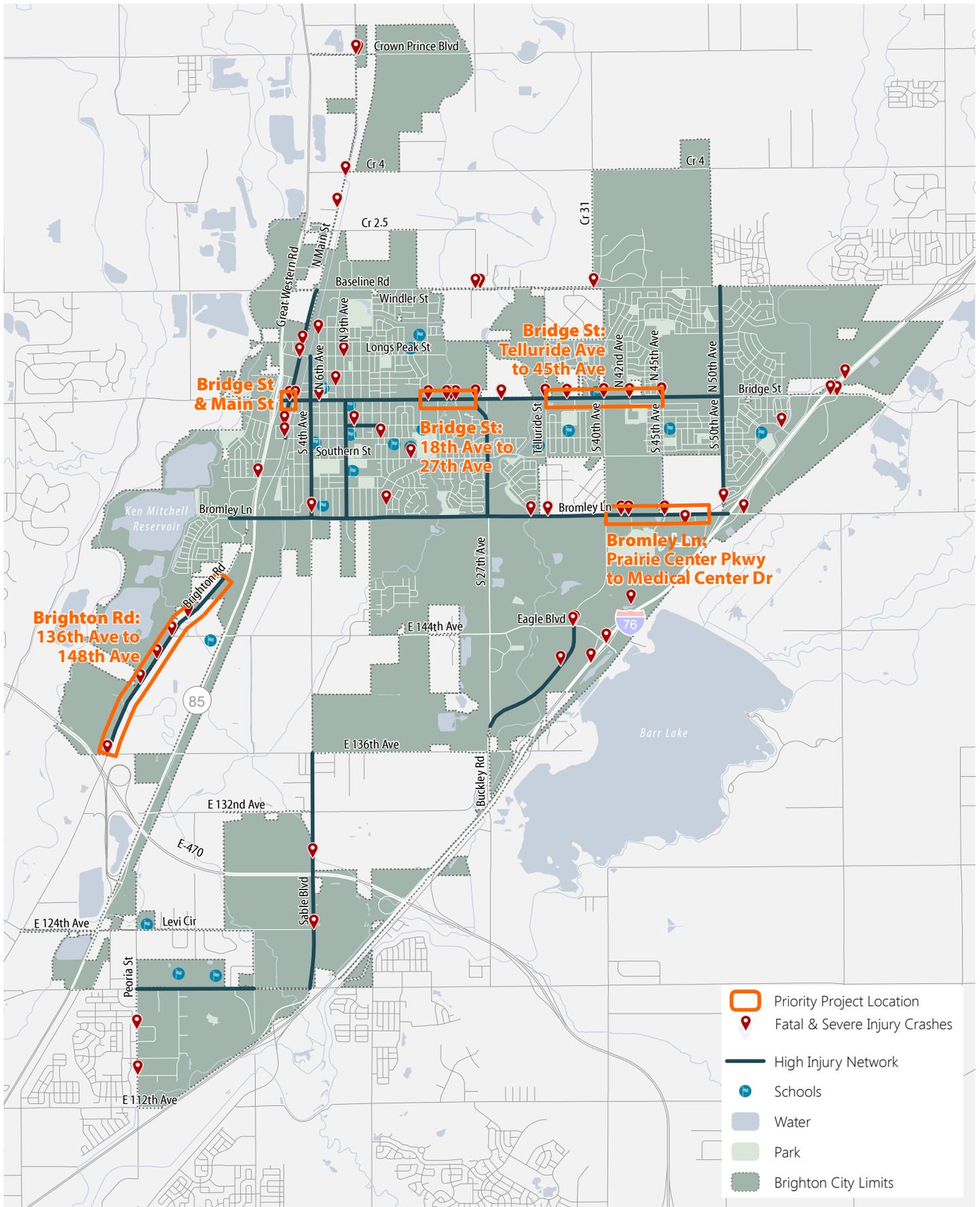


FIGURE 3: BRIGHTON VISION ZERO TOP FIVE PRIORITY PROJECT LOCATIONS



PARKS AND RECREATION MASTER PLAN (2021)

The 2021 *Parks and Recreation Master Plan* guides Brighton in providing well-maintained and appropriate parks and recreation services and facilities to meet the growing needs of the community. The plan provides a realistic implementation plan for a five-to-ten-year horizon.

The plan identifies the following key opportunities for serving the expanding community's priority needs:

- Participate in City bicycle-related planning, infrastructure, and programming efforts
- Increase capacity to provide recreation programs through improved and new facilities
- Preserve Brighton's agricultural heritage and natural resources in support of the District Plan

The strategic implementation plan is separated into four categories: community priorities, organizational strategies, parks and facility improvements, and recreation programming. The following objectives are related to the bicycle and pedestrian network:

- Pursue collaborative planning efforts to provide more specific bicycle and pedestrian infrastructure recommendations
- Amend policies to better accommodate and encourage bicycle and pedestrian uses of infrastructure
- Support bicycle and pedestrian related programming to support community priorities

The plan recommends multiple action items to implementing the above objectives. As part of the improvements to the bicycle and pedestrian network, action items include improving sidewalks, trails, intersections, crossings, and bicycle facilities. The bicycle and pedestrian facilities involving Brighton's trail network are to reference the recommended trail network (**Figure 4**).

The Parks and Open Space Divisions are responsible for park and trail maintenance, which is a large focus of the plan. Maintaining existing infrastructure and new trails that are recommended as part of the Bicycle, Pedestrian, and Multimodal Plan will be important for plan longevity.

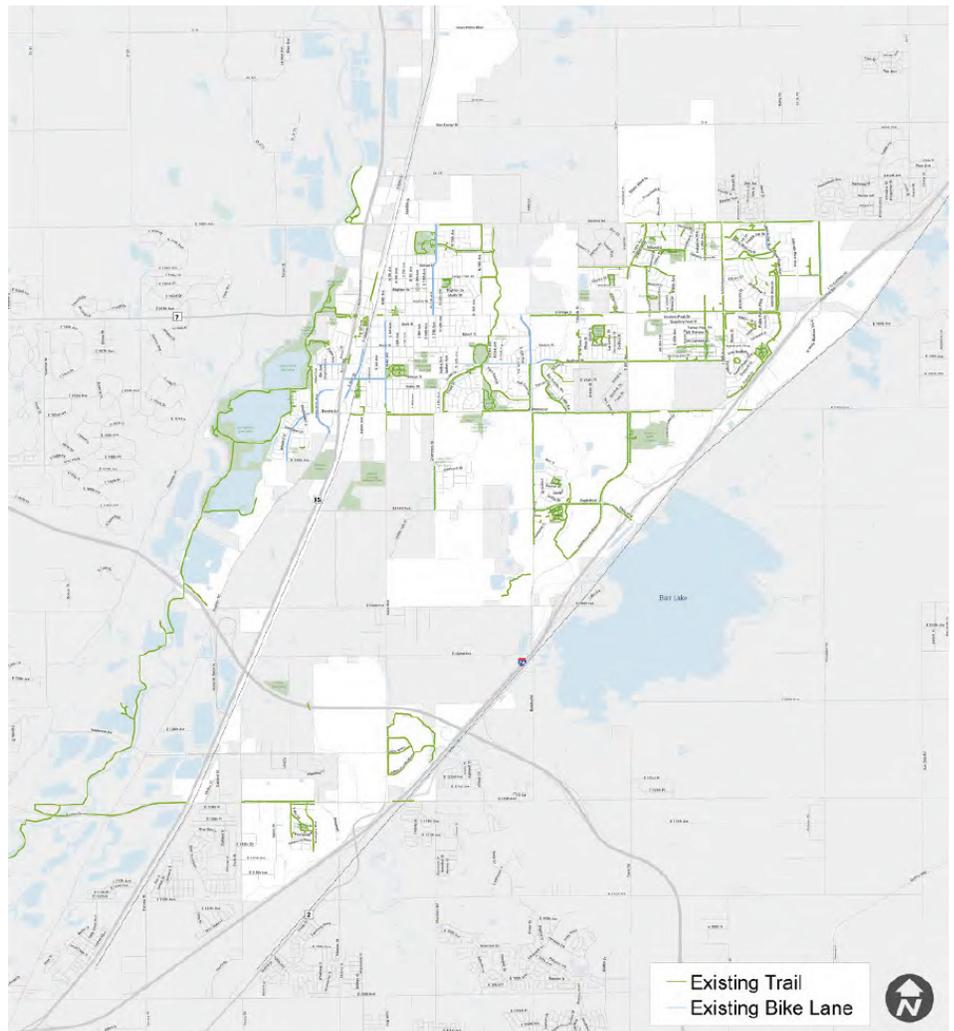


FIGURE 4: RECOMMENDED TRAIL NETWORK



ADVANCING ADAMS TRANSPORTATION MASTER PLAN (2022)

The 2022 *Advancing Adams Transportation Master Plan* guides Adams County through changes to the mobility network through 2040. The plan is framed by the three lenses of Equity, Sustainability, and Livability as it tackles the five opportunity corridors, future opportunities by transportation mode, and future mobility. The plan also identifies several performance measures and metrics by which to assess the effectiveness of the implementation strategies over time.

The plan's main goals for the pedestrian element are the following:

- Complete sidewalk gaps in high priority pedestrian areas
- Rehabilitate existing sidewalks
- Rebuild curb ramps to comply with ADA
- Implement new enhanced pedestrian street crossings
- Consider use of facilities by equestrians.

The plan identifies high, medium, and low priority corridors that allow Adams County to navigate implementing improvements based on highest need and return on investment.

The plan's main goals for the bicycle element are the following:

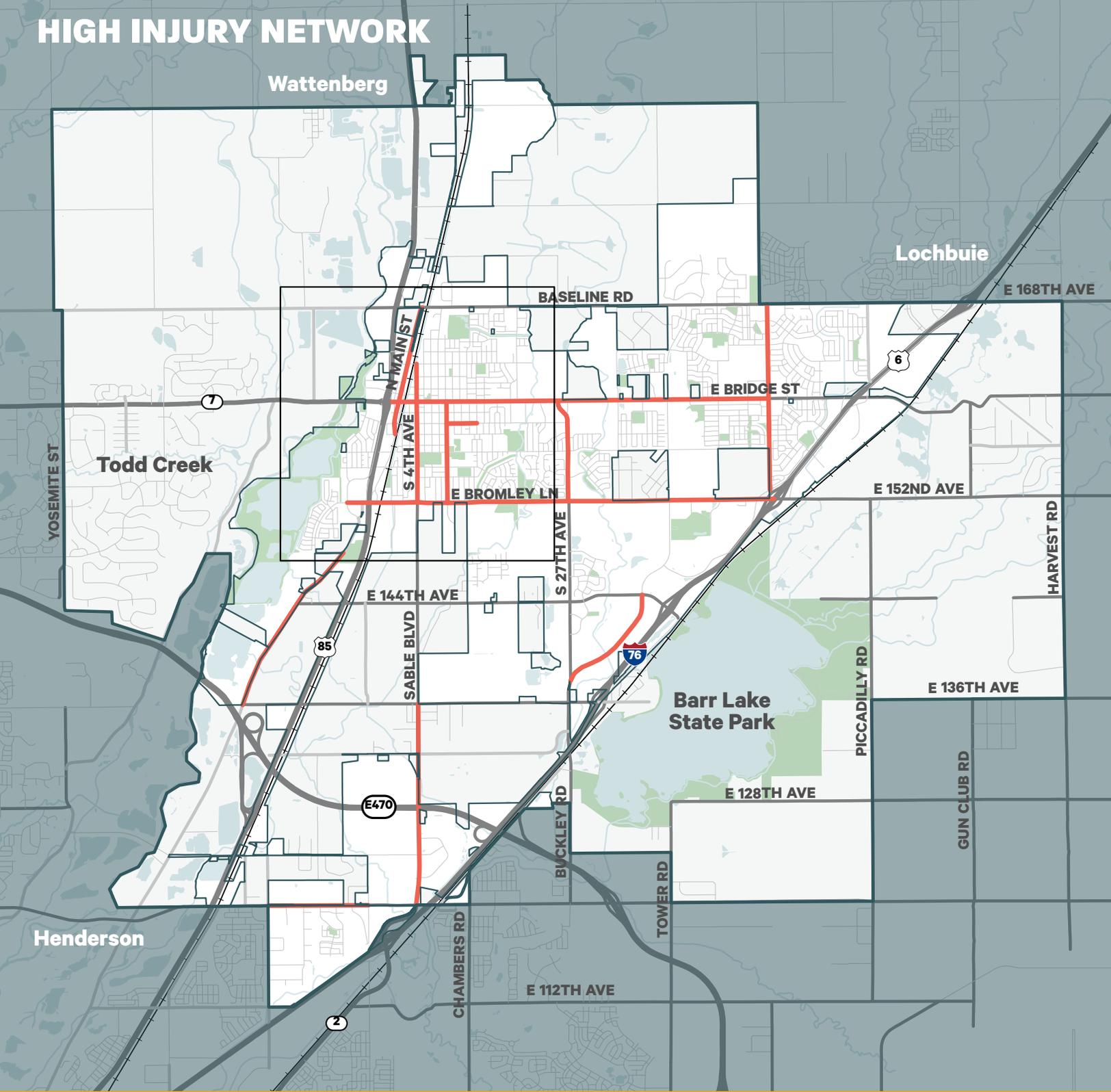
- Increase connectivity of the network
- Support biking for transportation and recreation
- Emphasize low stress connections to existing and proposed trails
- Connect with neighboring and incorporated jurisdictions for a more seamless experience

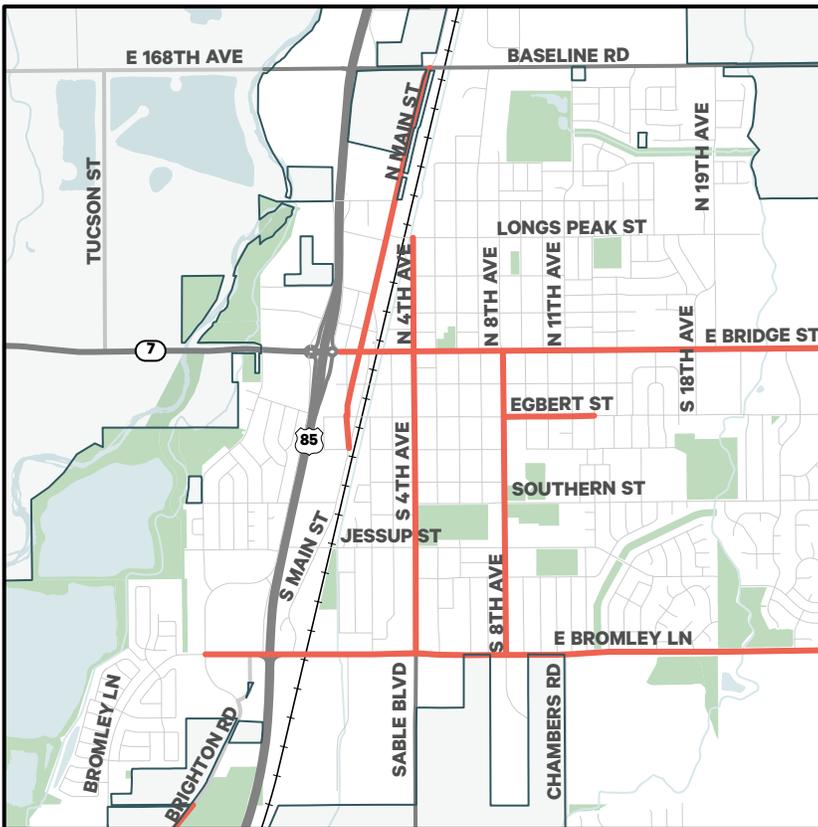
The plan also recommends programs and policies that will tremendously improve connectivity throughout both the bicycle and pedestrian networks, such as wayfinding, neighborhood connections, the Complete Streets policy, Transportation Demand Management, bike parking, Safe Routes to School, maintenance, and pedestrian crossing guidelines.

The plan identifies the City of Brighton as the lead for one specific future bicycle network project: improvements on the South Platte River Trail between 144th Avenue and Bromley Lane. There are other prioritized roadway projects, bicycle projects and trail projects identified that will impact Brighton residents and visitors, and the project lead is mostly Adams County.



HIGH INJURY NETWORK





LEGEND

- City Boundary
- Growth Boundary
- Waterways
- Parks & Open Space
- Railroads
- Street Classification**
- Highway
- Arterial
- Collector
- Local
- High Injury Network

FIGURE 5: BRIGHTON HIGH INJURY NETWORK

EXISTING CONDITIONS

The following section describes the existing bicycle, pedestrian, and multimodal network in Brighton, including corridors with frequent and severe crashes and level of comfort for people walking, rolling, and biking.

High Injury Network

The 2018 Vision Zero Action Plan identified Brighton's High Injury Network (HIN), which represents the corridors with the highest levels of fatal and severe injury crashes in the city. The plan developed the HIN through detailed analysis of crash data, resident survey feedback, and collaboration with the Vision Zero Technical Advisory Committee.

The red corridors in **Figure 5** are where about 60% of fatal and severe injury crashes have occurred in Brighton, but

only represent about 6% of Brighton's total street network. Additionally, while crashes involving bicyclists and pedestrians only account for about 3% of all crashes, they account for 21% of KSI crashes.

A significant focus of the Bicycle, Pedestrian, and Multimodal Plan will be improving safety and reducing pedestrian and cyclist-involved crashes. The HIN network can help to prioritize safety improvement investments in areas that will have the greatest impact at reducing fatal and severe injury crashes.

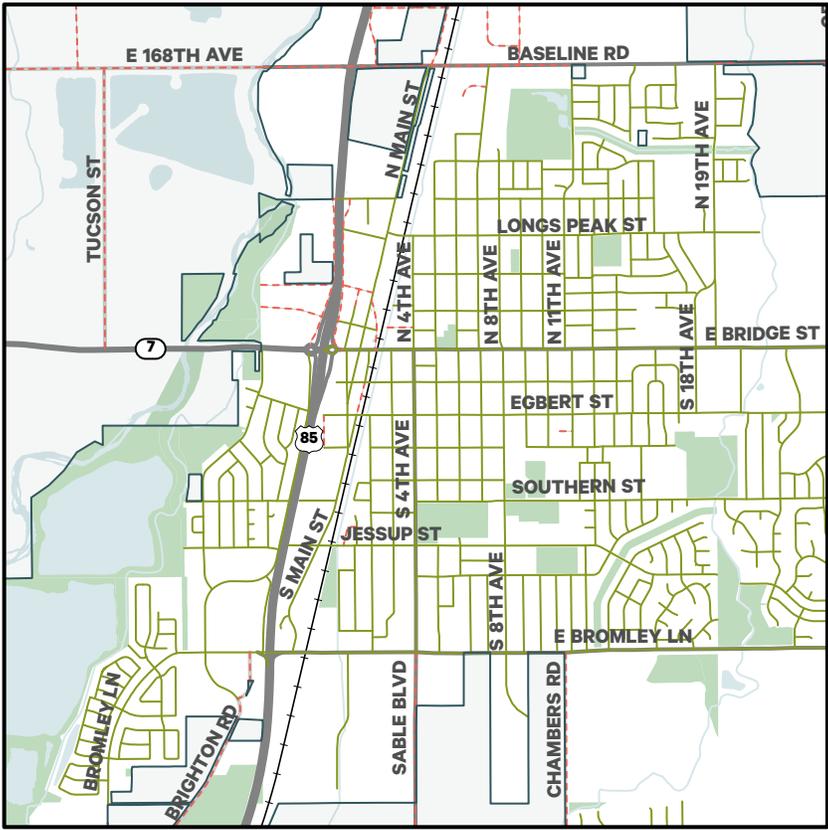


FIGURE 6: MAJOR HIGH INJURY NETWORK CORRIDORS



EXISTING PEDESTRIAN NETWORK





- LEGEND**
- City Boundary
 - Growth Boundary
 - Waterways
 - Parks & Open Space
 - Railroads
 - Street Classification**
 - Highway
 - Arterial
 - Collector
 - Local
 - Pedestrian Facilities**
 - Missing Sidewalk
 - Sidewalk
 - Trail

FIGURE 7: EXISTING PEDESTRIAN NETWORK

Existing Pedestrian Network

Figure 7 illustrates the existing pedestrian network in Brighton. Sidewalks are generally present across most of the streets in developed areas of Brighton, but sidewalk width and buffer from the street varies by location and there are some notable gaps.

Sidewalks are grouped into three overall categories: attached, detached, and missing. Attached sidewalks directly adjacent to the roadway are common in older areas of city, especially the more gridded downtown core (**Figure 8**).



FIGURE 8: ATTACHED SIDEWALK



Newer neighborhoods and select areas of the historic area around downtown have detached sidewalks (**Figure 9**) buffered from the street by a landscaped tree lawn or hardscape buffer, the current city standard for new local streets.

Missing sidewalks are more common in rural areas of Brighton outside of the city core, although gaps in the city core remain that inhibit connectivity to key destinations (**Figure 10**). For example, sidewalks are missing along Bridge Street between Sierra Street and 42nd Avenue, along 168th Avenue/Baseline Road, and along some streets near Main Street downtown.

Figure 7 illustrates key missing connections for people walking and rolling across major infrastructure barriers like US 85, I-76, E-470, and the railroads. Crossings of these highways are limited to the pedestrian bridge across US 85 (**Figure 11**) just north of Southern Street and intersections with major arterials like 168th Avenue, Bridge Street, Bromley Lane, 144th Avenue, 136th Avenue. However, these intersections can be uncomfortable for people walking and rolling due to relatively narrow attached sidewalks adjacent to higher-speed, high-volume traffic (**Figure 12**).

The roundabouts on Bridge Street adjacent to Main Street provide a key connection for those entering downtown from the Colorado Front Range Trail or the western side of the city, but are generally uncomfortable for most users given the narrow walkways, close proximity to traffic, and frequent busy crossings (**Figure 13**).



FIGURE 9: DETACHED SIDEWALK



FIGURE 10: EXAMPLE OF SIDEWALK GAP ON COLORADO FRONT RANGE TRAIL AT VETERAN'S PARK

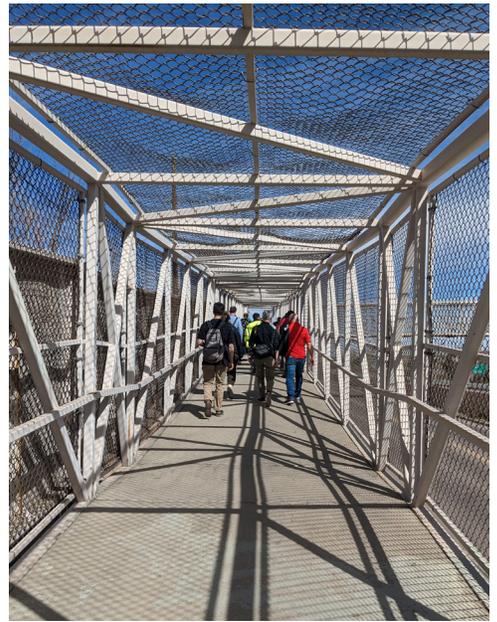
OPPOSITE PAGE:

FIGURE 11: PEDESTRIAN BRIDGE ACROSS US 85 JUST NORTH OF SOUTHERN STREET (TOP)

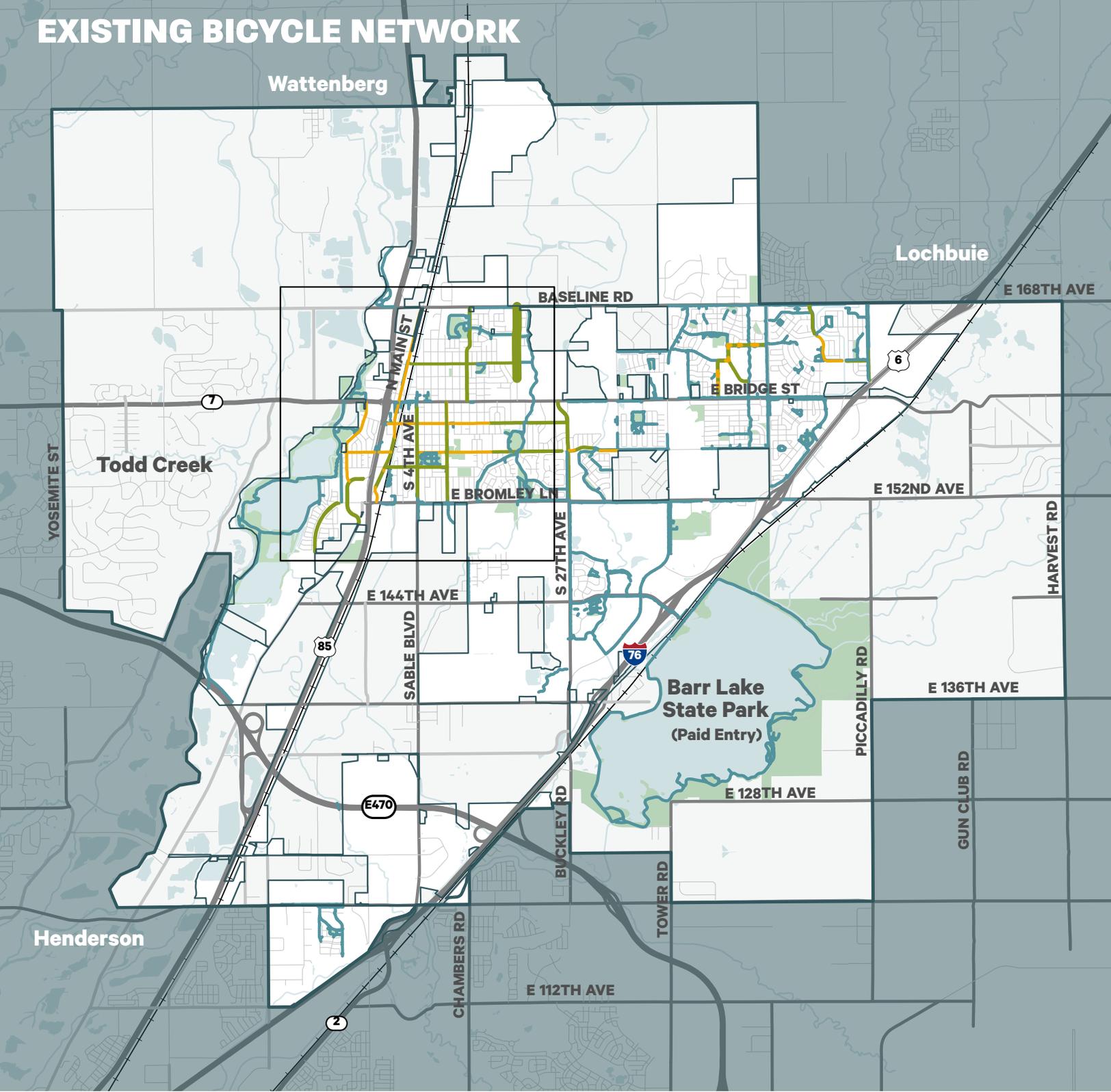
FIGURE 12: CROSSING OF US 85 AT BROMLEY STREET (MIDDLE)

FIGURE 13: CROSSING OF US 85 AT ROUNDABOUTS ON BRIDGE STREET (BOTTOM)





EXISTING BICYCLE NETWORK



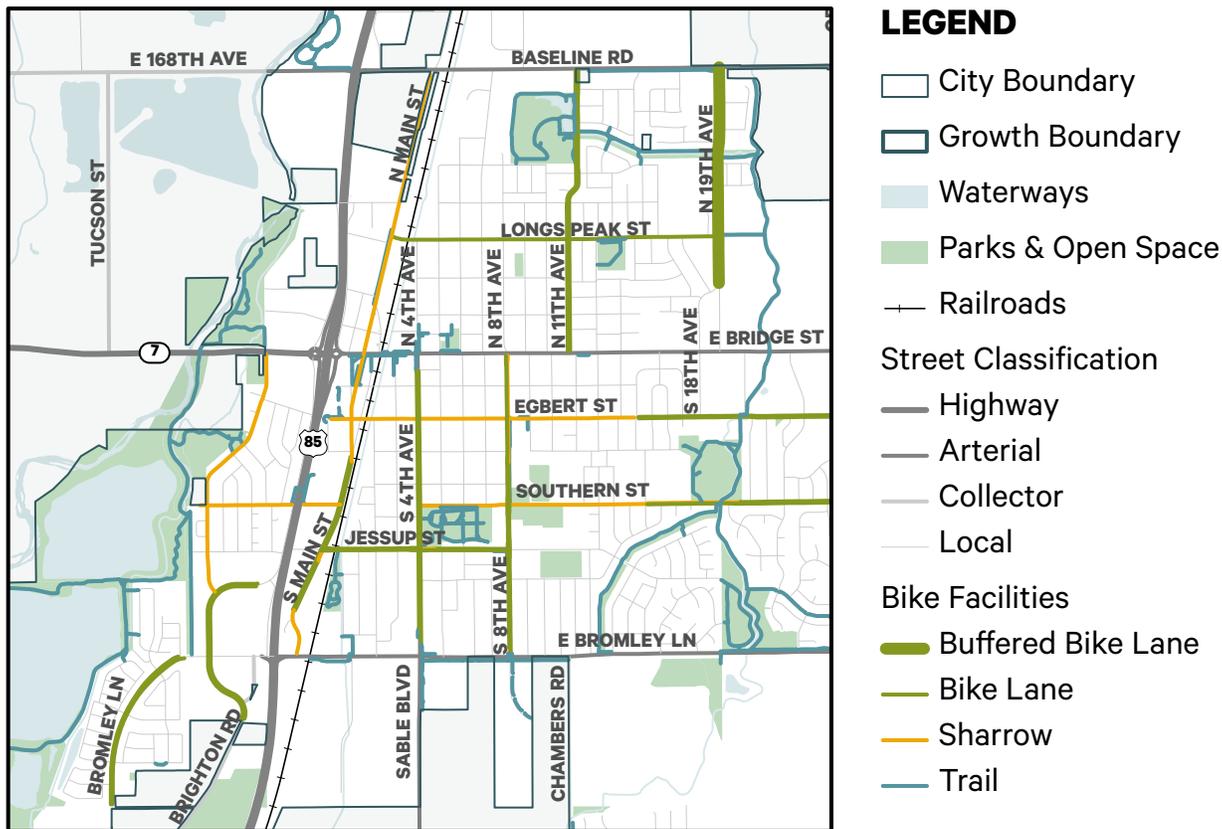


FIGURE 14: EXISTING BICYCLE NETWORK

Existing Bicycle Network

As shown in blue in **Figure 14**, Brighton has a relatively robust trail network that provides regional access and local recreational opportunities, including the Colorado Front Range Trail, Platte River Trail, and Fulton Ditch Trail. However, regional access to neighboring municipalities including Fort Lupton, Thornton, and Henderson is limited. Additionally, due to bikeways being relatively scarce on Brighton streets, connectivity to key destinations within the city is inconsistent and sometimes missing.

Existing on-street bike facilities, concentrated in the city core, include sharrows (**Figure 15**), bike lanes (**Figure 16**), and one buffered bike lane on N 19th

Avenue. Sharrows and bike lanes, while relatively comfortable for riders on a low-speed, low-volume neighborhood street, can be uncomfortable on streets with higher traffic speeds and volumes or where neighborhood streets cross busier streets.

Like the pedestrian network, major infrastructure barriers like US 85, I-76, E-470, and the railroads (**Figure 17**) detract from citywide connectivity for people biking. Beyond those barriers, key gaps in the bike network include sections of Bridge Street, Bromley Lane, 144th Avenue, 136th Avenue, and Sable Boulevard. Some streets with bike lanes like 4th Avenue, Southern Street, and Egbert Street are less comfortable facilities due to higher observed speeds and traffic volumes.





FIGURE 15: EXAMPLE OF SHARROW



FIGURE 16: EXAMPLE OF BIKE LANE





FIGURE 17: RAILROAD TRACKS AS A BARRIER



Level of Traffic Stress

WHAT IS LEVEL OF TRAFFIC STRESS (LTS)?

Level of Traffic Stress (LTS) is a way to measure people’s comfort walking and biking along a street. LTS was originally developed by Mekuria, Furth, and Nixon (2012) in *Low Stress Cycling and Network Connectivity* to assign a street a score from 1 to 4 based on a combination of factors. These factors include the type of pedestrian and bicycle facility, the number of travel lanes, traffic speed, and traffic volumes on the adjacent street.

Streets with LTS 1 and 2 are considered low stress, while streets with LTS 3 or 4 are considered higher stress for people walking, rolling, and biking. An LTS of 1 indicates the most comfortable, least stressful facility that accommodates people of all ages and abilities – one which a child would be comfortable walking or biking, for example.

An LTS of 4 indicates the least comfortable, most stressful facility that the majority of people would avoid using – one in which only a very strong and fearless cyclist would ride. A facility with an LTS of 2 is also relatively low stress and accommodating, while a facility with an LTS of 3 would likely only attract those familiar with biking and willing to accept a slightly more stressful environment.

These scores correlate with the four types of cyclists described in **Figure 19**, originally studied by Roger Geller, Bicycle Coordinator for the City of Portland, and a pattern confirmed nationally.¹ Only about 1% of cyclists are “strong and fearless,” meaning they are comfortable in any kind of street, regardless of the presence of designated bike lanes or trails. Another 7% of cyclists are “enthused and confident,” and can tolerate higher-stress facilities, but not biking in mixed traffic on a major arterial, for instance.

The majority of the population – 60% – are “interested but concerned” cyclists who would like to ride but require bicycle high comfort (LTS 1 or 2) facilities separated and/or protected from traffic. Not shown in **Figure 19**, about a third of the population is “no way no how” cyclists who are unable or uninterested in biking, regardless of the facility available.

METHODOLOGY

The following methodology was used to develop the draft LTS maps, with some manual changes based on observations in Google StreetView, during the downtown walk audit, during the bike audit, and feedback from city staff. LTS scoring uses a “weakest link” approach in which the overall score is the lowest of the individual scores for a facility. For example, in Table 3, if a detached sidewalk is on a street with 4 lanes but the speed limit is 45 mph, it will be categorized as LTS 4 due to the higher speed.

¹ Geller, R. “Four Types of Cyclists,” Portland Bureau of Transportation, Portland, OR, 2006. <http://www.portlandoregon.gov/transportation/article/264746>.



FIGURE 18: PEDESTRIAN LEVEL OF TRAFFIC STRESS (LTS) RATINGS

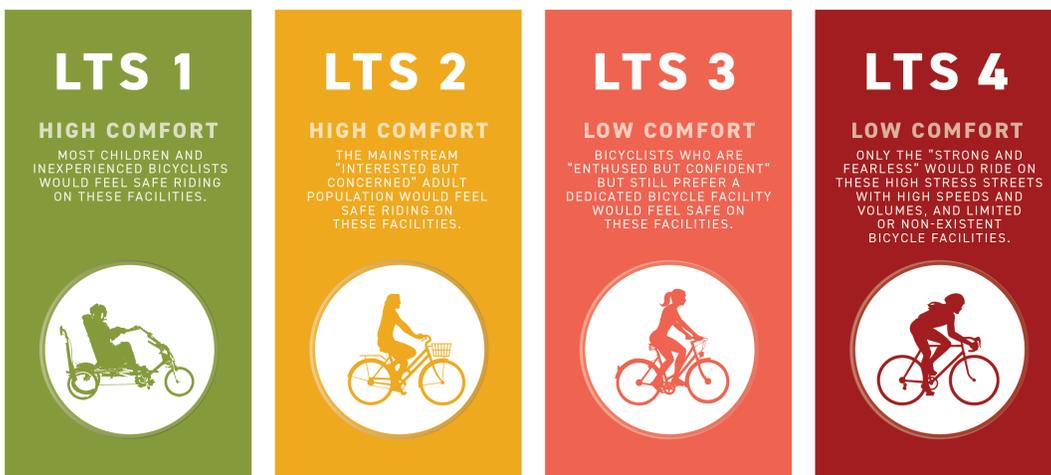


FIGURE 19: BICYCLE LEVEL OF TRAFFIC STRESS (LTS) RATINGS



PEDESTRIAN LTS

A trail meeting design standards scores an LTS 1.

While sidewalks are generally 6-8 feet and may or may not have buffers between the facility and travel lanes, trails are usually 10-12 feet and have a significant horizontal and/or vertical buffer from the street. The bicycle network plan and pedestrian network plan describes trails and buffers in greater detail.

TABLE 3: LTS SCORING FOR DETACHED SIDEWALKS

	LTS 1	LTS 2	LTS 3	LTS 4
Lanes	2-3		4-5	6
Speed limit	25 mph	30 mph	35 mph	40 mph+

TABLE 4: LTS SCORING FOR ATTACHED SIDEWALKS

	LTS 1	LTS 2	LTS 3	LTS 4
Lanes	2-3		4-5	6
Speed limit	20 mph	25 mph	30 mph	35 mph+

BICYCLE LTS

A trail or raised cycle track or protected bike lane meeting design standards scores an LTS 1.

TABLE 5: LTS SCORING FOR BUFFERED BIKE LANES

	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph
5-6 lanes	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4
3-4 lanes	LTS 2	LTS 2	LTS 2	LTS 3	LTS 3	LTS 3
1-2 lanes	LTS 1	LTS 1	LTS 2	LTS 3	LTS 3	LTS 3

TABLE 6: LTS SCORING FOR STRIPED BIKE LANES

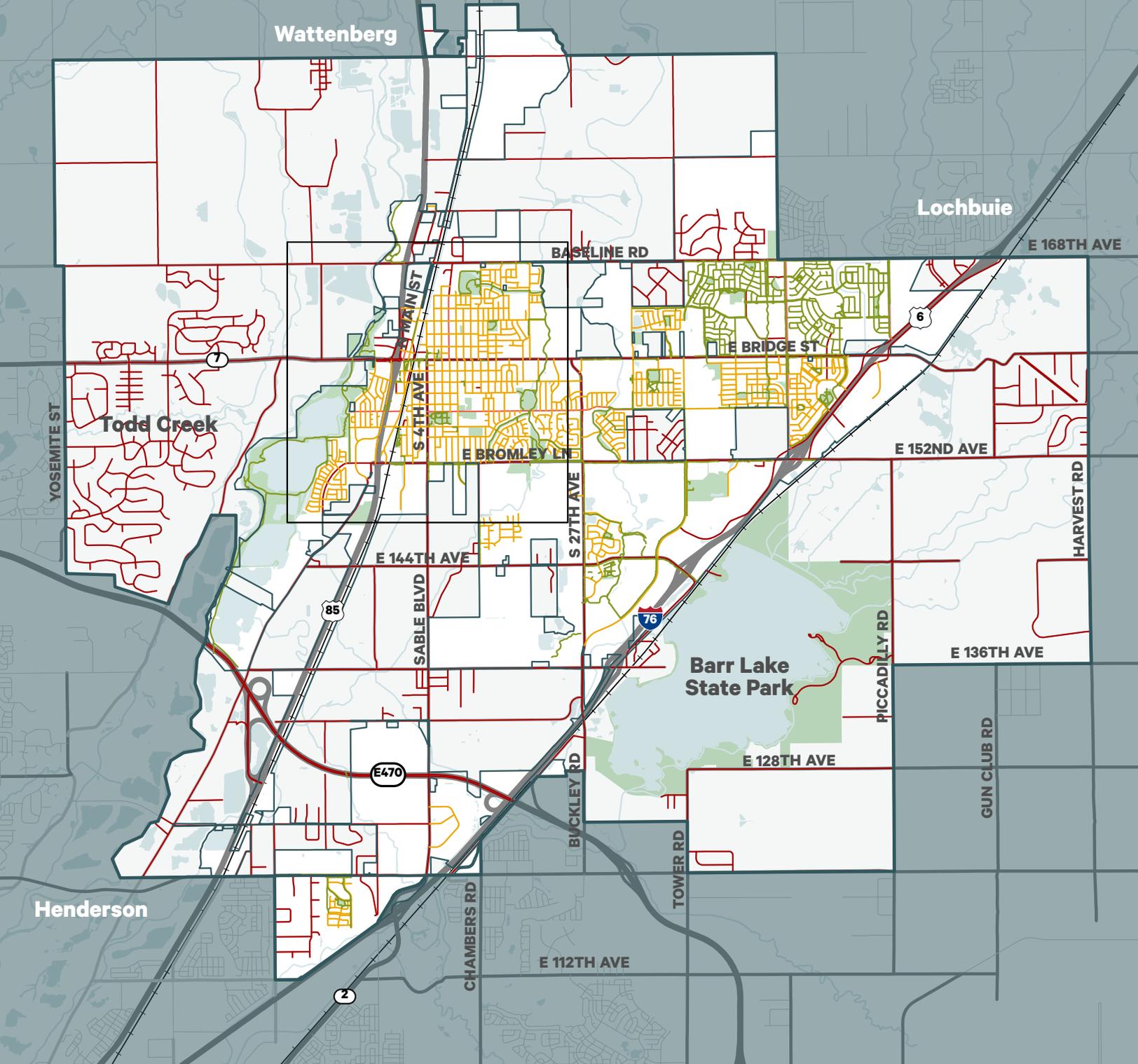
	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph
5-6 lanes	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4
3-4 lanes	LTS 2	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4
1-2 lanes	ADT >1000	LTS 2	LTS 2	LTS 2	LTS 3	LTS 3
	ADT ≤1000	LTS 1	LTS 2	LTS 2	LTS 3	LTS 4

TABLE 7: LTS SCORING FOR SIGNED BIKE ROUTES/SHARROWS/NO FACILITY/MIXED TRAFFIC

	Average Daily Traffic (ADT)	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph
5-6 lanes	Any	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4	LTS 4
3-4 lanes	>8000	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4	LTS 4
	≤8000	LTS 3	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4
1-2 lanes	>3000	LTS 2	LTS 2	LTS 3	LTS 3	LTS 4	LTS 4
	1001-3000	LTS 2	LTS 2	LTS 2	LTS 3	LTS 3	LTS 4
	≤1000	LTS 1	LTS 1	LTS 2	LTS 2	LTS 3	LTS 3



PEDESTRIAN LEVEL OF TRAFFIC STRESS (LTS)



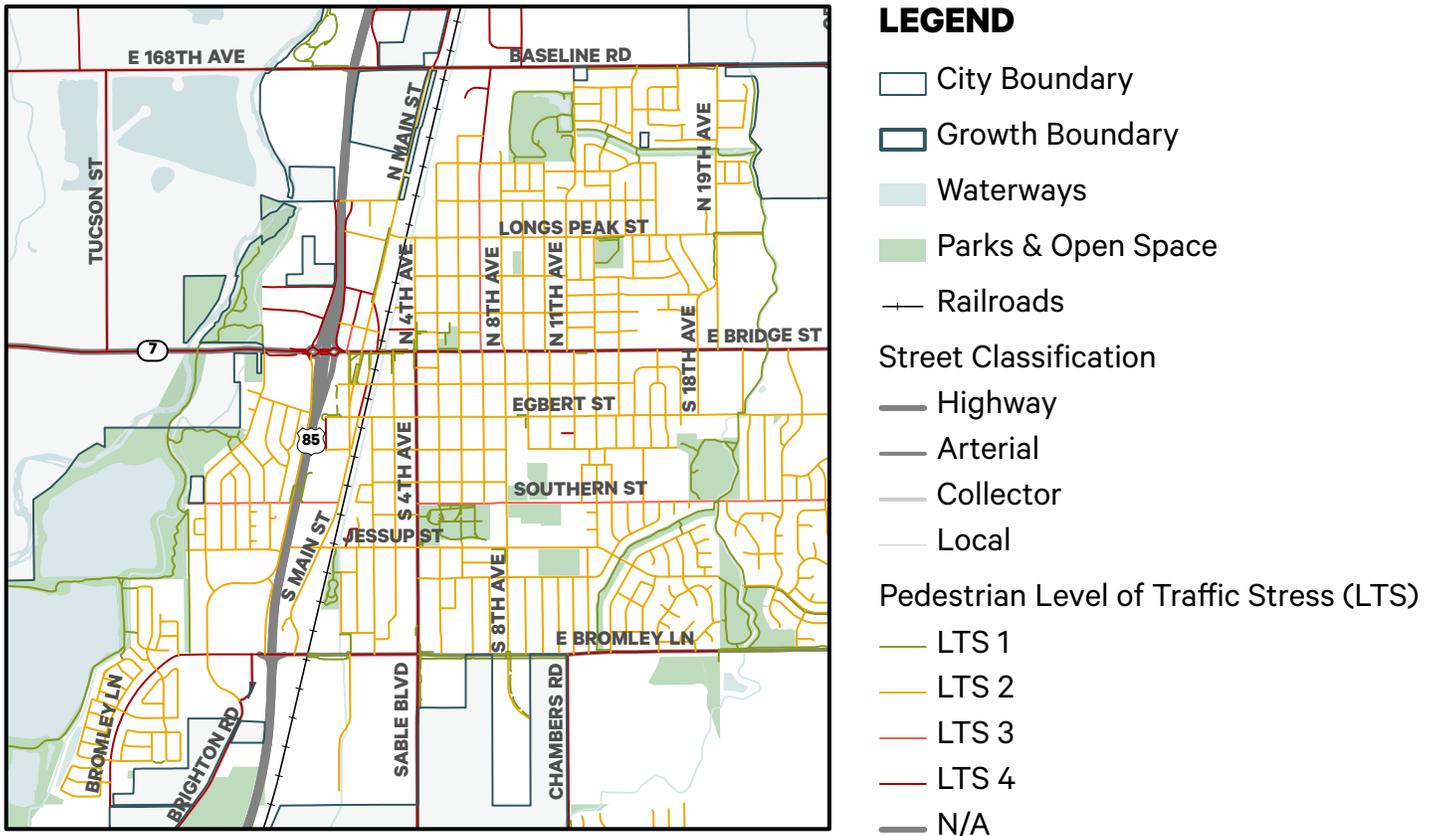


FIGURE 20: PEDESTRIAN LEVEL OF TRAFFIC STRESS (LTS) MAP

LTS FINDINGS

As shown in **Figure 20** and **Figure 21**, much of the current pedestrian and bicycle networks score as higher-comfort facilities. However, collectors and major arterials, which provide key connections, are generally much higher stress streets for people walking and biking, scoring LTS 3 or 4. These corridors are not designed to support the majority of bicycle riders or people walking in the city. The goal for this plan will be to establish high-comfort facilities that

cater to “interested but concerned” riders so that the active transportation network can be used by all ages and abilities.

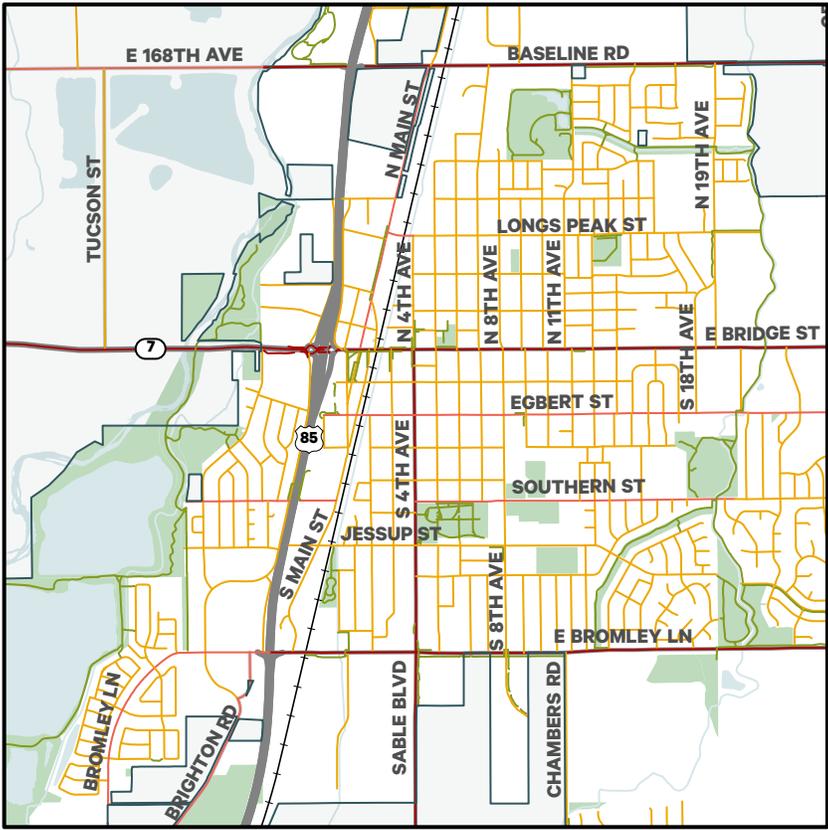
Neighborhood streets with detached sidewalks score best (LTS 1), whereas local streets with attached sidewalks still score as comfortable facilities (LTS 2) due to lower traffic volumes and speeds. Higher-volume, higher-speed arterial streets without sufficiently separated walkways score as high stress walking facilities, as does any street with missing sidewalks.

The existing LTS maps show critical gaps in the pedestrian and bicycle network today where the existing facilities do not provide a sufficient level of comfort for people walking, rolling, and biking. The LTS maps are a critical component in developing recommendations for the active transportation network and street design.



BICYCLE LEVEL OF TRAFFIC STRESS (LTS)





LEGEND

- City Boundary
- Growth Boundary
- Waterways
- Parks & Open Space
- Railroads
- Street Classification**
- Highway
- Arterial
- Collector
- Local
- Bicycle Level of Traffic Stress (LTS)**
- LTS 1
- LTS 2
- LTS 3
- LTS 4
- N/A

FIGURE 21: BICYCLE LEVEL OF TRAFFIC STRESS (LTS) MAP



COMMUNITY ENGAGEMENT FINDINGS

The public and stakeholder engagement process was designed to reach a diverse cross section of the city reflective of the broader community interest. Community involvement was essential to identify issues and priorities and formulate a vision for the plan. Development of the plan was done using two rounds of community engagement. The first round occurred early in the planning process to identify issues, concerns, and desires of the community related to multimodal transportation in Brighton. The second round was conducted later in the project to solicit input on draft recommendations and to identify priorities.

Format and Strategy of First Round of Engagement

The first phase of community engagement included three stakeholder focus groups, a downtown walk audit, bike audit, online survey, and interactive map.

STAKEHOLDER FOCUS GROUP 1: PARKS AND RECREATION ADVISORY BOARD (PRAB) & BIKE BRIGHTON

Close collaboration with the Bike Brighton Sub-Committee of the Parks and Recreation Advisory Board (PRAB) and the PRAB was essential for plan success. Members of Bike Brighton provided insight on many of the local bicycle-related issues and potential solutions.

Project staff attended a joint meeting of the PRAB and Bike Brighton on March 1, 2023, which was attended by about 25 stakeholders. Key topics discussed by PRAB and Bike Brighton members included:

- The lack of east-west connectivity across US 85 and I-76
- The need for the plan to focus on crossings and not just segments
- That the plan should aim for LTS scores of 1 or 2 within core bicycle network to support riders of all ages and abilities
- The need for wayfinding and signage

STAKEHOLDER FOCUS GROUP 2: BRIGHTON & ADAMS COUNTY STAFF

Project staff hosted a stakeholder focus group on March 8, 2023, which was attended by about 30 Brighton and Adams County department staff from Community Development, Parks & Recreation, Open Space, Streets, Fire Department, Police, and other divisions. The goal of this focus group was to communicate the purpose of the plan and open lines of communication about the effort across departments from the start, as well as to collect thoughts and concerns about the existing active transportation network. Key topics discussed by these stakeholders included:

- The need for a connected network and completion of gaps
- The lack of east-west connectivity across US 85 and I-76
- The need for wayfinding and signage
- Their desire for guidance on maintenance of proposed walkways and bikeways (such as funding options, snow removal, and striping)
- The desire for the plan to acknowledge the importance of land use and development strategies that support walking and biking

STAKEHOLDER FOCUS GROUP 3: OLDER ADULTS & RTD

Project staff hosted a stakeholder focus group on March 14, 2023, which was attended by about 15 stakeholders, including older adult community members, staff from the Eagle View Adult Center, a representative from the Regional Transportation District (RTD), and others. The goal of this focus group was to communicate the purpose of the plan and collect thoughts and concerns about the existing active transportation network from those who may have mobility challenges and have unique needs when navigating the system. Key topics discussed by these stakeholders included:

- The need for a connected network and completion of gaps
- The need for the city to coordinate sidewalks and bikeways with development so that it happens correctly from the start
- The need for the city to model best





FIGURE 22: DOWNTOWN WALK AUDIT

practices when it comes to construction of ADA-accessible facilities

- Concern about current sidewalk and curb ramp design not catering to people with mobility challenges or who use assisted mobility devices

WALK AUDIT

Project staff hosted a downtown walk audit on March 14, 2023, which was attended by about 30 stakeholders from the community. The purpose of this walk audit was to observe strengths and challenges of existing sidewalks and crossings around downtown, the Colorado Front Range Trail, and local neighborhoods. Key takeaways from the walk audit included the following:

- Verified proposed LTS methodology was generally reflective of people's experience walking on different streets
- Desire for safer crossings on Main Street, traffic calming, and better options for people biking
- Attendees felt uncomfortable on

1st Avenue and Bridge Street at the roundabouts due to missing sidewalks, lack of ADA accessible ramps, and crossings that are not visible to drivers

- Attendees identified that an improved connection between the Colorado Front Range Trail and downtown along Bridge street as important given it is a key link for the bike network and could help generate economic activity downtown from trail riders
- Attendees felt comfortable on the Colorado Front Range Trail, but thought it needed more wayfinding and signage, especially at key entrances to the city
- Attendees felt the sidewalks in the neighborhood west of US 85 were pretty comfortable, but narrow and in need of maintenance
- Attendees felt that the entrance to the city and the Pavilions east of the pedestrian bridge was not intuitive and needed better wayfinding and signage to provide a more clear route for pedestrians and cyclists





FIGURE 23: BIKE AUDIT

BIKE AUDIT

Project staff hosted a bike audit on April 12, 2023, which was attended by about 20 stakeholders from the community. The purpose of this bike audit was to observe strengths and challenges of existing bike facilities and crossings around downtown, the Fulton Trail, and local neighborhoods. Key takeaways from the bike audit included the following:

- LTS methodology generally matched experience of people on the bike audit
- Attendees had concerns about blind corners/poor visibility at crossings for people biking
- Concerns that certain streets such as 19th Avenue and Southern Street could be much more uncomfortable for cyclists during school pick-up and drop-off times when there were greater vehicle volumes
- Concerns that wider travel lanes on certain streets such as Longs Peak Street could encourage drivers to speed
- The train tracks posed a major barrier as the group had to wait five minutes for a train to go by, and it was uncomfortable due to noise and proximity
- Concerns about rollover curbs in neighborhoods rather than sidewalks, and lack of curb ramps



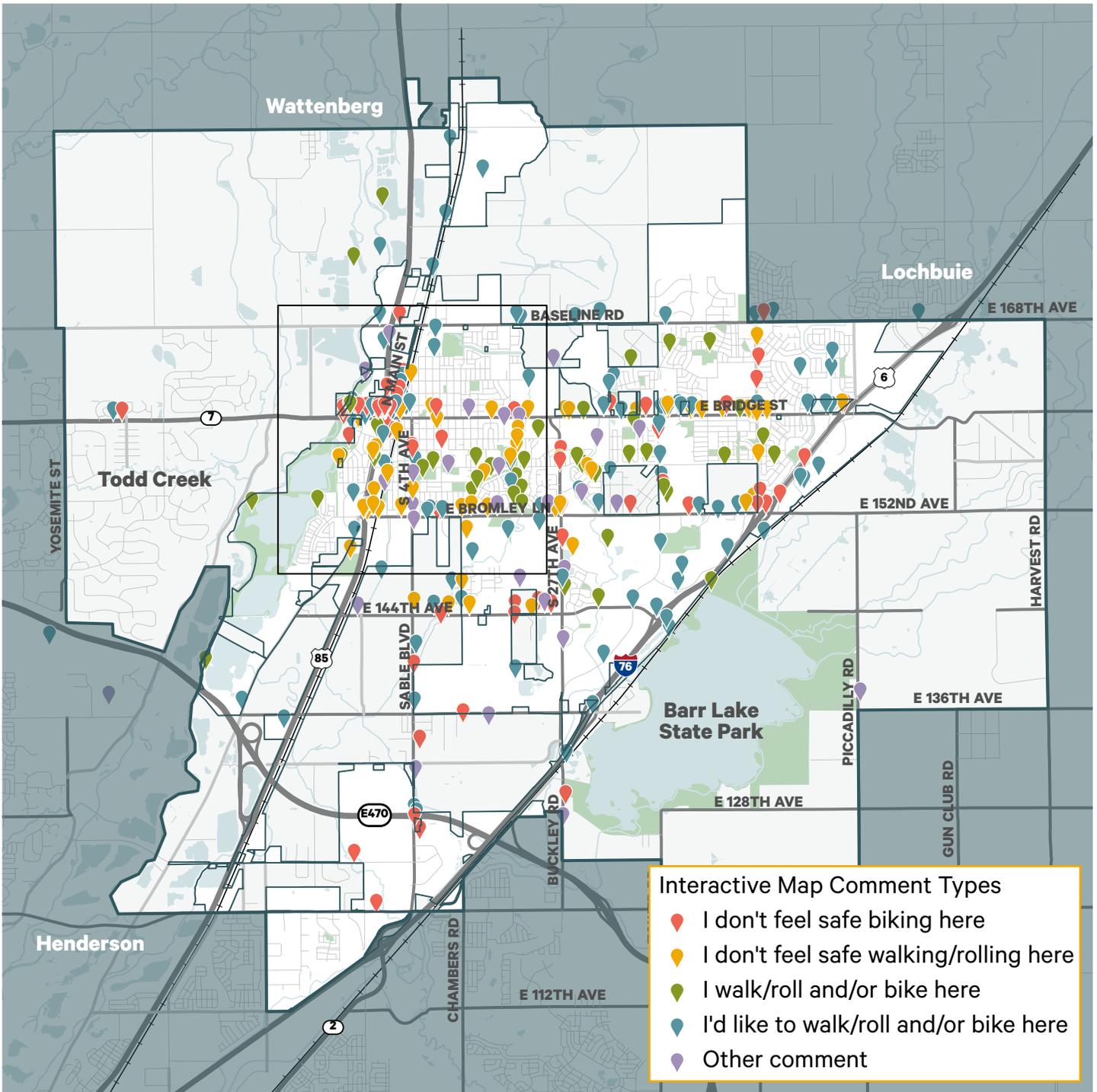


FIGURE 24: ALL INTERACTIVE MAP COMMENTS (EXPLORED BY THEME FOLLOWING)

ONLINE SURVEY & INTERACTIVE MAP

Understanding that people prefer to participate in the planning process in different ways, and that not everyone can be available for traditional in-person community meetings, the project team developed an online survey and interactive map. These platforms of input

were open to the public for almost two months, from February 3 to April 7.

The survey included questions about respondents' current and desired use of active transportation (walking, rolling, and biking) for trips, challenges they experience with the existing system, and some demographic questions. The interactive map allowed respondents to place markers



on a map to indicate specific locations they currently walk, roll, and bike, where they would like to, areas of discomfort and safety concerns, and other geographic comments.

The city publicized these platforms through their social media channels, press releases, the 27 J School District, Recreation Center, Eagle View Adult Center, Daily Post, Greater Brighton Chamber of Commerce & Tourism Bureau weekly newsletter, Bicycle Colorado's weekly newsletter, and other channels.

Ultimately, the online survey received 156 responses and respondents placed 344 comments on the interactive map. **Figure 24** shows all comments received, which the following sections explore in greater detail.

Demographics of Respondents

The goal for the survey and map was to collect feedback that accurately reflected community sentiment. Demographics of respondents generally matched those of the City of Brighton as a whole.

AGE

The age of respondents was fairly evenly divided between those 35 or under, 36 to 55, or 56 or older (**Figure 25**), skewing slightly older.

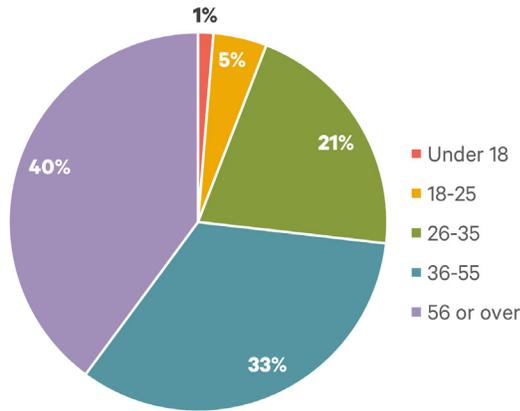


FIGURE 25: AGE OF RESPONDENTS

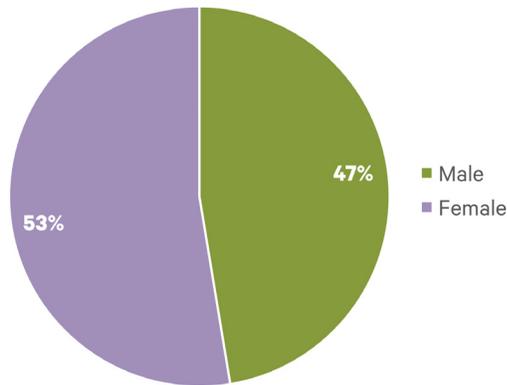


FIGURE 26: GENDER OF RESPONDENTS

GENDER

Roughly equal shares of men and women responded to the survey, with slightly more women completing it.

ASSOCIATION WITH BRIGHTON

Over 75% of respondents live in Brighton, and the majority of other respondents work, go to school, shop, and/or own a business in Brighton (**Figure 27**).

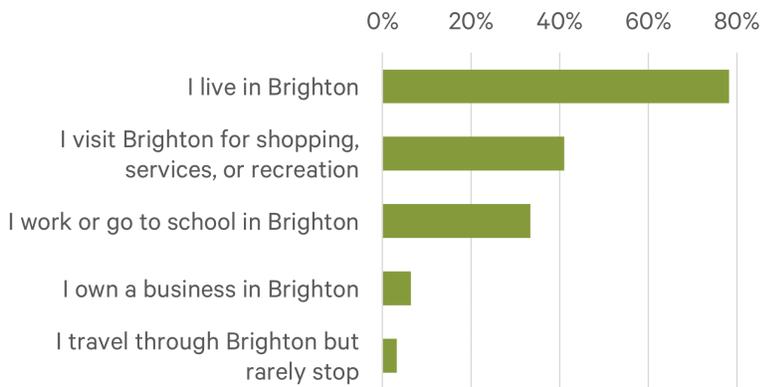


FIGURE 27: RESPONDENT ASSOCIATION WITH BRIGHTON

TYPICAL MODE OF TRANSPORTATION

Nearly 90% of survey respondents indicated they use a personal vehicle as their primary mode of transportation, with less than 10% traveling primarily by bike (**Figure 28**). Five respondents walk, two use a wheelchair, and two rely on the RTD bus system.

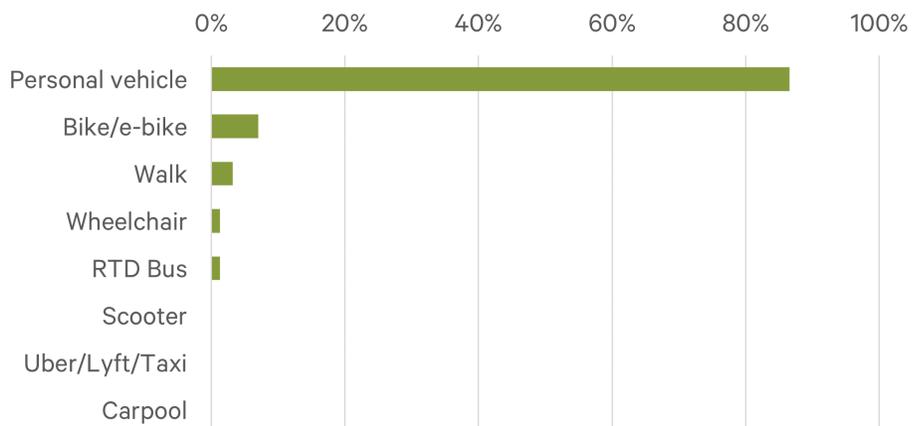


FIGURE 28: TYPICAL MODE OF TRANSPORTATION OF RESPONDENTS



These responses illustrate that most members of the community rely on a car for transportation today. While few respondents use modes other than a car today, this question allowed respondents to choose just one answer, so they may still use alternate modes less often.

CURRENT & DESIRED TRAVEL PATTERNS

The survey also asked respondents about what types of trip types they currently complete by walking/rolling and/or biking, and what trip types they would like to be able to complete using active transportation. Trip types completed today by active transportation are most commonly recreational.

Pedestrian and Cyclist Demand

Most respondents – 88% – would like to be able to walk, roll, and/or bike for more types of trips than they do currently (Figure 29).

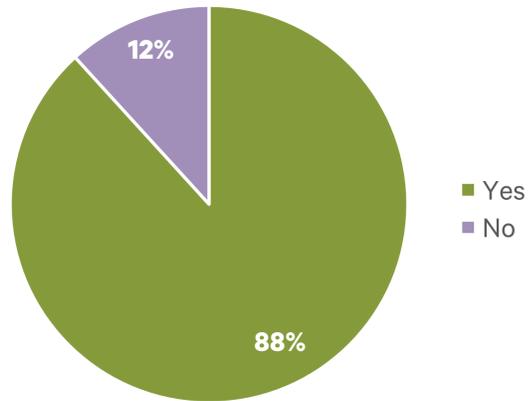


FIGURE 29: ANSWER TO WHETHER RESPONDENTS WOULD LIKE TO USE ACTIVE TRANSPORTATION MORE OFTEN

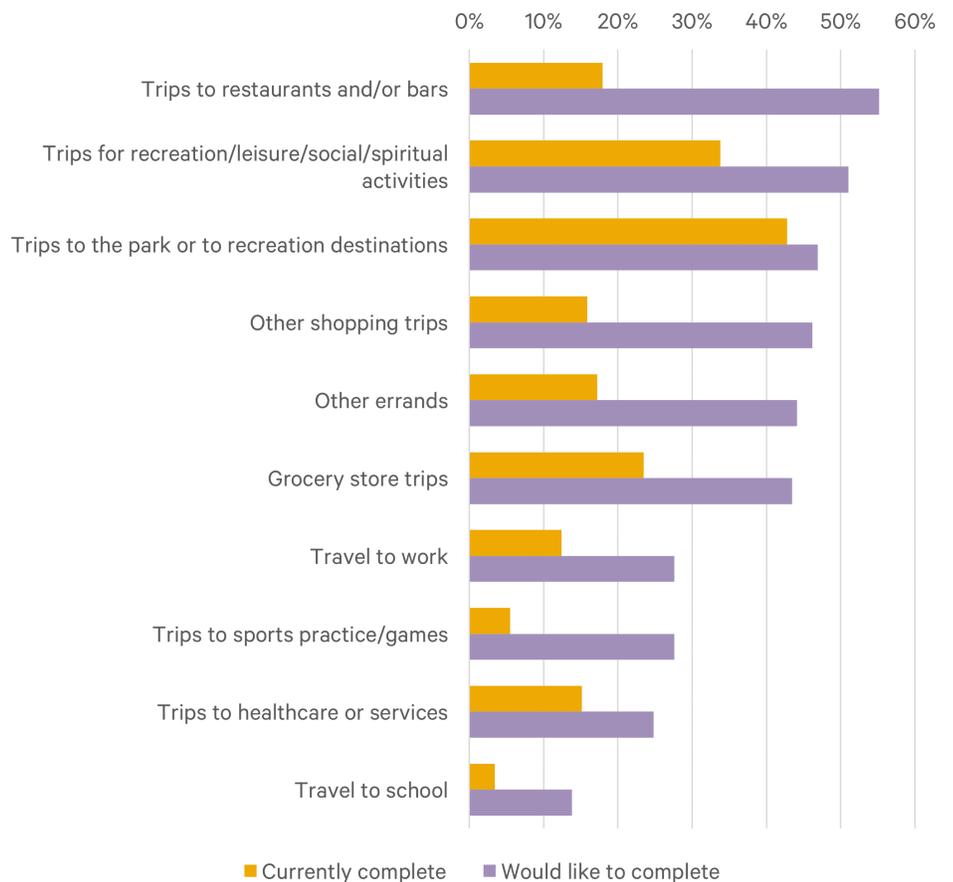


FIGURE 30: CURRENT & DESIRED TRIP TYPES



WHERE PEOPLE CURRENTLY WALK, ROLL, AND BIKE



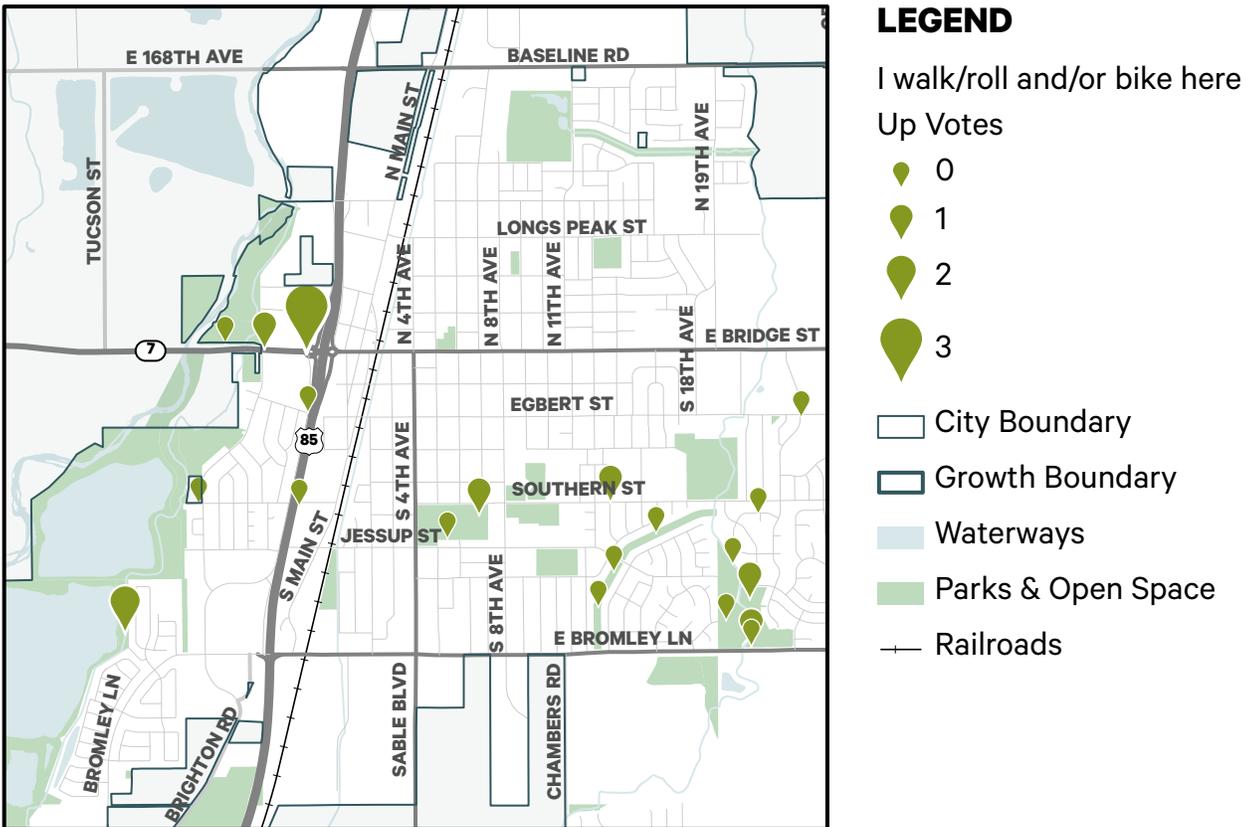


FIGURE 31: WHERE PEOPLE CURRENTLY WALK, ROLL, AND BIKE IN BRIGHTON

Respondents would like to complete more types of trips by walking/rolling and biking - especially trips for utilitarian purposes such as to restaurants & bars, and for shopping & errands. (Figure 30). These utilitarian trips represent the largest gap between where people currently walk and bike and where they would like to walk and bike.

The online interactive map allowed respondents to indicate areas they currently walk, roll, and bike (Figure 31). The primary locations respondents currently use active transportation are along neighborhood streets and existing recreational trails including:

- Colorado Front Range Trail
- Platte River Trail
- Fulton Ditch Trail
- Memorial Trail
- Brighton Lateral Ditch Trail



WHERE PEOPLE WOULD LIKE TO WALK, ROLL, AND BIKE



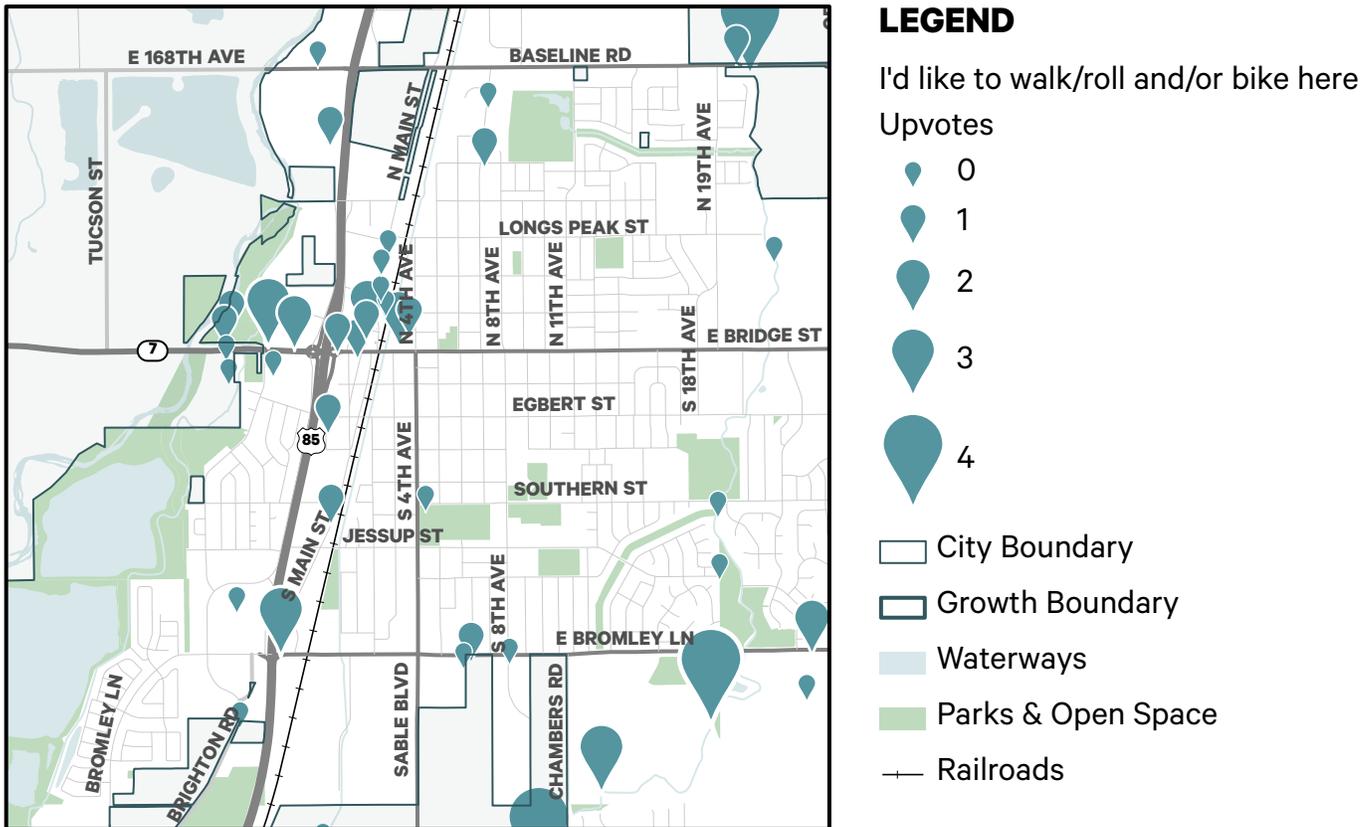


FIGURE 32: WHERE PEOPLE WOULD LIKE TO WALK, ROLL, AND BIKE IN BRIGHTON

The online interactive map also allowed respondents to indicate areas they would like to be able to walk, roll, and bike (**Figure 32**). Respondents are interested in using active transportation to access new destinations including:

- Baseline Road
- Bridge Street east of Telluride Street to just east of I-76 to access neighborhoods, businesses, and schools
- Chambers Road for better access from the south to shopping
- 136th Avenue to connect from Brighton Road and trail system to Barr Lake
- Sable Boulevard for better access from the south, especially across E-470
- Extension of the Fulton Ditch Trail south of Bromley to access Brighton Oasis Family Aquatic Park and southern Brighton
- Barr Lake access across I-76
- Access across I-76
- Downtown Brighton, Main Street, and Pavilions
- Roundabouts on Baseline Road to access trail system
- A pedestrian bridge to connect Jessup Street across the Fulton Ditch
- Neighboring municipalities including Fort Lupton and Thornton



Challenges for Walking, Rolling, and Biking

WALKING/ROLLING

The survey asked respondents to select the biggest challenges associated with walking and rolling in Brighton.

As shown in **Figure 33**, the most-cited challenges for walking and rolling are missing sidewalks (75% of respondents), missing or poor crossings (63% of respondents), uncomfortable street conditions (57% of respondents), and poor sidewalk and trail maintenance (38% of respondents).

Importantly, all of the top five concerns are related to infrastructure, and within the realm of influence of this plan. Respondents find more intractable issues like long travel distances and weather less of a challenge.

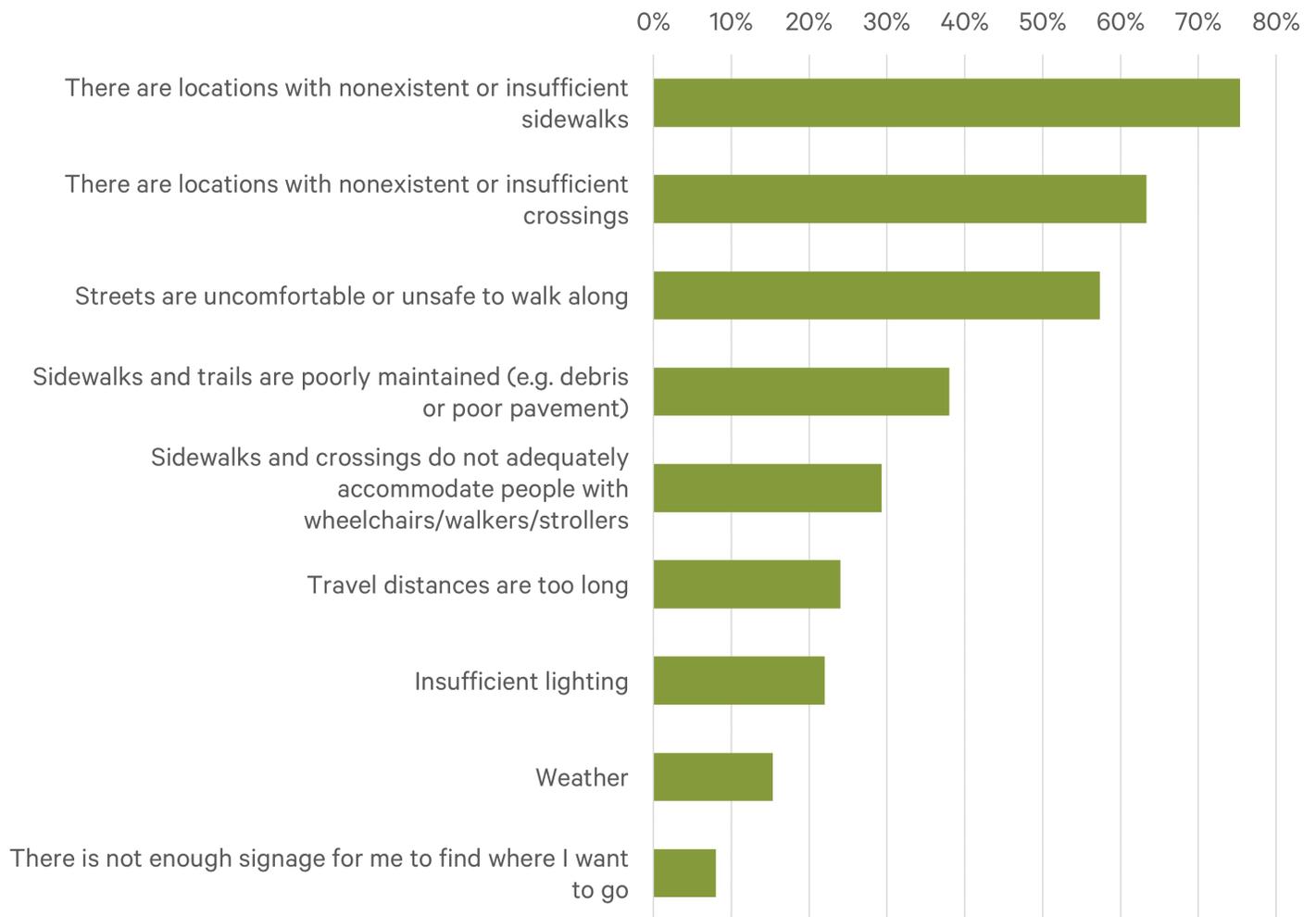


FIGURE 33: MOST-CITED CHALLENGES TO WALKING & ROLLING



BIKING

The survey also asked respondents to select the biggest challenges associated with biking in Brighton.

As shown in **Figure 34**, the most-cited challenges for biking are lack of bike facilities (71% of respondents), uncomfortable street conditions (70% of respondents), uncomfortable crossings (57% of respondents), lack of bike parking (26% of respondents), and poor maintenance (24% of respondents).

Importantly, all of the top five concerns are related to infrastructure, and within the realm of influence of this plan. Respondents find more intractable issues like weather and long travel distances less of a challenge. The issue of bike theft is closely related to the lack of secure bike parking and storage.

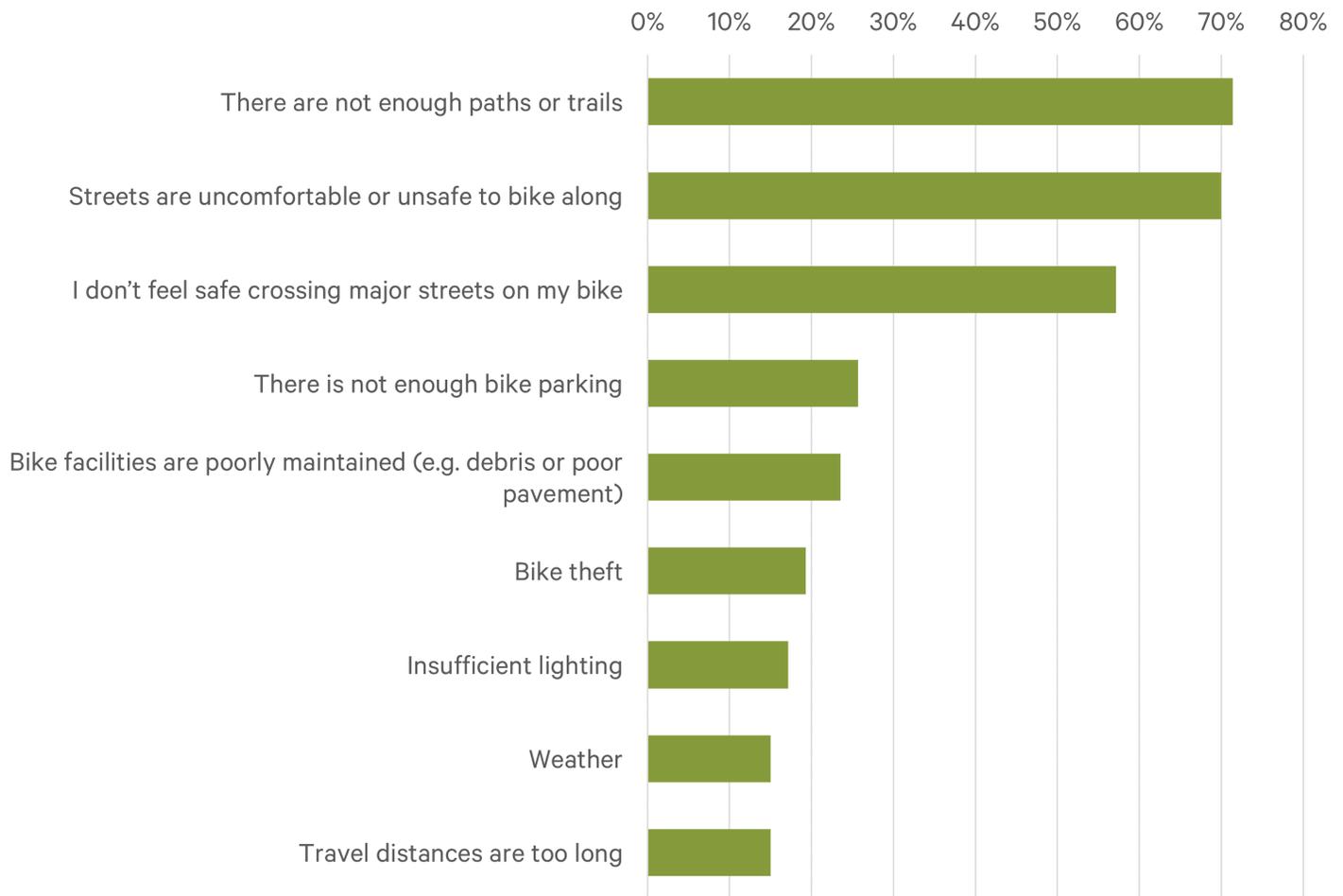
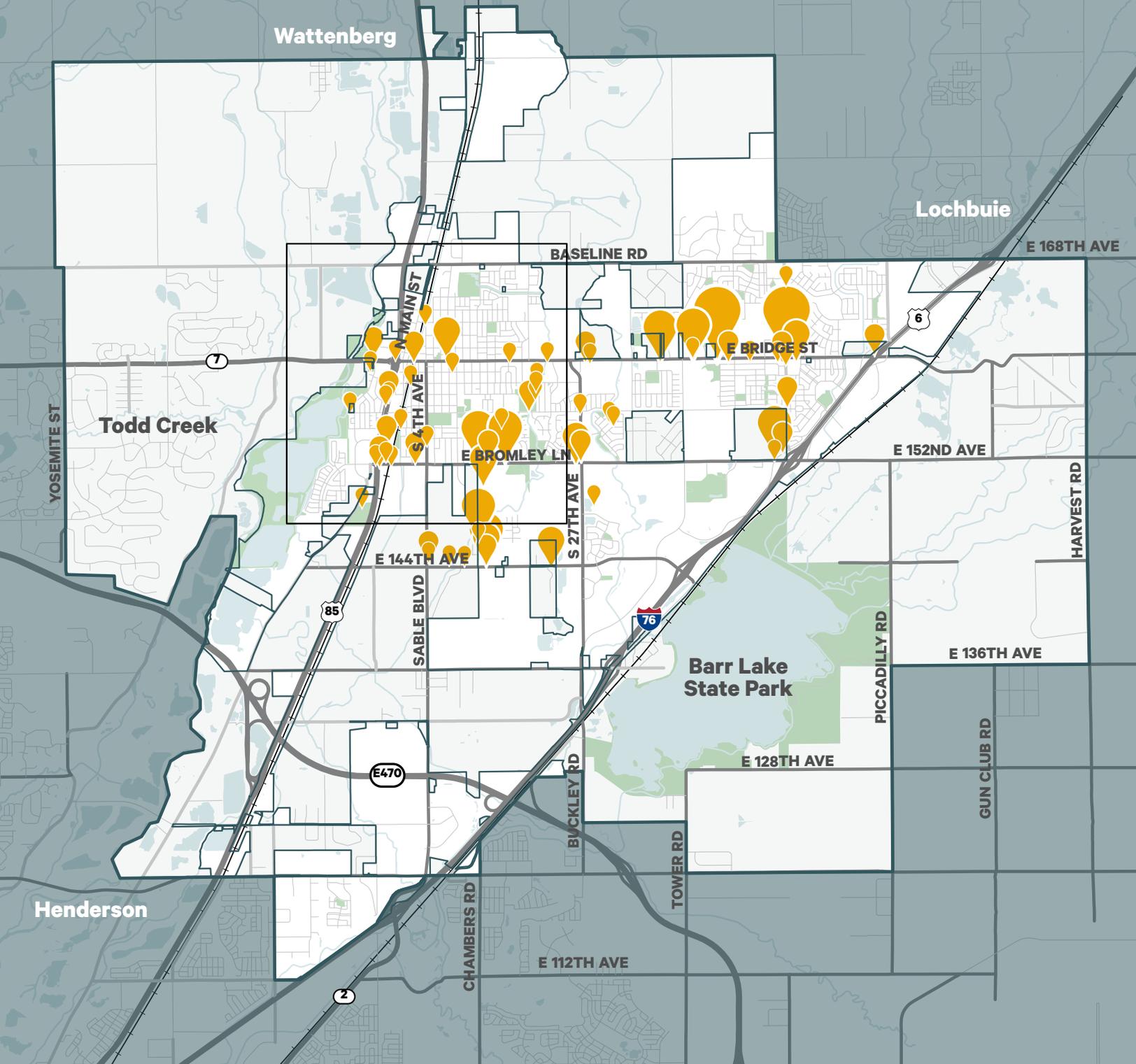
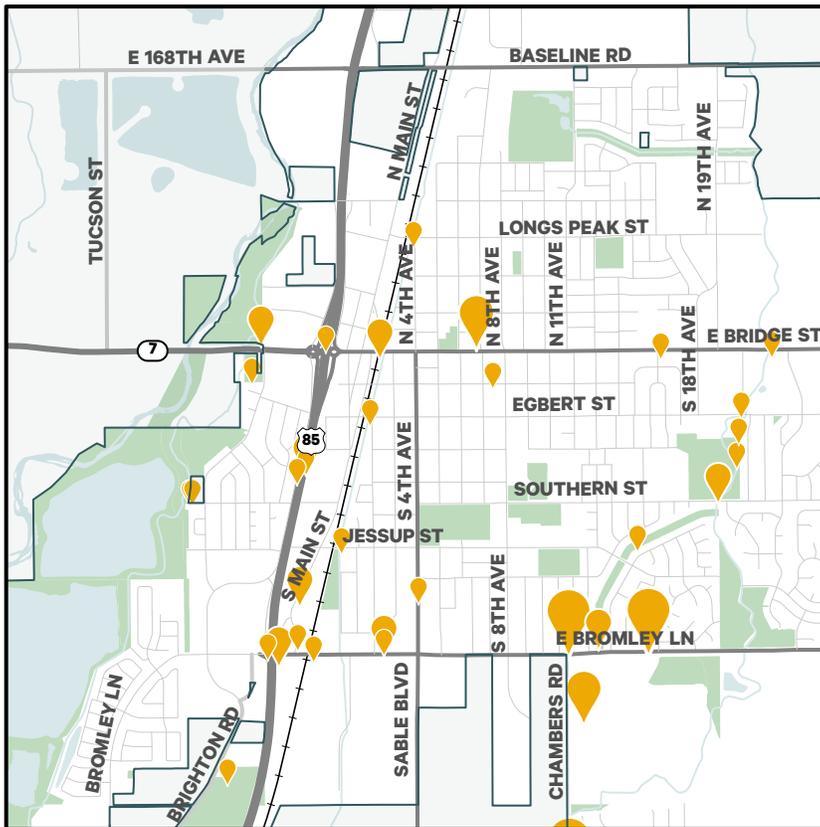


FIGURE 34: MOST-CITED CHALLENGES TO BIKING



WHERE RESPONDENTS FEEL UNSAFE WALKING OR ROLLING





LEGEND

I don't feel safe walking/rolling here

Upvotes



City Boundary

Growth Boundary

Waterways

Parks & Open Space

Railroads

FIGURE 35: WHERE RESPONDENTS FEEL UNSAFE WALKING OR ROLLING

SAFETY CONCERNS & AREAS OF DISCOMFORT

The online interactive map also allowed respondents to indicate areas where they feel unsafe walking/rolling and biking. Respondents had numerous safety concerns. Many locations had clusters of pins in close proximity, some of which were upvoted by other respondents numerous times.

As shown in **Figure 35**, respondents expressed safety concerns when walking and rolling along or near:

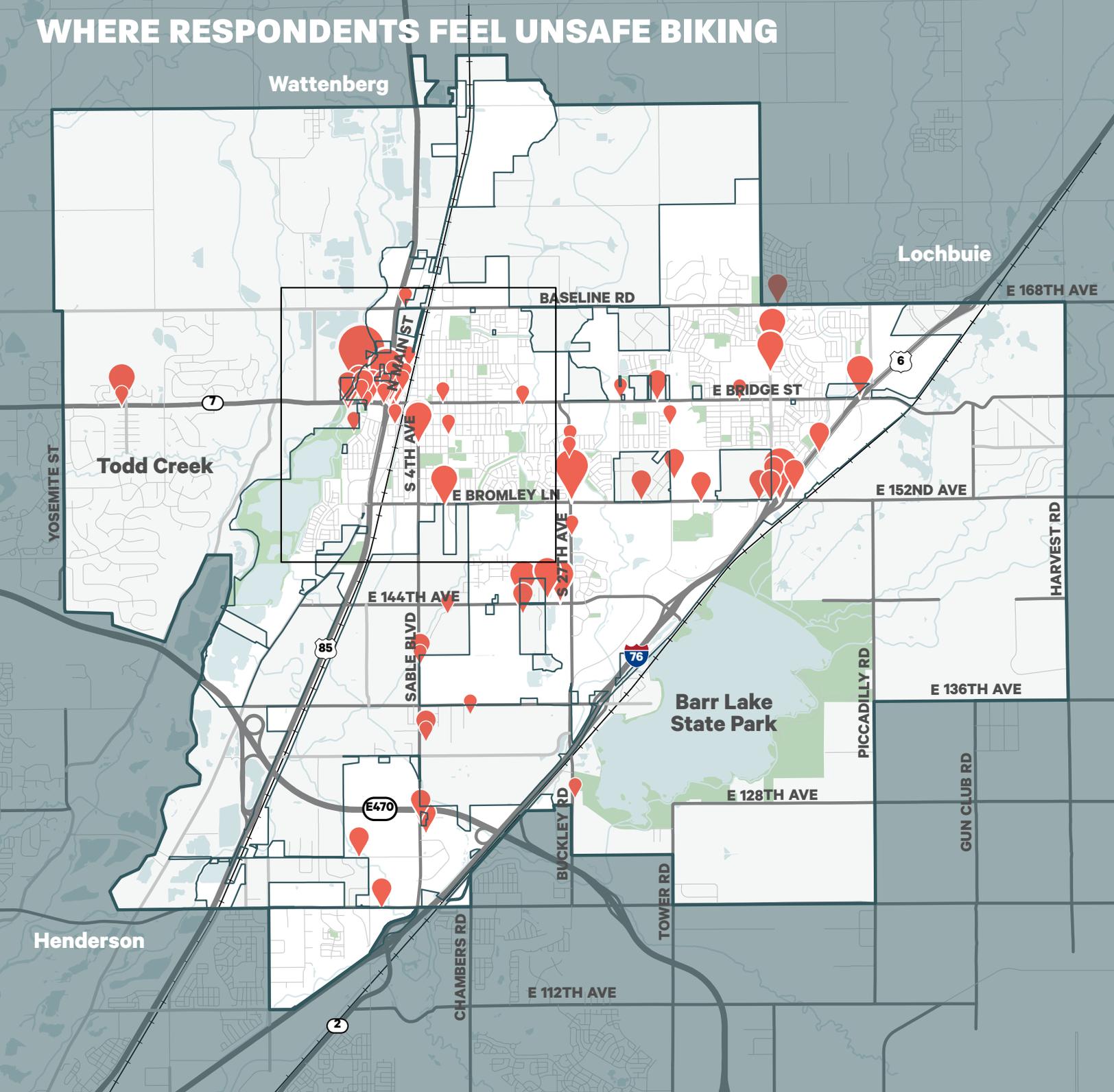
- Bridge Street due to narrow/poorly-maintained/missing sidewalks, poor lighting, uncomfortable crossings, and high traffic speeds
- Bromley Lane due to narrow/poorly-maintained/missing sidewalks, poor lighting, uncomfortable crossings, and high traffic speeds – respondents

feel the sidewalk is too narrow, encroached on by vegetation, and would prefer it to be a detached path rather than attached sidewalk

- Chambers Road due to narrow or missing sidewalks
- Fulton Ditch Trail due to poor lighting at night
- 144th Avenue to Prairie Center due to poor sidewalks



WHERE RESPONDENTS FEEL UNSAFE BIKING



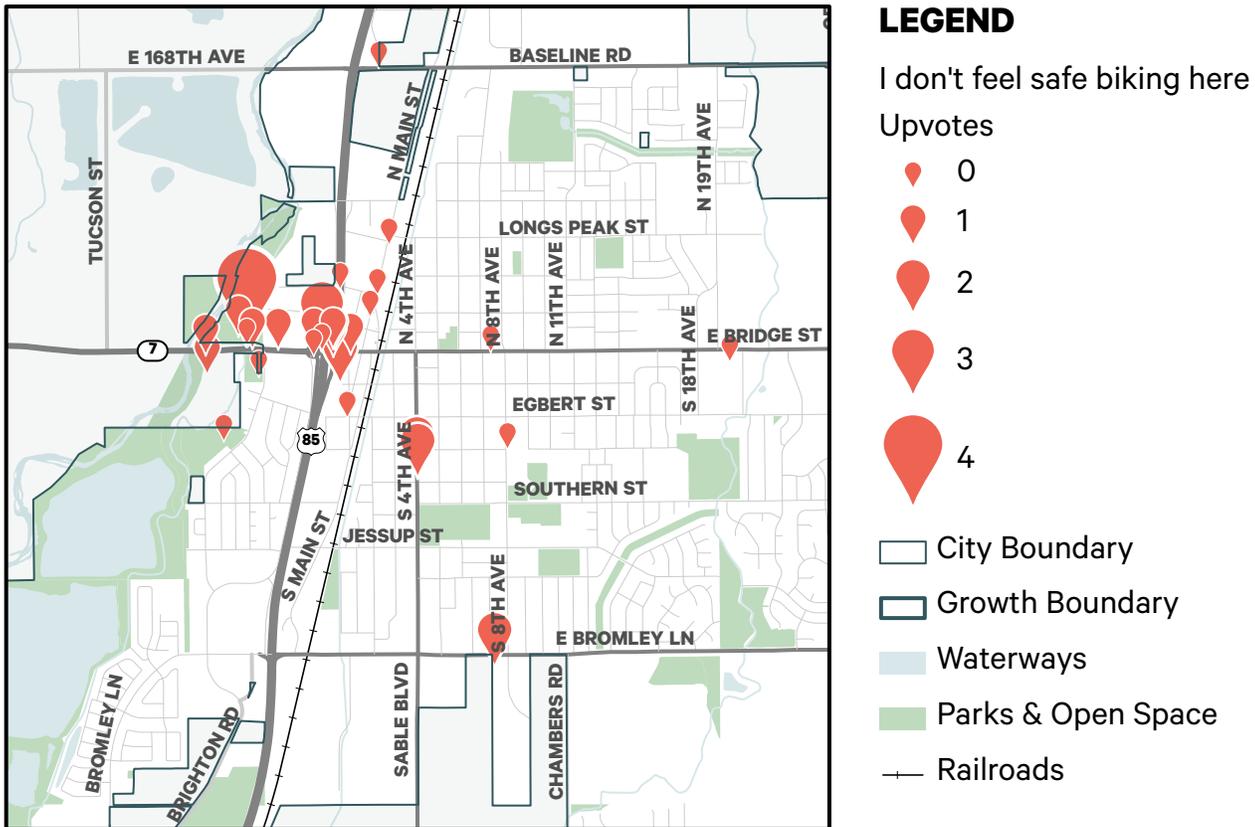


FIGURE 36: AREAS WHERE RESPONDENTS FEEL UNSAFE BIKING

As shown in **Figure 36**, respondents expressed safety concerns when biking along or near:

- Roundabouts along Bridge Street to access trail system by far the greatest concern of respondents due to high traffic speeds/volumes and lack of protected facility or wayfinding
- Downtown and Main Street due to uncomfortable crossings
- Bromley Lane due to lack of bike facilities, uncomfortable crossings – especially crossing I-76
- 50th Avenue due to high traffic speeds and uncomfortable crossings
- 27th Avenue due to lack of bike facilities and traffic conditions
- 144th Avenue due to lack of bike facilities



The second question asked respondents to rank the three highest comfort bike facilities from most preferred to least preferred. Respondents to the survey preferred raised cycle tracks first (1.49 average rank), protected bike lanes second (1.81 average rank), and trails third (2.42 average rank). The following section on bikeway types describes each of these facilities.

The final question on the survey asked respondents which factors should be used to prioritize projects, allowing respondents to select as many options as desired.

As shown in **Figure 39**, the factors supported by most respondents were proximity to parks/open space/recreation centers (76%), proximity to trails/trailheads (70%), proximity to schools (62%), proximity to grocery stores/shopping centers/commercial areas (57%), projects that provide access

across barriers (49%), and proximity to libraries/public buildings (47%).

Each of these factors were used to inform the project prioritization; however, the top six factors, which were each supported by more than 45% of respondents, were weighted twice as heavily in the prioritization. See the project prioritization section and **Appendix A** for more details.

SUMMERFEST

The project management team and members of Bike Brighton hosted a pop-up tent at Summerfest on Saturday, June 3 to share project information with members of the public and to collect in-person feedback on the same three questions in the survey.

Due to heavy rain, some of the boards were damaged, but staff collected 47 responses on the board on facility preferences

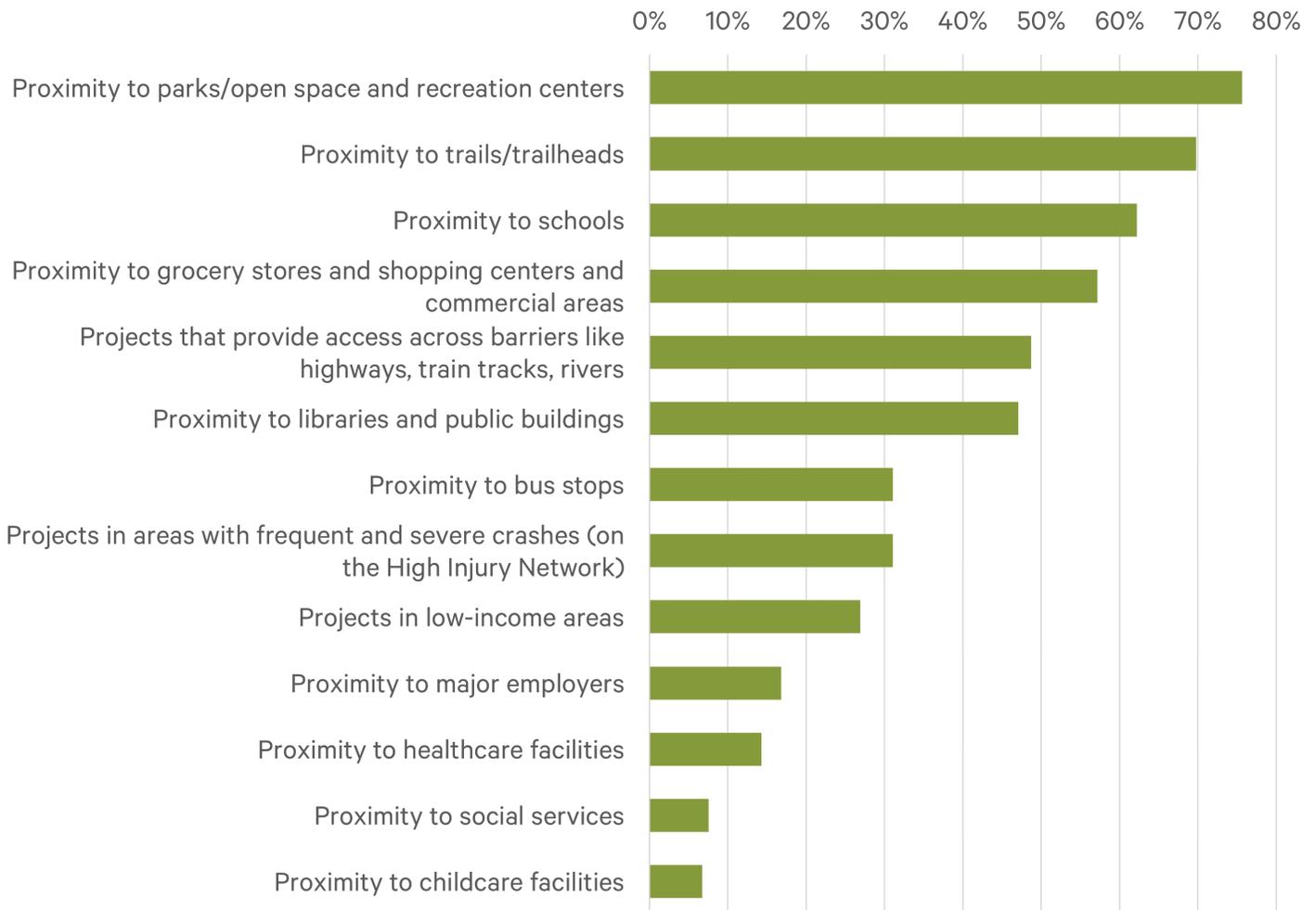


FIGURE 39: FACTORS THAT SHOULD BE USED TO PRIORITIZE PROJECTS



and distributed 40 flyers with links to the survey. Project staff averaged the results shown in **Figure 41** and found that members of the public preferred protected bike lanes first (1.72 average rank), raised cycle tracks second (1.89 average rank), and trails third (2.38 average rank). The following section on bikeway types describes each of these facilities.

**STAKEHOLDER FOCUS GROUP:
PARKS AND RECREATION
ADVISORY BOARD (PRAB)
& BIKE BRIGHTON**

Project staff attended a second joint meeting of the PRAB and Bike Brighton on August 2, 2023, which was attended by about 20 stakeholders. The purpose of the presentation was to share key components of the 95% draft plan and solicit feedback from these representatives of the community. Key topics discussed by PRAB and Bike Brighton members included:

- Support for SRTS programming to support and encourage more students to bike and walk while reducing traffic congestion around 27J schools
- Interest in doing a walk and/or bike audit with City Council members to experience some of the major challenges
- Curiosity about top priorities in the plan



FIGURE 40: TALKING TO RESIDENTS IN THE RAIN AT SUMMERFEST

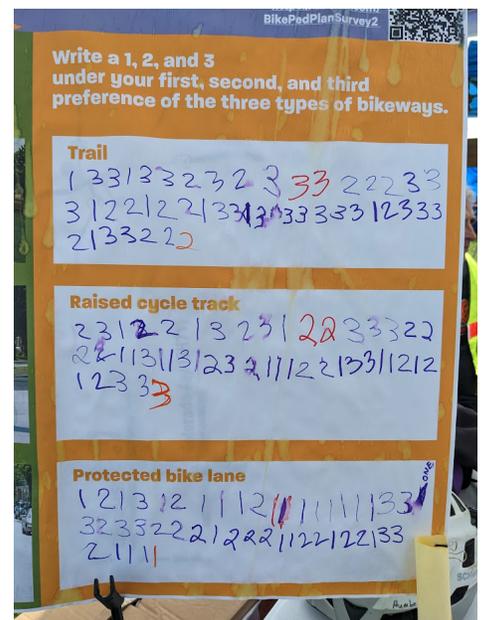


FIGURE 41: BOARD RESULTS



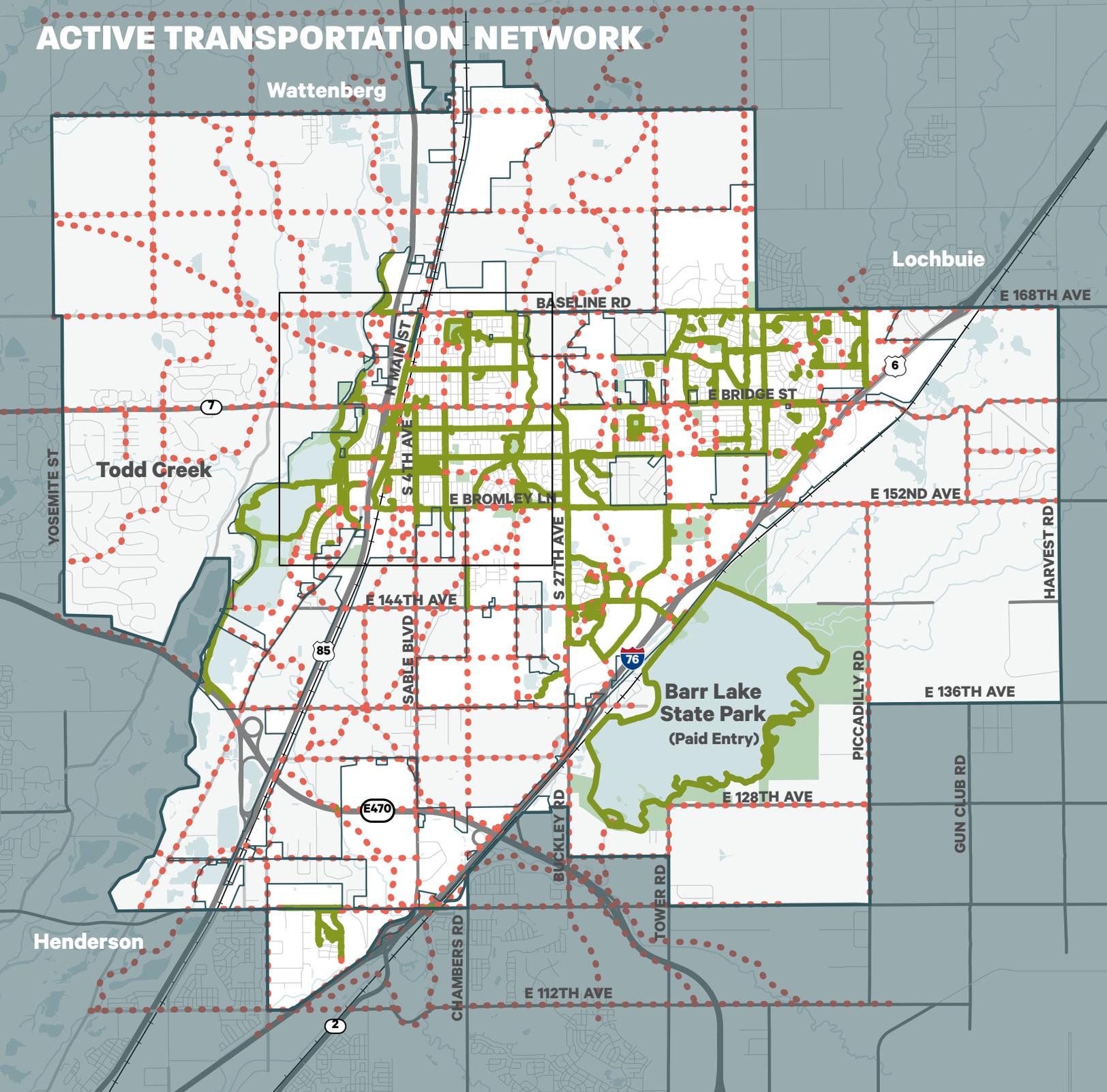
BICYCLE NETWORK PLAN

The bicycle network plan in this section includes the following:

- **Active transportation network:** This map represents the vision for the ultimate backbone pedestrian and bicycle network once completely built out.
- **Preferred design user:** Includes a description of the user type that the bike network will be designed to support.
- **Bikeway types & design guidelines:** Includes a description of each type of bicycle facility and provides general design guidelines for each.
- **Bicycle network map:** As supported by the Plan's vision, the future bicycle network map shows the alignment and recommended facility types of future bike corridors across the city.
- **Bikeway design at bus stops:** Presents a range of options for the configuration of bus and bike facilities.
- **Bicycle crossing guidance:** Includes bicycle crossing guidance to improve comfort and convenience for bicyclists at intersections.



ACTIVE TRANSPORTATION NETWORK



OBJECTIVE W1:

Design low-stress, high-comfort bikeways that support all ages and abilities.





FIGURE 42: ACTIVE TRANSPORTATION NETWORK

Preferred Design User

Based on input from the community, stakeholder focus groups, and city staff, this plan sets forth a goal to have low-stress, high-comfort facilities on all corridors in the active transportation network shown in **Figure 42**. Low-stress facilities score an LTS 1 or 2 on the rating system described in **Figure 19**.

These high-comfort facilities support “interested but concerned” riders, who represent about 60% of the population.²

The plan aims for LTS 1 and 2 facilities to design for all ages and abilities and ensure that all residents and visitors of Brighton feel comfortable choosing to bike.

Active Transportation Network

Figure 42 shows the active transportation network in Brighton. This map identifies key connections needed for continuity in the bike network to improve access all over the city and to reduce out-of-direction travel for bicyclists. By completing bikeways on these corridors over time, the city will develop a continuous and dense bicycle network.

Most of the planned connections shown in the map were recommended in the 2016 *Transportation Master Plan* and the 2021 *Parks and Recreation Master Plan*. Others were added during this planning process based on discussion with city staff and public feedback about where safe connections were missing.

Additions to the network reflect planned developments, provide additional redundancy in the system (particularly in the city core), and provide more direct east-west and north-south connections for people walking and biking. These modifications also improve the feasibility, comfort, convenience, connectivity, and access to key destinations of the bike network.

These conversations also resulted in a publicly-supported goal to construct low-stress (LTS 1 or 2) bike facilities on these corridors to support riders of all ages and abilities, not just fearless riders.

² Geller, R. “Four Types of Cyclists,” Portland Bureau of Transportation, Portland, OR, 2006. <http://www.portlandoregon.gov/transportation/article/264746>.



Bikeway Types

Bicycle facility types recommended in the Future Bicycle Network map in **Figure 43** are those needed to achieve an LTS 1 or 2 on corridors in the active transportation network based on the roadway speed, number of lanes, and traffic volumes. While using the posted speed is acceptable when identifying the best bicycle facility for a given street it is preferred to use the design speed or 85th percentile operating speed when possible.

This section describes the toolbox of bicycle facility types (summarized in **Figure 43**) and basic design guidance for each type, with more specific guidance found in the updated street sections in the 2023 Transportation Master Plan. Design guidance is based primarily on National Association of City Transportation Officials (NACTO) recommendations.

All bikeways will accommodate both directions of travel. Most on-street bikeways will be designed as one-way on each side of the street. Multiuse trails will also be on both sides of the street in most contexts to serve land uses on both sides of the street.

Protected bike lanes and raised cycle tracks will also typically be designed as one-way on both sides of the street, but can be also be designed as two-way facilities. In these situations, staff must pay close attention to bikeway design at intersections and driveways, especially at signalized intersections. The NACTO

Urban Bikeway Design Guide provides guidance on two-way cycle track design.

Table 8 summarizes the minimum bike facility to achieve an LTS 2 or better given the street characteristics of speed, number of travel lanes, and volume. In some cases, a higher comfort facility is recommended than what is shown in **Table 8** given other context-sensitive characteristics, such as the volume of motor vehicles, volume of bicyclists, frequency of large trucks, and presence of driveways. The city may also elect to provide a higher comfort facility than what is listed in **Table 8** to achieve an LTS 1.

GEOMETRIC TREATMENT FIRST PHILOSOPHY

Be Brighton recommended this plan integrate traffic calming measures, including narrow streets, neckdowns, varied pavement surfaces, roundabouts, and other neighborhood scaled street features that increase pedestrian and bicyclist safety, decrease car speeds and make a more pleasing and interesting physical environment. Public feedback received during this planning process also voiced concerns about speeding on residential streets.

On residential streets with observed speeds exceeding posted speeds of 25 mph, the city should consider implementing traffic calming features such as horizontal geometric changes such as pinchpoints or neckdowns, chicanes, mini roundabouts, and curb extensions; as well as vertical

OBJECTIVE S1:

Explore opportunities to reduce the speed and/or number of lanes as part of a corridor project, before identifying the appropriate low-stress bike facility.

OBJECTIVE S2:

Implement bike facilities according to the design guidance in the Bikeway Types section.



BIKE BOULEVARD

May include sharrow markings & bike route signage, traffic calming elements like curb extensions, mini roundabouts, traffic diverters

Applicable on streets with:

Low speeds (25 mph or lower), low traffic volumes (1,000 cars per day or fewer), few travel lanes (up to 2), parallel routes to major arterials



BIKE LANE

Painted stripe, usually 5' or wider

Applicable on streets with:

Few travel lanes and/or low speeds (2 lanes up to 35 mph or 3-4 lanes up to 25 mph)



BUFFERED BIKE LANE

Painted stripe, usually 5' or wider with 2' buffer

Applicable on streets with:

3-4 travel lanes & speeds of 30 or 35 mph



TABLE 8: MINIMUM BIKEWAY RECOMMENDED TO ACHIEVE LTS 2 OR BETTER GIVEN STREET ATTRIBUTES

			Lanes		
			1-2	3-4	5+
Speed	<25 mph	≤1,000 ADT	Bike Boulevard	Bike Lane	Trail, Cycle Track, or Protected Bike Lane
		>1,000 ADT	Bike Lane		
	25-30 mph		Bike Lane	Bike Lane	Trail, Cycle Track, or Protected Bike Lane
	35 mph		Bike Lane	Buffered Bike Lane	Trail, Cycle Track, or Protected Bike Lane
	40+ mph		Trail, Cycle Track, or Protected Bike Lane	Trail, Cycle Track, or Protected Bike Lane	Trail, Cycle Track, or Protected Bike Lane

geometric changes such as speed humps or cushions. Reducing 85th percentile speeds on these neighborhood streets can dramatically improve comfort.

On streets with five or more lanes and/or speeds of 40 mph or more (generally arterials), the recommended bike facility is a trail, cycle track, or protected bike lane. Reducing the speed (not only posted speed, but design speed through traffic calming) and/or number of lanes on a street may change the recommended minimum bike facility on a corridor.

For example, on a four-lane corridor the recommendation could shift from a trail to a buffered bike lane with a speed reduction from 40 mph to 35 mph. It is recommended that changes to posted speed are accompanied by geometric design changes and traffic

calming interventions to be effective.

While switching out a posted speed limit sign will not necessarily reduce speeds on its own, incorporating traffic calming measures proven to reduce speeds (such as narrower lanes, curb extensions at crossings, horizontal curves and other elements) can effectively improve comfort for all street users and reduce costs of installing high-comfort bikeways.

Pairing these measures with a buffered bike lane could create an even more pleasant environment for someone biking as constructing a trail without traffic calming, at potentially lower cost.

For this reason, the plan recommends that the city identify opportunities to reduce the speed and/or number of lanes as part of a corridor project, before deciding on the needed type of bike facility.



PROTECTED BIKE LANE

Bike lane protected by barriers such as flex posts, planters, rigid bollards, parking strip, or concrete barriers; 5'+ depending on traffic volume of street

Applicable on streets with:
High speeds (40 mph or greater),
many travel lanes (more than 4)



RAISED CYCLE TRACK

Bike lane elevated from street level to curb height or mid-curb height, may be protected by additional barriers, separated from sidewalk

Applicable on streets with:
High speeds (40 mph or greater),
many travel lanes (more than 4)



TRAIL

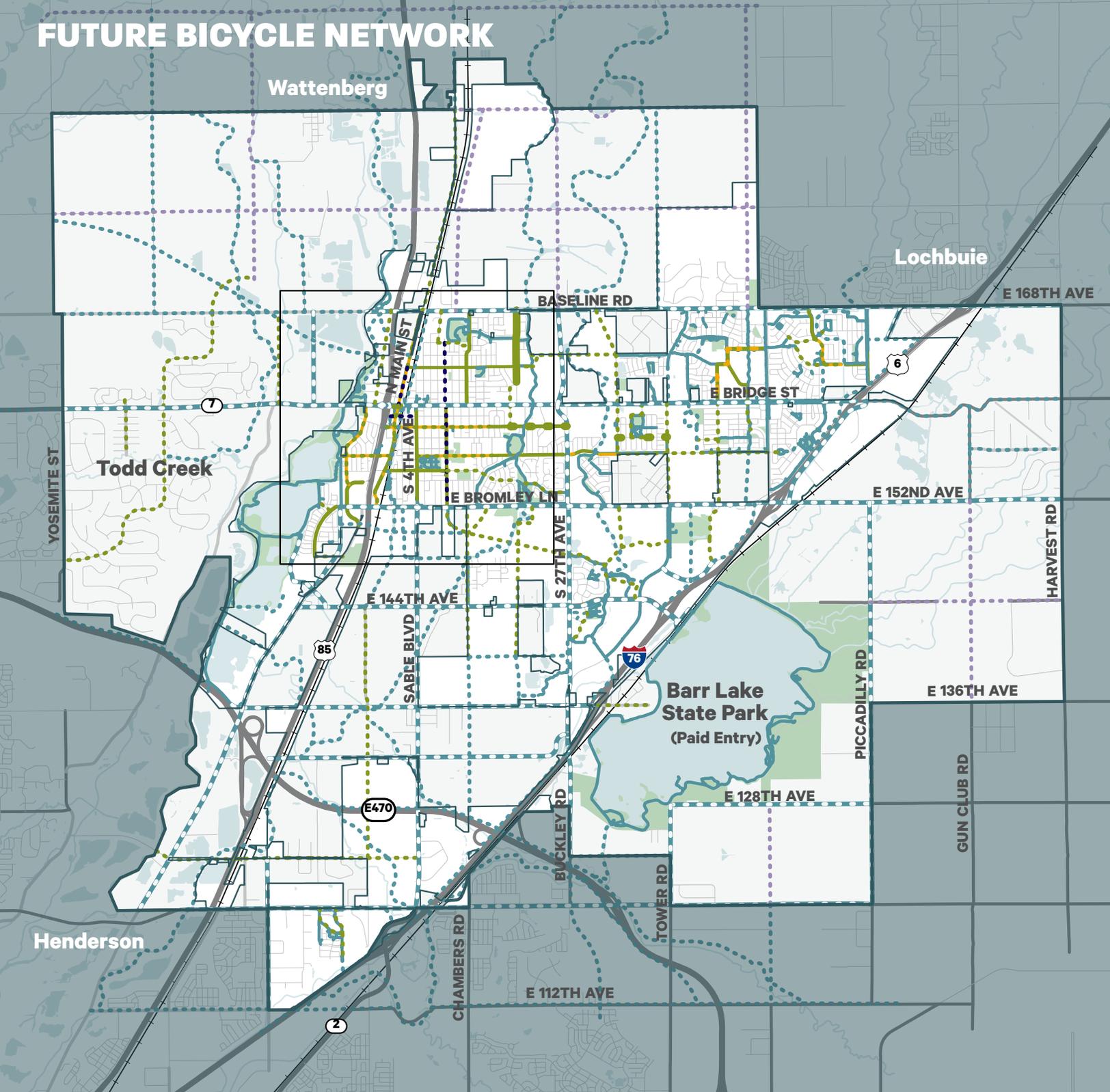
Multi-use path 10' feet or wider, preferably separated from the roadway by a landscaped buffer

Applicable on streets with:
High speeds (40 mph or greater),
many travel lanes (more than 4)

FIGURE 43: BICYCLE FACILITY TOOLBOX



FUTURE BICYCLE NETWORK



OBJECTIVE C1:

Implement bike facilities on the active transportation network as shown in Figure 50: Future Bicycle Network.



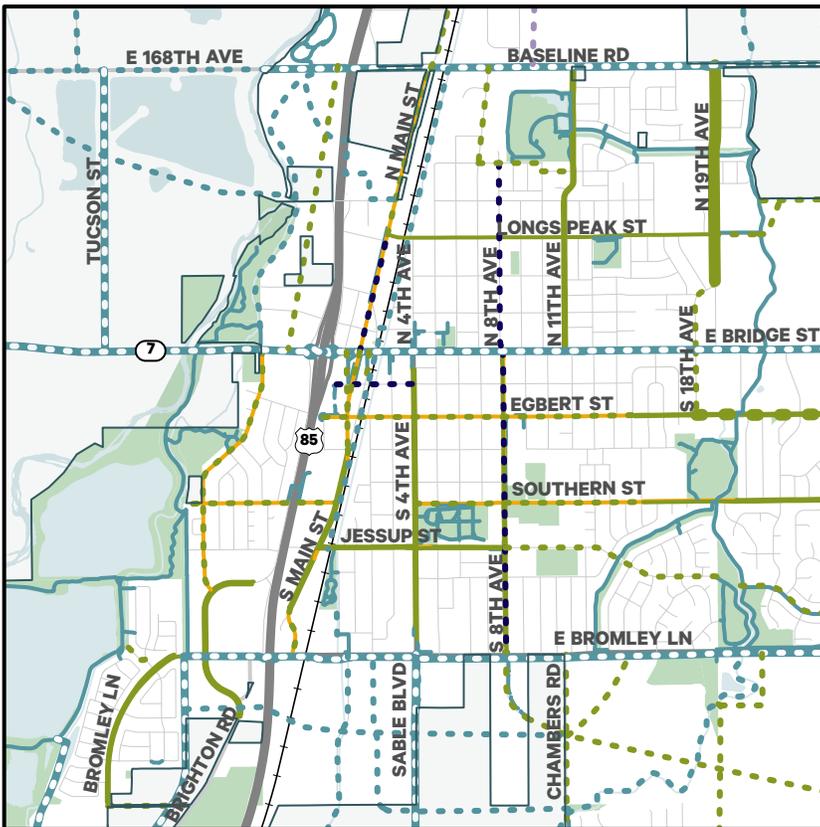


FIGURE 44: FUTURE BICYCLE NETWORK

LEGEND

- City Boundary
- Growth Boundary
- Waterways
- Parks & Open Space
- Railroads
- Existing Bicycle Facilities**
 - Buffered Bike Lane
 - Bike Lane
 - Sharrow
 - Trail
- Proposed Bicycle Facilities**
 - Shoulder
 - Bike Lane
 - Buffered Bike Lane
 - Bike Boulevard
 - Trail
 - Trail, Cycle Track, or Protected Bike Lane

Bicycle Network Recommendations

Figure 44 shows the existing bike facilities and recommended future bike facility types in Brighton. This map illustrates the long-term vision for the bicycle network, and the recommendations are the minimum type of bike facility needed to achieve an LTS 1 or 2. In other words, the recommendations are what is needed to provide a high-comfort facility that caters to all ages and abilities, based on posted speed limits, existing traffic volume, and existing number of lanes on the roadway.

Facilities should generally follow the routes on the Future Bicycle Network map unless a bicycle boulevard (or other low-stress facility) located along a parallel street with as direct a route (generally within one block) is found to be more feasible during implementation.

Bikeway Design

STRIPED BIKE LANE

Striped bike lanes adjacent to a curb face should be 6 feet, with 4 feet of width from the longitudinal joint (such as a gutter pan) preferred and an absolute minimum of 3 feet of width from the gutter pan. When placed adjacent to a parking lane, bike lanes without a buffer must be 5 feet or wider, and the width from the curb face to the edge of the bike lane should be at least 14 feet. In constrained environments the width should be not less than 12 feet from the curb when adjacent to parking.

Designing bike lanes 6' or wider and with adequate distance from the gutter pan allows room for snow storage. Refer to the [Conventional Bike Lanes](#) section of the [NACTO Urban Bikeway Design Guide](#) for additional design guidance.

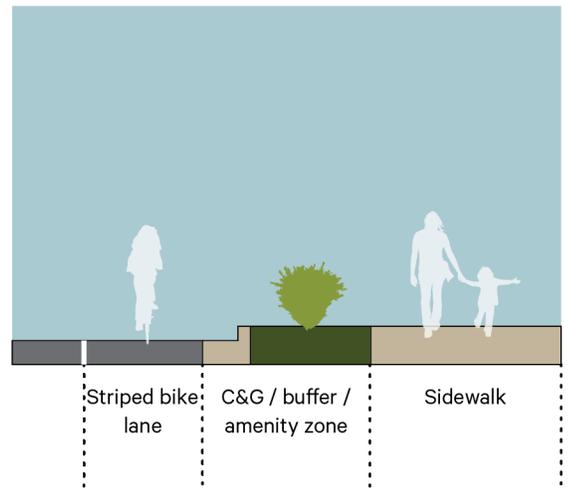


FIGURE 45: STRIPED BIKE LANE ELEMENTS



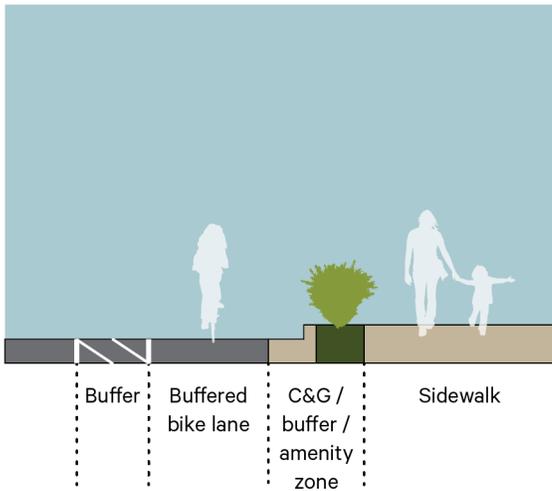


FIGURE 46: BUFFERED BIKE LANE ELEMENTS

BUFFERED BIKE LANE

Streets with three to four lanes and speeds of 30 or 35 mph will require a buffered bike lane.

Buffered bike lanes (with horizontal buffer) must be 5 feet or wider, and 7 feet is recommended along streets with high volumes of bicyclists or uphill sections to allow passing or side-by-side riding. Buffers should be at least 1.5 feet, and buffers 3 feet or wider should include diagonal hatching. Buffers of 3 feet or more are preferable since they allow snow storage. Separation may also be provided between bike lane striping and the parking lane to reduce door conflicts. Refer to the [Buffered Bike Lanes](#) section of the NACTO *Urban Bikeway Design Guide* for additional design guidance.

PROTECTED BIKE LANE

Streets with more than four through lanes, and streets with speeds greater than or equal to 40 mph will require a trail, raised cycle track, or protected bike lane. In some contexts protected bike lanes may be easier and more cost-effective to construct as compared to trails, such as in contexts where the city would have to move curb and gutter or acquire additional right-of-way to create a trail.

Protected bike lanes should not be considered as a design option unless the Street Operations Division has hired a maintenance technician focused specifically on bikeway maintenance and has a Bobcat Toolcat or equivalent piece of equipment available (as described in the Maintenance section).

To achieve an LTS 1, protected bike lanes (with vertical buffers) must be 5 feet or wider, with 7 feet or wider suggested for streets with higher volumes of bicyclists or uphill sections to allow passing. Wider 7' lanes also allow maintenance staff to more easily plow the bikeway.

Buffers should be at least 1.5 feet, and buffers should be 3 feet or wider when parking protected. Buffers of 3 feet or more are preferable since they allow snow storage. Possible barriers include flex posts, planters, rigid bollards, parking strips, and/or concrete barriers. Bollards or flexible delineators may be removed in the winter to improve access of snow removal equipment. However, flex posts are susceptible to more damage when struck by a vehicle and may be less preferable due to aesthetic concerns.

Alternating low pre-cast or cast-in-place concrete curbs with flex posts can improve durability of the barrier while also retaining a vertical reminder to plow drivers to signal the existence of the bike lane. Designing parking-protected bike lanes with a hashed buffer and less frequent flex posts between the parking and bike lane is another lower-cost solution. Planters can be a more aesthetically pleasing choice in key commercial areas.

Refer to the [One-Way Protected Cycle Track](#) section or [Two-Way Cycle Track](#) section of the NACTO *Urban Bikeway Design Guide* or the FHWA *Separated Bike Lane Planning and Design Guide* for additional design guidance for protected bike lanes.

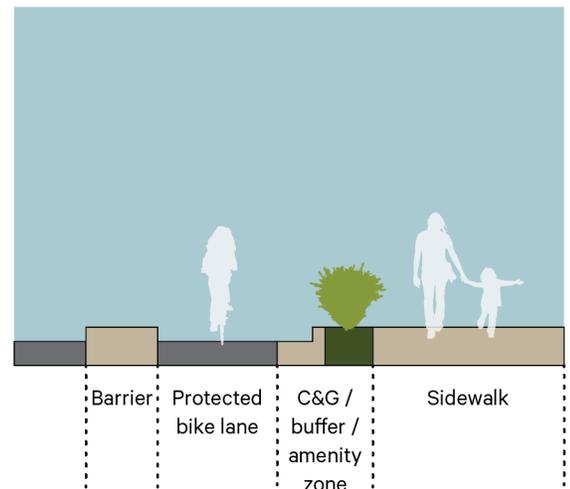


FIGURE 47: PROTECTED BIKE LANE ELEMENTS



RAISED CYCLE TRACK

Streets with more than four through lanes, and streets with speeds greater than or equal to 40 mph will require a trail, raised cycle track, or protected bike lane. Raised cycle tracks have similar safety benefits as trails, because the curb physically separates people biking from the roadway. However, they may be preferable in areas with greater bicyclist and pedestrian volumes, since they provide separated spaces for people walking and biking and can avoid user conflicts in congested areas.

Raised cycle tracks should not be considered as a design option unless the Parks and Open Space Divisions have hired a maintenance technician focused specifically on trail and raised cycle track maintenance and have a Bobcat Toolcat or equivalent piece of equipment available (as described in the Maintenance section).

To achieve an LTS 1, raised cycle tracks must be 6.5 feet or wider, with 8 feet or 10 feet suggested for streets with higher volumes of bicyclists. They should be raised from street level between 2 and 6 inches and have horizontal and/or vertical separation from the sidewalk. Buffers should be at least 3 feet to allow adequate space for snow storage. Refer to the [Raised Cycle Track](#) section of the NACTO [Urban Bikeway Design Guide](#) for additional design guidance for raised cycle tracks.

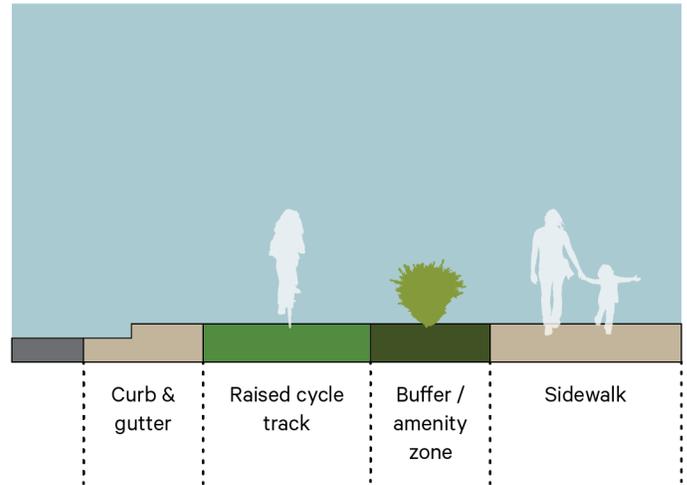


FIGURE 48: RAISED CYCLE TRACK ELEMENTS

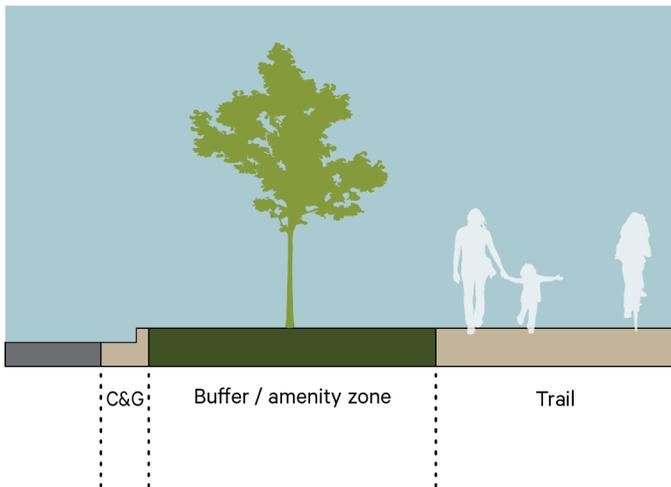


FIGURE 49: TRAIL ELEMENTS

TRAIL

Streets with more than four through lanes, and streets with speeds greater than or equal to 40 mph will require a trail, raised cycle track, or protected bike lane.

To achieve at least an LTS 2, trails (also known as multi-use paths or shared-use paths) should be at least 10 feet wide and preferably 12 feet, with a 5-foot buffer on local streets, 8-foot buffer on collector streets, and 12-foot buffer on arterials. In a constrained environment with limited right-of-way behind the curb, trails should be as wide as possible, with an absolute minimum width of 8 feet and a minimum buffer width of 2 feet. This should be avoided when possible, as wider buffers increase user comfort and allow adequate space for snow storage.

Striping on major trails can help separate opposing traffic where needed, especially in areas where visibility is limited due to trail curvature. In locations with high concentrations of both pedestrians and bicyclists that may increase congestion and user conflicts, the city may consider widening the trail to 12 feet or 14 feet, or providing separate facilities for pedestrians and bicyclists, such as a 6-foot sidewalk and a raised cycle track (see Raised Cycle Track description).

Note: Additional trail construction within 25' of the edge of the Fulton Ditch bank will require a Pedestrian Trail Agreement with the Fulton Ditch.



BIKE BOULEVARD

Bike boulevards are quiet, narrow neighborhood streets with 1 or 2 lanes, low speeds (25 mph or less), and low traffic volumes (1,000 ADT or less). These streets create an attractive, convenient, and comfortable cycling environment welcoming to cyclists of all ages and skill levels.

Bike boulevards are more than just a “shared street” with cars and bicycle traffic sharing the same space. These boulevards incorporate traffic calming and/or diversion to limit street access to local traffic only. Traffic calming measures, listed following, reduce design speeds to no more than 15 to 20 mph to create a more comfortable environment for people biking. It is also suggested that the city reduce posted speeds to 20 mph on bicycle boulevards.

Of particular importance along bike boulevards are treatments at major street crossings to facilitate continued comfort through the intersection (see the Bicycle Crossing Guidance section).

Major arterials on the active transportation network are all eligible for bicycle boulevards on adjacent local streets, if there is a parallel and relatively direct connection.

According to the NACTO *Urban Bikeway Design Guide*, bicycle boulevards incorporate some or all of the following elements, with examples shown in **Figure 50**:

1. **Route Planning:** Direct access to destinations
2. **Signs and Pavement Markings:** Easy to find and to follow
3. **Speed Management:** Slow motor vehicle speeds
4. **Volume Management:** Low or reduced motor vehicle volumes
5. **Minor Street Crossings:** Minimal bicyclist delay
6. **Major Street Crossings:** Safe and convenient crossings
7. **Offset Crossings:** Clear and safe navigation
8. **Green Infrastructure:** Enhancing environmental resilience

As seen in **Figure 44**, there are few bike boulevards currently recommended in Brighton due to the novelty of the treatment. 8th Avenue and short street segments downtown (Bush Street west of 4th Avenue and a few blocks of Main

Street) are shown as potential pilot locations. The project team considered 8th Avenue to be a candidate location for a bike boulevard due to the relatively narrow right-of-way, slower speeds, and adjacency to multiple schools. Bike boulevard traffic calming treatments could reduce speeding in an area with greater numbers of students while also encouraging children to walk and bike to school.

The project team did not consider Bush Street and Main Street to be critical locations for bike lanes, but they are still important streets in which to design infrastructure to support walkability and bikeability while minimizing traffic speeds through downtown. Not all treatments in **Figure 50** will be appropriate in Brighton’s core, but traffic calming elements like traffic circles, curb extensions, and refuge medians can encourage people to bike to destinations downtown. Main Street already has a mid-block pedestrian crossing - the city could expand similar treatments along the corridor.

SPEED MANAGEMENT

Speed hump or table or cushion



Chicane



MINOR STREET CROSSING

Traffic circle



All-way stop and/or curb extensions



VOLUME MANAGEMENT

Partial closure



Diverter



MAJOR STREET CROSSING

Refuge median



Bike detection and/or signalization



FIGURE 50: EXAMPLE CHARACTERISTICS OF BICYCLE BOULEVARDS



BIKEWAY DESIGN AT BUS STOPS

This section presents a range of options for the configuration of bus and bike facilities. **Please refer to the 2023 Transportation Master Plan for additional guidance.** During corridor-specific plans and projects, staff should consider these design options and make context-specific infrastructure decisions at time of design, with RTD as a review party.

The design of bus stops and level of infrastructure separation between buses and people biking should be driven by frequency and ridership of a given stop. On bus routes with frequent service, buses will be present more often and there will be a greater number of potential conflicts from buses pulling over more frequently. Additionally, at stops with greater boarding and alighting demand, buses have greater dwell times and longer periods for potential conflicts between people biking.

Infrastructure treatments should also consider the adjacent bike facility type and whether the bike treatment at the bus stop will constitute the weakest link in the broader facility.

Streets with protected bike lanes or cycle tracks should incorporate **floating bus stops/bus islands** with a raised concrete island with the bus lane on one side and the bike lane channelized behind the stop (**Figure 51**). This separates bicycle traffic and transit riders waiting for, boarding, and alighting buses. It also provides a greater degree of protection from buses for people riding bikes.

On other transit corridors with on-street bike lanes, **pull-out stops** in which buses must exit the travel lane to pull into the stop are acceptable. These stops also may cause transit delays from buses waiting for a gap in traffic to reenter the travel lane. This stop configuration may incorporate either **a hashed bike lane** between the stop and the travel lane (**Figure 52**) – preferred – or **a shared bus loading area/bike lane** (**Figure 53**), acceptable on transit corridors with 60 minute frequencies or less.

On streets without bike facilities, **in-lane stops/bus bulbs** are recommended (**Figure 54**). These allow buses to stop in the travel lane through the use of a curb extension, minimizing delay from exiting and re-entering the travel lane.

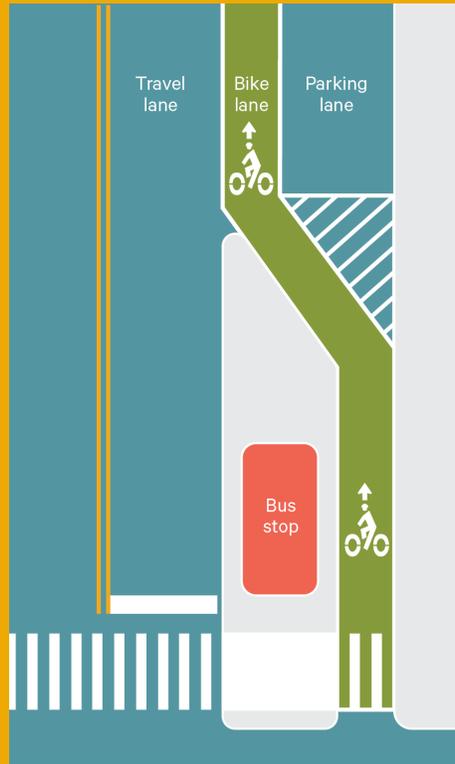


FIGURE 51: FLOATING BUS STOP/
BUS ISLAND

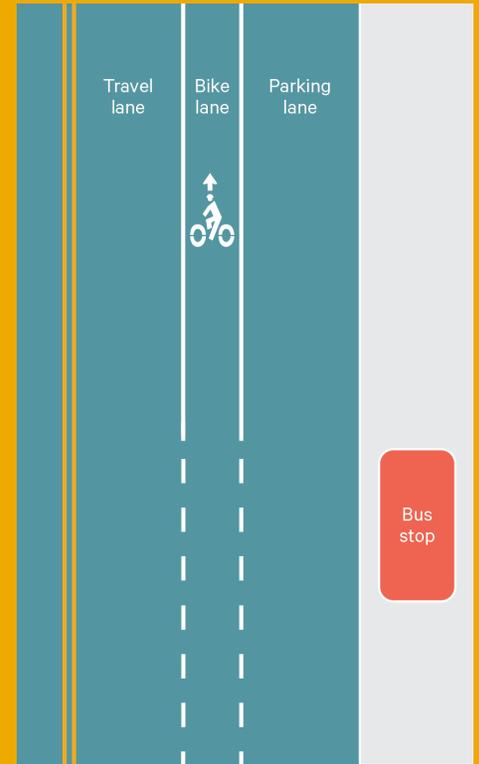


FIGURE 52: PULL-OUT STOP
WITH HASHED BIKE LANE

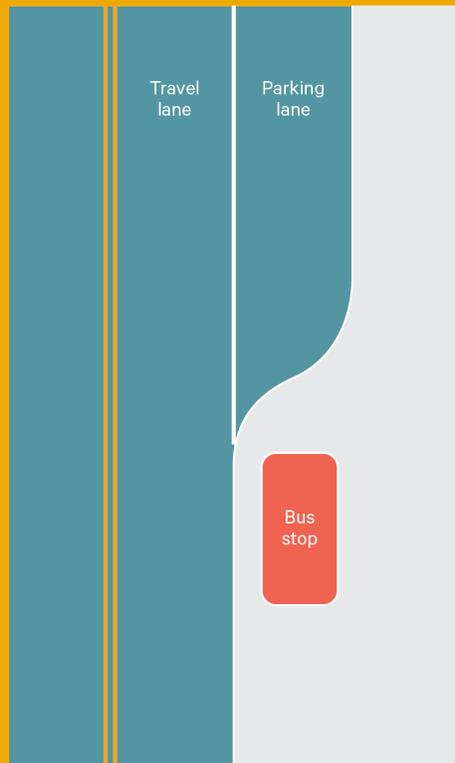


FIGURE 54: IN-LANE STOP/BUS BULB

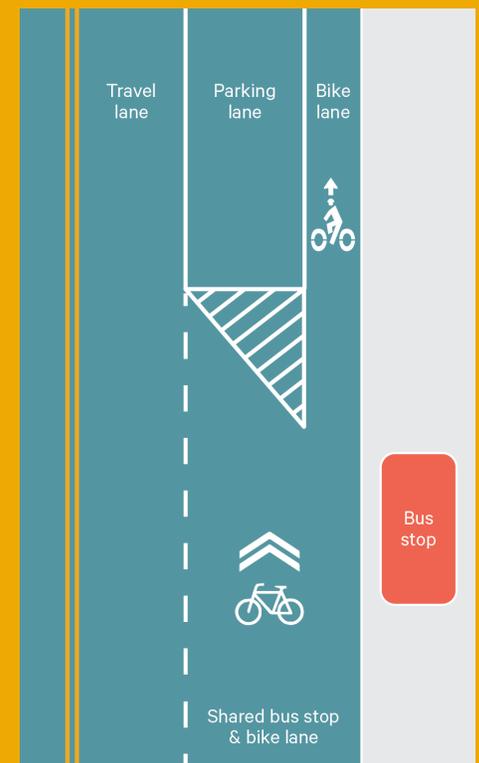


FIGURE 53: PULL-OUT STOP
SHARED WITH BIKE LANE

NOTE: Figures 51 through 53 can each be configured without parking lanes. The floating bus stop would channelize the bike lane behind the stop and onto the sidewalk. The pull-out stop with hashed bike lane would have the same striping but without a parking lane. The pull-out stop shared with bike lane would instead be a shared area between the travel and bike lane at the bus stop.

Bicycle Crossing Guidance

When creating a low-stress bike network, it is paramount to consider where bicycle facilities cross at intersections or at midblock designated crossings. The weakest link approach acknowledges that a low-stress bicycle facility is only as comfortable as the lowest comfort component; this component is often the intersection.

The NACTO *Urban Bikeway Design Guide* provides guidance on best practices for intersection design treatments for urban bikeway crossings. Additionally, NACTO also published a supplemental design guide for effectively designing low-stress bikeways through intersections for all ages and abilities titled *Don't Give Up at the Intersection*. Refer to these publications for supplemental design guidance on bicycle crossing treatments at intersections. Low-stress bicycle facility crossing applies design strategies and tools at the intersection to reduce the conflict between vehicles and people on bikes by targeting three key elements:

1. Reduce vehicle turning speeds
2. Increase the visibility of bicyclists
3. Give priority to bicyclists

The characteristics of the roadway crossed and the bicycle facility type influence what crossing treatment is necessary. NACTO defines three main types of low-stress bicycle crossing types. These three, plus a fourth - roundabouts (which are present in Brighton), are applied to any permutation of bike facility type and street classification:

1. Protected intersections
2. Dedicated intersections
3. Minor street crossings
4. Roundabouts



FIGURE 55: PROTECTED INTERSECTION (SOURCE: KITTLESON)



FIGURE 56: DEDICATED INTERSECTION (SOURCE: NACTO)

Table 9 shows what category of crossing treatment is most appropriate for each facility type and street type.

INTERSECTION TYPES

The following section provides a brief summary of contextual applications and design considerations of each bicycle crossing intersection type. Refer to

NACTO's *Don't Give Up at the Intersection* for guidance on the specific intersection treatments and considerations for designing protected intersections, dedicated intersections, and minor street crossings. Refer to Chapter 14 of CDOT's *Roadway Design Guide* for design guidance for carrying bikeways through roundabouts.

TABLE 9: BICYCLE CROSSING INTERSECTION TYPE IDENTIFICATION

	Local	Collector	Arterial	Driveway	Roundabout
Bike Boulevard	Minor Street Crossing	Dedicated Intersection	Dedicated Intersection	Minor Street Crossing	Merge with traffic
Striped or Buffered Bike Lane	Minor Street Crossing	Dedicated Intersection	Dedicated Intersection	Minor Street Crossing	Merge with traffic and/or provide ramps to multiuse trail
Protected Bike Lane/Cycle Track	Dedicated Intersection	Protected Intersection	Protected Intersection	Minor Street Crossing	Provide ramps to multiuse trail
Trail	Minor Street Crossing	Dedicated Intersection	Dedicated Intersection	Minor Street Crossing	





FIGURE 57: MINOR BICYCLE CROSSING (SOURCE: NACTO)

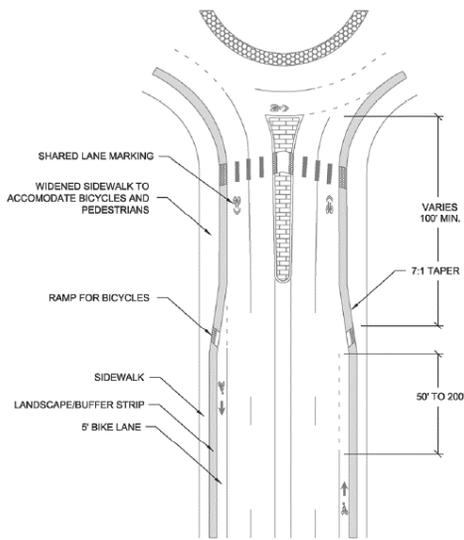


FIGURE 58: BIKE CROSSING AT ROUNDABOUT (SOURCE: CDOT)

PROTECTED INTERSECTIONS

Protected intersections are recommended where protected bike lanes meet collectors and arterials, as shown in **Figure 55**.

According to NACTO: “Protected intersections can be applied on any street where enhanced bike comfort is desirable. They are most commonly found on streets with parking-protected bike lanes or buffered bike lanes. Protected intersections can also be implemented using interim materials. Where no parking lane exists, a setback can be created by shifting the bikeway or motor vehicle lanes away from one another as they approach the intersection.”

DEDICATED INTERSECTIONS

Dedicated intersections are recommended when bike boulevards, bike lanes, and trails meet collectors and arterials and where protected bike lanes meet local streets. An example of a dedicated intersection is shown in **Figure 56**.

According to NACTO: “Dedicated intersection geometry should be considered where there is not enough space to set back the bikeway from mixed traffic at the intersection. This condition often arises when a protected bike lane runs close to mixed traffic lanes without a parking or loading lane between them.”

MINOR STREET CROSSINGS

Minor street crossings are recommended when bike boulevards, bike lanes, or trails cross local roads or driveways (with the exception of protected intersection treatments for some protected bike lanes). An example of a minor street crossing is shown in **Figure 57**.

According to NACTO: “Minor street crossings use compact corners and raised elements to keep turn speeds low. The raised crosswalk and bikeway indicate to drivers that they are entering a low-speed environment, and must prepare to yield to other users. Traffic control devices, such as signals, are uncommon. Ensuring a clear approach sightline is essential to encourage drivers to yield to people in the bikeway or the crosswalk.

Raised bikeway crossings should be considered where bikeways cross minor

streets, neighborhood streets, driveways, and other small streets. Where the bikeway is not signalized, such as at uncontrolled or stop controlled on-minor intersections, the raised crossing provides unambiguous priority to bikes in the intersection.”

ROUNDABOUTS

When bike facilities meet a single lane roundabout with a designated speed of <15 mph bike boulevards and bike lanes can merge with traffic. Additional signage should also be provided, as well as on-street painted arrows.

When a protected bike lane or trail meets a roundabout, or when any bicycle facility meets a two-lane roundabout, separated facilities for bicyclists (perhaps shared with pedestrian infrastructure and with pedestrian crossings) should be clearly marked. Separated facilities can also be included when a standard bike lane meets a one-lane roundabout. This infrastructure should have ramps and clear crossing markings for where bikes are to cross the legs of the roundabout. An example is shown in **Figure 58**.

INTERSECTION TREATMENTS AT BICYCLE CROSSINGS

Refer to NACTO’s *Urban Bikeway Design Guide* for treatment strategies for different bicycle crossing contexts, including specific design guidance. Several bicycle crossing treatment options, including specific recommendations most relevant to Brighton are provided below.



BIKE BOULEVARDS CROSSINGS

Since bike boulevards will most commonly occur on local streets, special consideration should be given to intersection treatments along these streets. NACTO provides treatment guidance for two basic types of intersections: minor street crossings and major street crossings.

Minor Street Crossings

At minor street crossings on bike boulevards, the primary consideration is mitigating frequent stops, which can be a significant inconvenience for bicycle mobility. Frequent placement of stop signs along low-volume, low-speed streets is a common strategy to mitigate speeding and cut-through vehicle traffic, especially in residential areas where most bike boulevards will occur. NACTO recommends that “bicycle boulevards should have right-of-way priority and reduce or minimize delay by limiting the number of stop signs along the route.”

Therefore, it is recommended to consider flipping the stop sign to be directed to the non-bike priority street, creating a two-way stop-controlled intersection, which could be paired with a neighborhood traffic circle to limit vehicle speeds. Other speed and volume control treatments should be used on the bike boulevard in lieu of frequent stop signs, such as speed humps, chicanes, bulb-outs, neighborhood traffic circles, and diverters (see **Figure 50**).

Major Street Crossings

Because bike boulevards are typically along local streets that have two-way stop control at major cross streets, the primary consideration at these locations is providing a safe and convenient way for bicyclists to cross. Effective treatments at major crossings will be essential to implementing effective bike boulevards in Brighton.

In fact, many of the streets designated as future bike boulevards on the Future Bicycle Network Map (see **Figure 44**) are already low-volume and low-speed and the primary treatment that will be needed along these corridors will be crossing improvements particularly at major crossings. NACTO provides guidance on potential treatments where bike boulevards cross major streets, including curb extensions, flashing beacons, median refuge islands, and signals (see **Figure 50**).



FIGURE 59: COMBINED BIKE LANE/TURN LANE (SOURCE: NACTO)

THROUGH BIKE LANES

Carrying bike lanes through the intersection approach is important so bicyclists have the opportunity to correctly position themselves to avoid conflicting with turning traffic. This typically includes positioning bike lanes to the left of right turn lanes and providing a dotted transition lane for bikes of the appropriate width and distance in advance of the intersection. Green skip paint can be used for intersections with high right turn volumes.

In addition, ending the bike lane prior to the intersection should be avoided as much as possible. In constrained environments where there may not be enough space to accommodate a bike lane through the intersection under the existing lane configuration, the city should evaluate removing a turn lane, providing a combined bike/turn lane (see example in **Figure 59**), widening the intersection, or providing a ramp to/from a shared multiuse trail similar to a roundabout configuration (see **Figure 58**).

SIGNAL PHASING

At signalized intersections, there are several strategies related to signal phasing to enhance bicycle safety, visibility, and prioritization. They are:

- **Protected Left Turn Phasing:** Vehicles making a left turn on streets with a bikeway may not be looking for crossing bicyclists. Permitted-protected and protected-only signal phasing are proven safety countermeasures that can mitigate crashes with left turning vehicles.
- **Lagging Left Turn:** A lagging left turn provides the vehicle with a left





FIGURE 60: BIKE DETECTION AT SIGNAL (SOURCE: CITY OF PHOENIX)

According to NACTO: “A LBI can be provided if a shared through/turn lane is next to the bikeway. If a dedicated right or left turn lane is next to the bikeway, protected-permissive bike signal phasing should be considered. Protected signal phases should be considered if turn volumes from the adjacent lane exceed 120 to 150 vehicles per hour (vph). Protected signal phases should also be considered if conflicting left turn volumes (on two-way streets) across the bikeway exceed 60 to 90 vph, or if these turns cross multiple traffic lanes.”

SIGNAL DETECTION & ACTUATION

At all signalized intersections in Brighton where an existing or planned bikeway crosses the intersection the following should be considered in the signal design so a bicyclist can reliably actuate a green signal. There are several options to achieve this:

turn green arrow after the through movement, to allow bicyclists to pass through the intersection first.

- **Bike Signal:** A bike signal provides the bicyclist with a separate phasing from vehicles which can be useful at intersections with high volumes of right turning vehicles and where the bikeway is to the right of the turn lane. Phasing may be in the form of protected or protected-permissive right turns.
- **Leading Bike Interval (LBI):** An LBI is where the bicyclist receives a green bike signal a few seconds in advance of vehicles, allowing the bikes to get a head start into the intersection to become visible, especially if there is not a dedicated right turn lane. This phasing requires a separate bike signal head.
- **Signal Progression:** Setting signal progressions to bike-friendly speeds (around 12 mph) on streets prioritized for bike movements can reduce bicycle delay and improve bicycle compliance, while supporting bus transit reliability and disincentivizing vehicular speeding.
- **Prohibit Right-turn-on-Red:** In addition to situations outlined in Section 2B.54 of the *Manual for Uniform Traffic Control Devices (MUTCD)* for when a No Turn on Red sign should be considered, prohibiting right-on-red should also be considered at intersections with streets where a multiuse trail is present in order to mitigate conflicts caused by drivers looking left for gap in traffic and failing to see a bicyclist on a multiuse trail approaching from the right.
- **Automatic Bike Detection:** The most effective bike detection use video or radar to detect the presence of a bicyclist and actuate the signal. This should be paired with pavement markings and/or signage directing bicyclists where to position to actuate the signal (see **Figure 60**).
- **Push-Button:** A user activated button (similar to a pedestrian push button) mounted on a pole adjacent to the bikeway and at a level that a bicyclist can activate without dismounting or leaving the bikeway.
- **Automatic Recall:** The simplest way to ensure bicyclists can call a green signal is to set the signal phasing to automatic recall so that a green phase is actuated every signal cycle.

Providing a reliable and convenient way for bicyclists to actuate a signal is important to bicycle comfort, convenience, and safety when crossing busy streets, and will deter red light running.

In these cases, the City should examine current infrastructure and determine what updates need to be made to signalize the intersection for bicyclists. The city periodically upgrades and replaces outdated traffic signals that have exceeded their useful life.

When new actuated signals are installed (or upgraded) at locations where an existing or planned bicycle facility crosses the intersection, video or radar bicycle



detection, push buttons, or automatic recall should be added as a standard practice.

RECESSED STOP BAR OR BIKE BOX

Installing recessed stop bars for vehicles at intersections increases the visibility of bicyclists and can be applied across all controlled intersection treatment strategies.

Figure 61 shows a recessed vehicle stop bar.

This can also take the form of a bicycle box, which is a designated area in front of the travel lane at a signalized intersection that is safe and visible for bicyclists to wait. This allows cyclists to get ahead of queueing traffic during the red signal phase which helps to mitigate conflicts with right turning vehicles. It is recommended that this be paired with prohibiting right turns on red.

Figure 58 shows an example of a bike box.

INTERSECTION CROSSING MARKINGS

NACTO recommends the implementation of crossbike across the intersection; a crossbike is similar to a crosswalk but for bikes— intersection crossing markings for bikes. This can consist of bike lane line extensions with broken white lines and/or dashed green bars.

Figure 63 shows an example of a crossbike.

BRIDGES AND UNDERPASSES

Brighton is bisected by railroad tracks and several major urban highways, including US 85, I-76, E-470, all of which were identified by the community as significant barriers for bicycle and pedestrian movement between important destinations in the city.



FIGURE 61: RECESSED STOP BAR

To mitigate the impact of these barriers, additional pedestrian and bicycle crossings are recommended in the map of the active transportation network (**Figure 42**). All future bridge and underpass crossings along corridors in the active transportation network should be designed to accommodate pedestrians and bicyclists via a low-stress facility generally following the pedestrian and bicycle facility design guidance in the plan.

While the city may wish to eventually provide better access for people walking, biking, and rolling across the railroad long term, in the short term crossings of the railroad should be made more comfortable by creating dedicated spaces for drivers, pedestrians, and cyclists to cross and clearly signing and marking

OBJECTIVE S3:

When performing corridor upgrades, incorporate suggested intersection treatments to reduce stress of bicycle crossings, and ensure continuity of high-comfort facilities.



FIGURE 62: BIKE BOX AT INTERSECTION





FIGURE 63: CROSSBIKE

bicyclists be provided a separate shared-use path with a concrete barrier.

In these instances, merge ramps may be needed to allow bicyclists to transition from on-street to off-street facilities on either end of the bridge similar to roundabouts. AASHTO also recommends in these cases that multiuse trails be implemented on both sides to support bicycle mobility and prevent wrong-way riders.

The city should also create connections to adjacent bicycle and pedestrian corridors on either side of the bridge or underpass to ensure adequate access to the bridge or underpass. Lastly, bridges and underpasses should also be well-lit.

the presence of these vulnerable users.

DESIGN CONSIDERATIONS

Given the unique nature of bridge and underpass crossings, possibly including narrower cross-sections, higher vehicle speeds, and walls or railings, special consideration should be given to pedestrian and bicycle accommodations in these contexts. Traffic volume, speed, number of travel lanes, and length of the bridge will determine the facility most appropriate for bicycles.

The AASHTO *Guide for Development of Bicycle Facilities* provides recommendations for special considerations of bicycle facilities on bridges including the height and spacing of railings, and additional clear zone spacing. AASHTO also recommends on longer bridges (a half mile or more) with a design speed of over 45 mph that

BRIDGE RETROFITS

Bridges are expensive to replace and are often designed to last 50 years or more. Thus, in cases where there is an existing bridge not slated for replacement in the near future, the city may need to retrofit the crossing to adequately accommodate pedestrian and bicycle movement. Refer to AASHTO on guidance for best practices in bridge retrofits. Potential strategies in situations where there is not enough width to accommodate bicycle facilities may include widening the sidewalk, by narrowing or reducing travel lanes, or adding a cantilever structure.

The Fehr & Peers/Pedestrian and Bicycle Information Center white paper “Improving Pedestrian and Bicycle Connectivity During Rehabilitation of Existing Bridges” examines case studies of bridge retrofits in Missoula, MT; Richmond, CA; Portland, OR; Minneapolis, MN; and Ithaca, NY.

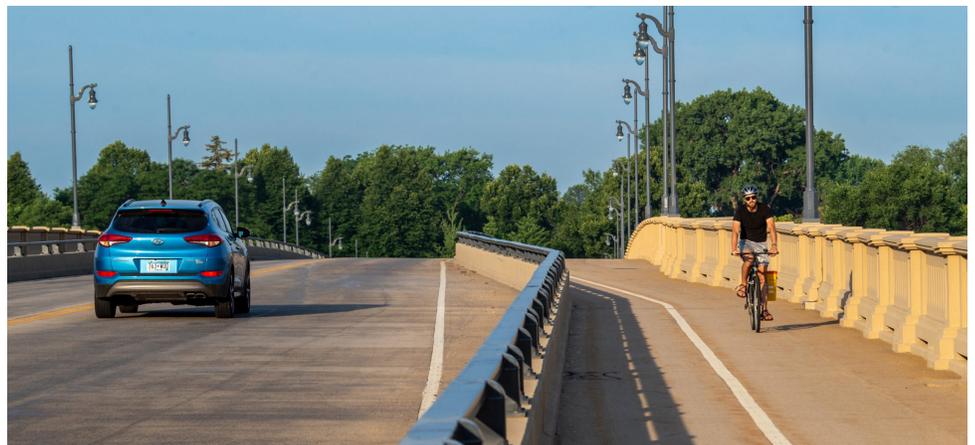


FIGURE 64: RETROFIT OF FRANKLIN AVENUE BRIDGE IN MINNEAPOLIS (SOURCE: HNTB)



PEDESTRIAN NETWORK PLAN

The pedestrian network plan in this section includes the following:

- A description of the preferred design user that pedestrian facilities will be designed to support.
- A description of pedestrian facility types and their design guidelines.
- Pedestrian crossing guidance on how to improve safety for pedestrians at street crossings.

This plan sets the goal for all streets in Brighton to provide high comfort locations for people to walk. Given there are hundreds of miles of streets in Brighton, the initial focus should be on completing sidewalks and trails on the Active Transportation Network, many of which are arterial streets with high traffic speeds and volumes.

The prioritization strategy described in the Implementation section of this plan identifies the most critical pedestrian infrastructure using criteria sourced from the community, prioritizing the locations with both the greatest need and that will have the greatest impact to pedestrian circulation.

Preferred Design User

Based on input from the community, stakeholder focus groups, and city staff, this plan sets forth a goal to have low-stress, high-comfort places to walk or roll on all streets in Brighton. Low-stress facilities score an LTS 1 or 2 on the rating system described in **Figure 18**. The plan aims for LTS 1 and 2 facilities residents and visitors of all ages and abilities in Brighton feel comfortable choosing to walk or roll.

ACCESSIBILITY & UNIVERSAL DESIGN

As recommended in the 2016 TMP, this means that the city should construct all new streets and retrofit existing corridors to be accessible to wheelchair users or people who move with assisted mobility devices and comply with the 1990 Americans with Disabilities Act.

This includes not just complete sidewalks, but also universal design features such as accessible pedestrian ramps, detectable surfaces (tactile paving or warning strips at curb ramps), audible pedestrian crossing buttons, and careful design of sidewalks to avoid blockages from street furniture and utilities.

Pedestrian Facility Types

Pedestrian facility types recommended in this plan, consisting of sidewalks and crossings, are those needed to achieve an LTS 1 or 2 on streets based on the roadway speed, number of lanes, and traffic volumes. Unlike the bicycle network plan, where specific streets will have bicycle facilities (primarily on corridors in the Active Transportation Network), it is assumed that the majority of, if not all, streets in the city will be a part of the future pedestrian network.³ However, this plan prioritizes where upgrades in the pedestrian network should be made first.

The prioritized pedestrian network maps in **Figure 81** and **Figure 82** show all sidewalks in the city prioritized in order of importance to complete or upgrade based on the prioritization criteria. This section describes design guidance for sidewalks and trails. Guidance is based on best practices from NACTO, FHWA, and from best practices established in other municipalities.

SIDEWALKS

To achieve at least an LTS 2, streets with three travel lanes or fewer and speeds of 30 mph or less (generally local and collector streets) require a 6-foot sidewalk with an 8-foot buffer. Streets with four travel lanes or more and/or speeds of 35 mph or more require an 8-foot sidewalk with 12-foot buffer. These recommendations follow a “weakest link approach,” meaning that a street with two travel lanes but a posted speed limit of 35 mph will require an 8-foot sidewalk with 12-foot buffer.

Notably, if the city chooses to reduce the speed and/or number of lanes on a street as part of a corridor project, the recommended width of sidewalk and buffer may be reduced. It is recommended that changes to posted speed are accompanied by geometric design changes and traffic calming interventions to be effective.

³ Geller, R. “Four Types of Cyclists,” Portland Bureau of Transportation, Portland, OR, 2006. <http://www.portlandoregon.gov/transportation/article/264746>.



OBJECTIVE W2:

Design low-stress, high-comfort sidewalks that support all ages and abilities.

OBJECTIVE W3:

Construct all new streets and retrofit existing corridors to be accessible to wheelchair users or people who move with assisted mobility devices and comply with the 1990 Americans with Disabilities Act.

OBJECTIVE S4:

Implement sidewalks and trails according to the design guidance in the Pedestrian Facility Types section.

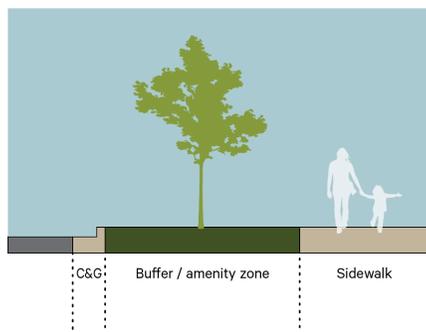


FIGURE 65: SIDEWALK ELEMENTS

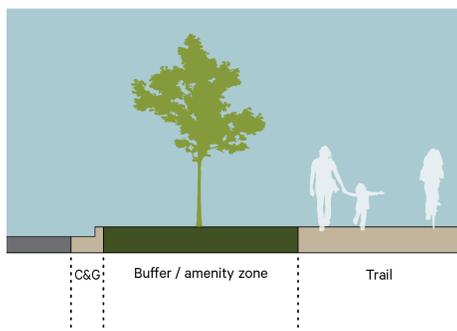


FIGURE 66: TRAIL ELEMENTS

TABLE 10: SIDEWALK FACILITY RECOMMENDATIONS TO ACHIEVE LTS 2 OR BETTER GIVEN STREET CHARACTERISTICS

		Lanes	
		3 or fewer	4 or more
Speed	30 mph or less	6 ft sidewalk, 8 ft buffer	8 ft sidewalk, 12 ft buffer
	35 mph or more	8 ft sidewalk, 12 ft buffer	8 ft sidewalk, 12 ft buffer

In constrained environments with limited right of way behind the curb, the sidewalk should be as wide as possible, with a minimum width of 5 feet and a minimum buffer width of 2 feet. This should be avoided, as wider buffers increase user comfort and allow adequate space for snow storage. Note: bike lanes and on-street parking can count as part of the buffer width as explained in the Buffer/Amenity Zone section.

TRAILS

To achieve at least an LTS 2, trails should be at least 10 feet wide and preferably 12 feet, with a 5-foot buffer on local streets, 8-foot buffer on collector streets, and 12-foot buffer on arterials. In a constrained environment with limited right-of-way behind the curb, trails should be as wide as possible, with an absolute minimum width of 8 feet and a minimum buffer width of 2 feet. This should be avoided, as wider buffers increase user comfort and allow adequate space for snow storage.

Striping on major trails can help separate opposing traffic where needed, especially in areas where visibility is limited due to trail curvature. In locations with high concentrations of both pedestrians and bicyclists that may increase congestion and user conflicts, the city may consider widening the trail to 12 feet or 14 feet, or providing separate facilities for pedestrians and bicyclists, such as a 6-foot sidewalk and a raised cycle track (see Raised Cycle Track description).

BUFFER/AMENITY ZONE

The buffer/amenity zone is an area that separates trails and sidewalks from travel lanes. The highest-quality buffers include both horizontal and vertical separation, for additional protection for those walking, rolling, and biking. Wider buffers better accommodate shared dockless micromobility (such as scooter- and bike-share), by allowing users of bike- and scooter-share to

park devices safely outside of the sidewalk, and in the amenity zone. This maintains a clear path of travel for people using wheelchairs and other mobility devices, while also reducing visual clutter. Wider buffers also increase user comfort and allow adequate space for snow storage.

While **Figure 65** and **Figure 66** show tree lawns in the zone, this is for illustrative purposes. This zone should provide a high-quality buffer with landscaping and street trees or a hardscaped surface with street furniture including streetlamps, benches, planters, and bike racks. Parked cars, bike lanes, or painted shoulders (such as painted edge lines) can also be included in the overall buffer width.

Pedestrian Crossing Guidance

There are two main types of marked roadway crossings for pedestrians: controlled crossings and uncontrolled crossings.

- A **controlled crosswalk** is a legal crossing across a roadway approach controlled by a stop sign or traffic signal
- An **uncontrolled crosswalk** is a legal crossing across a roadway approach without any control, such as a stop sign or traffic signal. Note: while a pedestrian can legally cross at uncontrolled crossings, the Colorado Revised Statutes Section 42-4-803 states: "(1)....Every pedestrian crossing a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles upon the roadway."

Crosswalks may also be marked or unmarked:

- A **marked crosswalk** is a legal crosswalk that features traffic control markings.
- An **unmarked crosswalk** is a legal crosswalk that does not feature any traffic control markings.

Figure 67 shows examples of different



crosswalk types in Brighton.

Frequency and quality of crossings of major streets are especially important, since these streets tend to have fewer crossings and longer crossing distances. On major arterials like Bridge Street, signalized crossings are roughly 1,000 feet apart, a long distance for people walking and potential encouragement for attempting to cross midblock or at uncontrolled intersections.

It is recommended that Brighton consider creating more frequent crossings of these major arterials to provide safe alternatives, especially in locations with pedestrian-oriented land uses on both sides and/or near bus stops where people will want to cross. In the meantime, wide distances between crossings makes the safety of each individual crossing more critical.

Cycle lengths, markings, signing, and ADA accessibility of crossings are key. Long cycle lengths at signals (the time a pedestrian must wait for a walk signal) are a source of frustration for pedestrians and often discourage people from choosing to walk.

According to NACTO, short cycle lengths

CONTROLLED CROSSING

Signalized



UNCONTROLLED CROSSING

Markings & signing



of 60–90 seconds are ideal, with an absolute maximum of 120 seconds or 2 minutes recommended. The city should evaluate existing signal timing to ensure compliance with these recommendations, and ensure push buttons and walk signals are performing correctly.

The specific treatment (marked crosswalk, signage, beacon, etc.) for a specific crossing can be determined using the FHWA *Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*, and the CDOT *Pedestrian Crossing Installation Guide*, including when and where to place different types of crossings.

The city should pay special attention to the universal accessibility of crossings for all ages and abilities. Crossings should be designed with ADA accessible pedestrian ramps, detectable surfaces, and other universal design features.

Existing crossings should be evaluated regularly to help ensure the current standards are being met. In addition to these local standards, the city can reference Federal guidance.

Stop controlled



Unmarked



OBJECTIVE S5:

When performing corridor upgrades, incorporate suggested intersection treatments to reduce stress of pedestrian crossings, and ensure continuity of high-comfort facilities.

OBJECTIVE P1:

When improving the active transportation network with new trails, install accessible trailheads as shown in Figure 64: Potential Trailheads.

FIGURE 67: PEDESTRIAN CROSSING EXAMPLES IN BRIGHTON



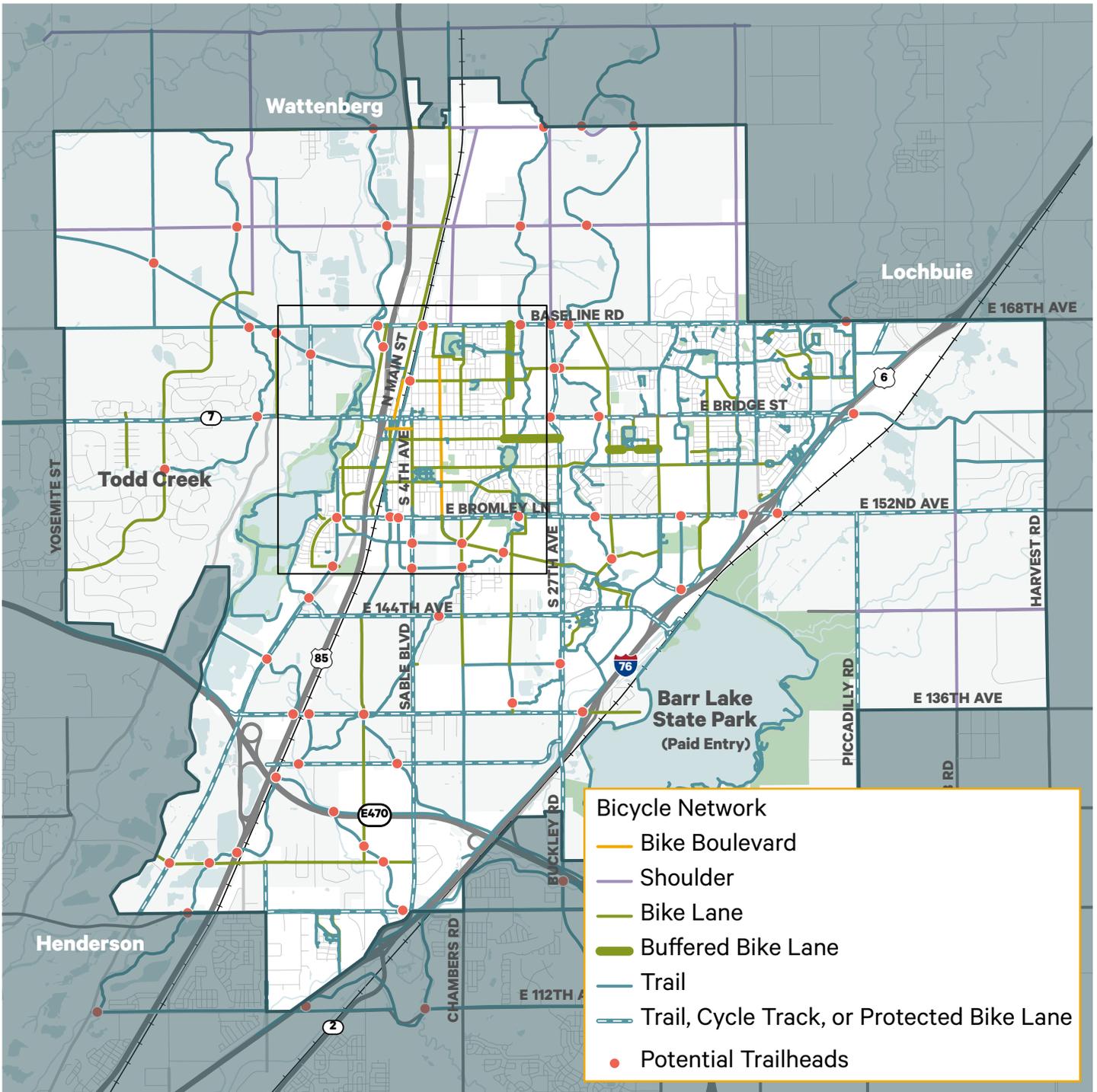


FIGURE 68: POTENTIAL TRAILHEADS

New Trailheads

Figure 68 highlights opportunities for new trailheads from neighborhoods or to better connect trails to the wider transportation system. With new trails proposed for the active transportation network, it is important to provide sufficient access to users; the red dots on the map represent the trailheads where these opportunities for access exist.

In most locations these potential trailheads are located where the proposed trail intercepts another multimodal facility or a large roadway. Trailheads should include amenities that help guide a user to engage with the trail safely and effectively. These amenities will vary by context and location, but common amenities which should be at all trailheads include

wayfinding signs/information kiosks and trash receptacles. Other common trailhead amenities that can be found at some trailheads include parking lots, tables, benches, and toilets. As these facilities are planned, Brighton should consider material types, durability, and placement with regard to the ease of maintenance and repair.



PROGRAM & POLICY RECOMMENDATIONS

Programs and policies complement physical infrastructure improvements to create a welcoming and pleasant community for people walking, rolling, and biking. Though building new sidewalks, trails, and bikeways are essential for safety and connection of the active transportation network, programs and policies go a step further to realize the plan vision and goals.

Programs

Programs will work in tandem with the build-out of the pedestrian and bicycle networks in Brighton to further support people walking, rolling, and biking. Programs to maintain new facilities, provide pedestrian and bicycle amenities, facilitate first-and-last mile connections to transit, regularly count bicycle volumes, develop a bike share or bike library, create Safe Routes to School, reduce commute trips, and improve education and awareness will each establish a culture friendly to walking and biking.

Based on the existing conditions analysis, feedback from the community, and collaboration with city staff, the following set of programs are recommended to support buildout and use of the future bicycle and pedestrian network and to achieve recognition from the League of American Bicyclists as a Bicycle Friendly Community.

MAINTENANCE

As the City of Brighton bike, sidewalk, and trail networks expand during implementation of the plan, a set of maintenance standards and a maintenance plan can help city staff assess and prioritize maintenance needs to keep infrastructure in a state of good repair. This will ensure the bike and pedestrian network is a reliable and comfortable transportation resource for all community members.

Maintenance also emerged as a concern in the first round of public engagement. When asked about the biggest challenges associated with walking and rolling in Brighton, 38% of respondents cited poor sidewalk and trail maintenance. Similarly, when asked about the biggest challenges associated with biking in Brighton, 24% of respondents cited poor bikeway maintenance as an issue.

This should not be seen as a critique of the divisions responsible for maintenance in Brighton, since maintenance issues are frequently linked

directly to funding. Planning and budgeting for maintenance needs can be communicated during planning, design, and construction of new facilities.

Funding for capital construction tends to be more readily available than funding for routine upkeep. While initial construction costs far outsize those of maintenance and improvement of existing facilities, funding for routine upkeep is more difficult to secure. Deferring routine upkeep can result in facilities degrading faster and requiring more expensive maintenance interventions later. Early, frequent maintenance can reduce overall costs over time, as seen in **Figure 69**.

RESPONSIBLE PARTIES

The Parks and Open Space Divisions are responsible for maintaining 48 miles of the urban trail system and over 950 acres of municipal parkland. The Street Operations Division of the Public Works Department is responsible for maintenance of all on-street bikeways, as well

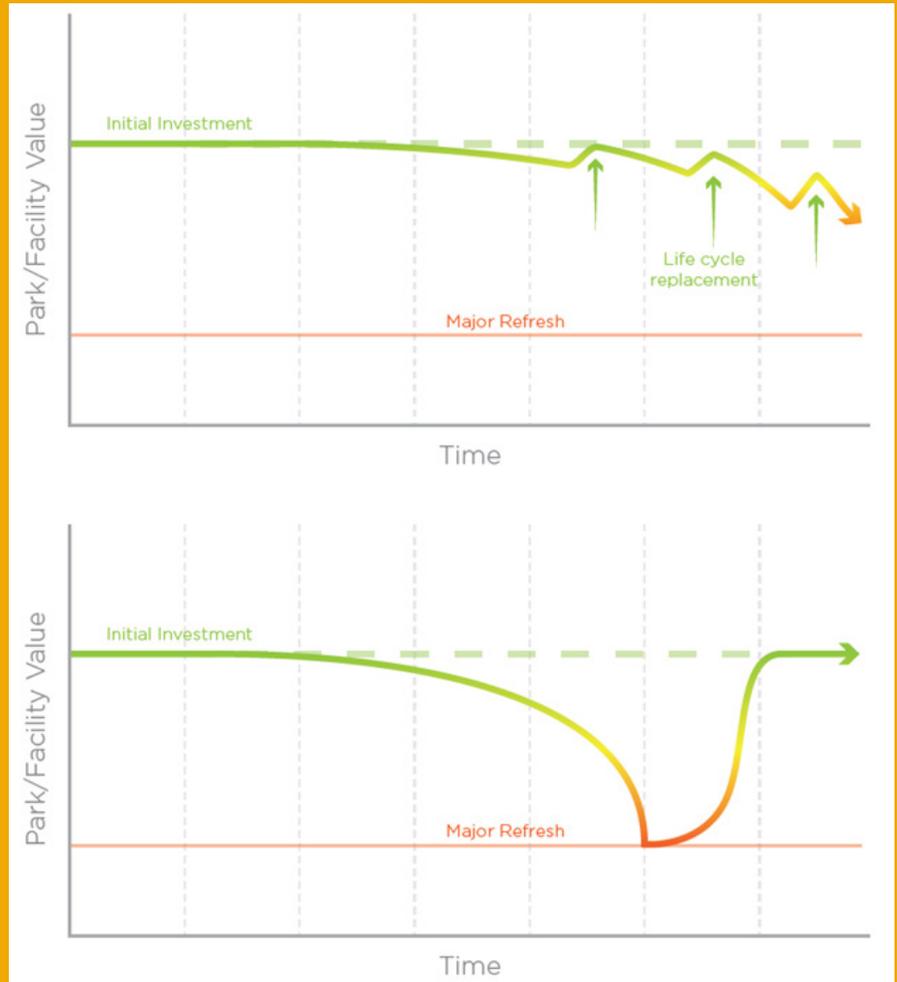


FIGURE 69: EXTENDED LIFE SPAN OF FACILITIES WITH CONSISTENT REINVESTMENT VERSUS LIFE SPAN OF FACILITIES WITHOUT MAINTENANCE (SOURCE: FORT COLLINS 2021 PARKS & RECREATION MASTER PLAN)



as street sweeping, drainage maintenance, leaf removal, pavement maintenance, and maintenance of most trails.

Additionally, volunteers can support local maintenance entities by assisting with routine upkeep responsibilities to reduce overall maintenance costs. Volunteers can perform a variety of tasks, including trash removal, vegetation management, and physical infrastructure maintenance.

RECOMMENDED MAINTENANCE ACTIVITIES

This section identifies recommended maintenance activities including trash removal, surface cleaning, vegetation maintenance, snow removal and drainage, pavement maintenance, amenity maintenance, physical infrastructure maintenance, and trailhead maintenance.

Snow Removal, Surface Cleaning, and Drainage

The goal of snow removal and drainage is to avoid weather-related blockages to trail access. In general, snow removal should occur as soon as possible after a snowfall on hard surface trails. Most roadway maintenance programs plow snow into the roadway shoulder or to the edge of a roadway.

This becomes an issue for bike lanes during the winter, as the lane becomes the area for snow storage. Snow storage should be considered during design and construction of bike lanes and sidewalks to retain access for cyclists during the winter (see the section on Bikeway Types for design guidance).

This plan recommends detached sidewalks and buffered trails in many areas of the city. The vegetated or hardscaped buffer of detached sidewalks creates a convenient location for snow storage.

Design of buffered or protected bike lanes can accommodate snow plowing. Creating a wide-enough lane (7'+) and/or buffers allows maintenance staff to plow these lanes with existing maintenance equipment like a pick-up truck. Narrower 5'-6' bike lanes can also be plowed but require a wider buffer (3'+) to store snow. In this configuration, Street Operations staff would plow/sweep the roadway using traditional methods

and plow/sweep sections of buffered and protected bike lanes using a smaller plow.

A Bobcat Toolcat or equivalent piece of equipment can be outfitted with a rotary broom, mower deck, pallet fork, snow plow, and other attachments to perform snow removal and surface cleaning. This equipment can also be used for trails and cycle tracks. Surface cleaning is necessary to remove obstacles that could cause injury or impede universal access. Staff may blow or sweep the surface clear of leaves and other debris.

Drainage maintenance is important for preventing damage to trails from storms and water erosion and for keeping trails open for use. Common drainage activities include clearing roadside swales and culverts. Roadside swales and drainage facilities shall be sized per city standards and specifications. Vegetation or trash that may block water flow must be removed from ditches, and slumping banks should be rectified. Drainage culverts should also be checked and cleared prior to major storms to ensure functionality during and after a weather event.

Pavement Maintenance

The city currently performs general pavement repairs each year, which includes hiring a contractor to shave uneven concrete. Asphalt pavement generally requires more maintenance than concrete and has fallen out of favor in many Colorado communities. Asphalt trails more frequently crack due to intruding vegetation, and a smooth trail surface is needed to better serve users of all abilities. Well-maintained concrete trails can last 25 years. However, concrete surfaces can still be damaged by water and erosion, tree roots, and frost and freeze cycles.

Other trail design characteristics with an impact on maintenance should be considered when constructing new facilities. New trails should be 10-12 feet to have adequate passing width and space for users to pause to the side, but also to allow access by maintenance and emergency vehicles. Trails should also be wider at intersections with other trails, at smaller radius curves, and at underpasses to allow for safe travel by users and to facilitate maintenance activities.





FIGURE 70: BUSHES ENCROACHING ON TRAIL (PHOTO BY JOHN KRUCHTEN)

Vegetation Management

Vegetation management is another maintenance activity that is necessary to remove obstacles that could cause injury or impede universal access. Challenges in Brighton include goatheads on trails, which create a risk for flat tires, and vegetation encroaching on sidewalks and trails, which can limit sightlines.

In Denver, a local resident dubbed “Goathead Greg” has inspired fellow trail users to join him on a “Goathead Patrol” that volunteers their time to uproot the plants during the weekends. Bike Brighton could organize similar volunteer events in collaboration with the Parks and Open Space Divisions to reduce their maintenance burdens. Bike Brighton could also partner with Brighton neighborhoods to encourage clipping overgrown bushes and vegetation that infringe on sidewalks adjacent to residential properties.

Best practices for trail clearance generally state that the edges of paved trails should have 2-3 feet of horizontal clearance from vertical obstructions, and trails should have a minimum vertical clearance of 8-12 feet. Clearing includes the removal of downed or leaning trees, protruding roots, loose limbs, or large pieces of bark from the trail and buffer zone.

Trash Removal

Trash removal is important not only for upholding the aesthetic character of trails, but also for protecting public health and safety and respecting natural habitat, wildlife, air, water, and soil quality.

Frequency of trash removal can vary based on trail use and location. For more remote or less trafficked trails, the city could reduce maintenance costs related to trash removal by placing bins at select locations and requesting that the public hold on to trash generated along the trail. Locations at trail entry points, in parking areas, and near street crossings are more easily accessed and serviced by maintenance staff.

Additionally, on trails where dogs are permitted, there should be signage and stations with disposable bags placed next to trash containers. These stations make it convenient for pet owners to pick up pet waste and can reduce the frequency of users dropping bags along the trail.

Amenity Maintenance

Trailside elements such as benches, picnic tables and shelters, drinking fountains, bicycle parking, bicycle repair stations, fencing, gates, bollards, and workout equipment may experience damage and require maintenance. Striping on major trails can help separate opposing traffic where needed, especially in areas where visibility is limited due to trail curvature. Striping and markings should be replaced where needed citywide on an annual basis.

Maintenance activities include cleaning, painting, repair, and replacement. During the construction of new trails, consideration should be given to whether these amenities should be installed (contingent on whether sufficient resources for maintenance are available), and if so, consideration should also be given to material types, durability, and placement for ease of maintenance and repair.

Physical Infrastructure Maintenance

Preventative maintenance can ensure pedestrian bridges remain in a state of good repair. Wooden bridges require checking for damage or deterioration of wooden decking. General bridge maintenance includes replacing boards or screws,



OBJECTIVE P2:

Provide funding for the Streets Operations and Parks and Open Space Divisions in alignment with trail and bikeway expansion.

OBJECTIVE P3:

Explore and pursue new funding sources to support maintenance of the expanded system.

bridge washing, debris clearing, deck sealing, steel bearings lubrication, and painting load-carrying steel members.

More intensive maintenance includes replacement of bridge elements such as joints, bearings, pedestals, bridge seat/pier cap, or columns/stems. The city may also apply products that enhance bridge grip and reduce slipperiness to improve safety for users in all weather conditions.

Trailhead Specific Maintenance

As the trail system expands, new trailheads and amenities may be installed. According to Rails-to-Trails, the most common trailhead elements are information kiosks, parking lots, tables and benches, trash receptacles, and toilets. As these facilities are planned, the city should consider material types, durability, and placement with regard to the ease of maintenance and repair.

FUNDING OPTIONS

Total annual maintenance cost estimates per mile vary greatly across communities, based on the type of facility (e.g., width, surface, structural design), as well as context-sensitive characteristics, such as the types of vegetation, amenities included, and number of annual users.

Current city maintenance budgets are limited each year, with an existing backlog of maintenance projects. Additional maintenance funding can increase the Divisions' staffing and shorten the list of maintenance backlog. The City of Brighton should continue to plan for increases in the budget of the Parks and Open Space Divisions and Street Operations Divisions commensurate with additional assets and capital facilities that they must operate and maintain.

Protected bike lanes and raised cycle tracks will require additional staff and equipment to maintain. If the city wishes to incorporate these bikeway types (beyond trails) in the transportation network, increases in funding should cover additional staff and equipment for both divisions:

- **It is recommended the city provide funding for the Streets Operations to hire an additional maintenance technician** internally focused specifically on bikeway maintenance (estimated at \$50,000-\$70,000

depending on tier and including benefits in 2023 dollars) or to contract out certain maintenance activities.

- **It is recommended the city provide funding for the Parks and Open Space Divisions to hire a maintenance technician** focused specifically on trail and raised cycle track maintenance (estimated at \$50,000-\$70,000 depending on tier and including benefits in 2023 dollars).
- **Funding should also be made available for each division to purchase a smaller dedicated piece of equipment for sweeping and snowplowing** such as a Bobcat Toolcat estimated at \$90,000-\$120,000 as of 2023 or a CV350 Multihog estimated at \$140,000 as of 2023. The Parks Division currently maintains trails with a pick-up truck, converted lawnmower, and Kaboda ATVs. The Street Operations Division currently has a skid steer.

In communities nationwide, usually more funding exists for capital construction than for maintenance. According to Rails-to-Trails, trail system managers nationally report receiving funding primarily from municipal budget allocations (49%), then from local fundraising activities (39%), in-kind donations (29%), the state budget (24%), community fees or taxes (9%), and federal funding (7%).

Many funding sources could be used for construction and maintenance. The city can explore these and more:

- Department of Local Affairs/Great Outdoors Colorado/Conservation Trust Fund (Colorado Lottery)
- Land and Water Conservation Fund
- Colorado Parks and Wildlife
- Conservation, trail advocacy groups, local organizations, non-profits
- Federal Highway Administration RAISE Grants, Recreational Trails Program Funding, Transportation Alternatives Program (TAP)
- Federal Safe Streets for All (SS4A) grants
- Highway Safety Improvement Program, National Highway Performance Program, FASTER Safety Grants
- City Capital Improvement fund (sales tax)
- City General Fund (sales tax)



PEDESTRIAN & BICYCLE AMENITIES

The following section outlines guidance for pedestrian and bicycle amenities for the city to incorporate alongside installation of new sidewalks, trails, and bikeways. With any corridor upgrade, the city should consider how to improve the overall streetscape to create a more pleasant environment for those walking and biking.

BICYCLE STORAGE & PARKING

A key component of the bicycle network is secure bicycle storage and parking. Without ample and safe bike parking, people may be more reluctant to choose to bike. Installing and maintaining end-of-trip facilities such as bike racks/parking, bike lockers/secure bike storage, showers, and personal locker encourages commuting by bicycle by making it more convenient.

The city should refer to the Association of Pedestrian and Bicycle Professionals (APBP) resource, *Essentials of Bike Parking*, which outlines design and installation guidelines for short-term and long-term bike parking (**Figure 71**). Placement and selection of these facilities should consider not just traditional bikes but cargo, e-bikes and adaptive devices.

Gridded bike racks, loop bike racks, and other similar bike racks that do not allow the user to easily lock the frame and wheel of the bike to a post should be avoided. These racks are typically inefficiently used, harder to secure one's bike, and less compatible with larger e-bikes and cargo bikes. The inverted U or other similar bike racks as shown in **Figure 71** are preferred.

The city should prioritize installation of high-quality bike parking and secure bike storage in key destinations across the city such as downtown, outside of city properties, and near major transit hubs, parks, schools, employment centers, and shopping areas.

Existing examples of high quality bike parking to replicate in other parts of the city include Vikan Middle School, which has quite a bit of bike parking near the entrance to the school, and Founders Plaza, as shown in **Figure 72**. Secure bicycle parking incorporates a "post" or "rack" where the front tire and the frame of the bicycle can be easily locked. The

city should also accommodate alternative micromobility devices such as e-bikes and scooters by constructing dedicated micromobility parking in high-demand areas. Bike parking could take the form of bike racks, micromobility corrals, bike lockers, bike shelters, and repurposed parking spaces.

Regardless of the type of bike parking used, it is important that it holds the number of bikes as they are designed to hold and it stores them securely. For example, on many traditional "bike racks" a bicycle can only be secured on each end of the rack where one can lock both the front wheel and the frame of the bicycle to the rack.

The spots between are difficult to use with limited distance between bike slots to lock up to and not as secure due to only a single tire being secured to the rack. This results in the total number of bicycle parking spaces the rack was designed for not being met and those bikes locked up not as secure. These concerns are magnified for e-bike users due to the larger size of the bike.

The city should also encourage new and existing developments to provide secure bike parking and amenities. The Development Code should require bike parking with new construction and a requirement or create an incentive such as vehicular parking amenity credit for covered, secure, easily accessible bike rooms in multifamily developments and office buildings. Additionally, the city should explore options for incentivizing existing developments to add secure bike parking, such as a grant program.

The city could work with existing businesses to provide bike parking by sharing the cost and promoting the League of American Cyclists Bicycle Friendly Business program. The Greater Brighton Area Chamber of Commerce may be a funding or promotional partner for establishing a Bicycle Friendly Business program.

STREET FURNITURE

The buffer/amenity zone described alongside the Bicycle and Pedestrian Facility Types is an area that separates trails and sidewalks from travel lanes. These buffers should include both horizontal and vertical separation. Wider buffers provide distance from moving traffic, but also create a valuable space to park

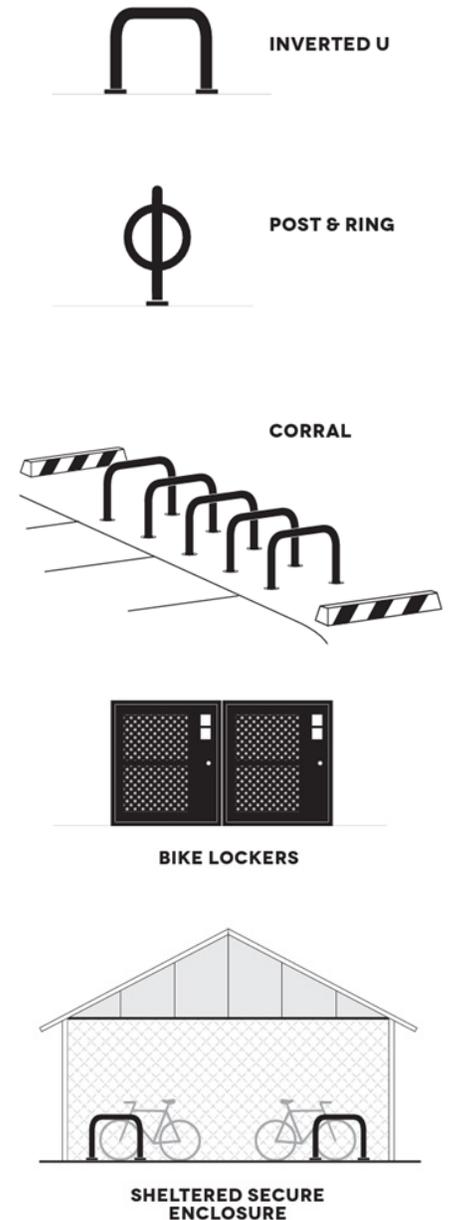


FIGURE 71: TYPES OF APBP-COMPLIANT PARKING

OBJECTIVE P4:

Prioritize installation of APBP-compliant bike and micromobility parking in key destinations downtown, outside of city properties, and near major transit hubs, parks, schools, employment centers, and shopping areas.

OBJECTIVE P5:

Encourage new and existing developments to provide secure bike parking and amenities through requirements and incentives.





FIGURE 72: BIKE PARKING IN FRONT OF VIKAN MIDDLE SCHOOL & FOUNDERS PLAZA





FIGURE 73: EXAMPLE OF HARDSCAPED BUFFER/ AMENITY ZONE ON BRIGHTON'S MAIN STREET

micromobility devices like scooters and bikes, to rest, to wait for the bus, and more.

Some buffer/amenity zones may be landscaped with native grasses, shrubs, and trees. Hardscaped buffers however, offer the opportunity to install street furniture like benches, streetlamps, bus stops, bike parking, waste receptacles, fountains, public art, and more. **Figure 73** shows an example of a hardscaped amenity zone. Each of these are amenities for people of all ages and abilities who walk and roll in Brighton.

Benches cater to people waiting for the bus, as well as older adults and small children, who may need to take more breaks. Pedestrian lighting, discussed below, creates a sense of safety on a street at night. Along trails, amenities like shade, water fountains, seating, and ADA accessible restrooms support recreation and active transportation. Each amenity listed creates a more pleasant and comfortable environment, making it more attractive to walk.

PEDESTRIAN-SCALE LIGHTING

Lighting plays an important role in establishing a safe and inviting environment for people to walk and bike, especially

into the nighttime hours. Many are likely familiar with Main Street environments that create an appealing place to walk at all times of day, with lampposts and cheerful string lights that continue to draw visitors to shops and restaurants throughout the evening. The opposite is also true. Dark, unlit corridors, regardless of whether they are a local street or a major arterial, feel uninviting and unsafe to the average person.

For those already unsure about walking or biking, especially vulnerable users like mothers with children or older adults, knowing that they will have to return home at night in the dark is likely to discourage choosing to walk or bike. Installing lighting of the appropriate scale and spacing can improve ambiance dramatically and increase one's sense of safety and "being seen" at night.

When performing corridor upgrades, the city should concurrently plan for the upgrade of lighting in the project area. These lighting strategies can improve safety along active transportation corridors, at trailheads, and in dark, unlit areas of concern that may be intimidating or uncomfortable for people to walk. Lighting considerations include:

OBJECTIVE P6:

When performing corridor upgrades, design high-quality landscaped or hardscaped buffers with street furniture and pedestrian amenities.

OBJECTIVE S6:

When performing corridor upgrades, concurrently plan for the upgrade of lighting in the project area.



Scale and Aesthetics

The dimensions of streetlights should be scaled to the width and characteristics of the street. Smaller lampposts between 25 and 30 feet should be chosen for local and collector roads to support street character and walkability of neighborhoods and local commercial districts. Taller poles of 30 feet or more are appropriate for wider arterial streets and highways. Other attractive types of lighting beyond lampposts can support illumination of the public realm, such as string lights, storefront lighting, lit signs, etc.

Spacing

Spacing between streetlights should be roughly 2.5 to 3 times the height of the pole. Density along a corridor and traffic speeds also affect ideal spacing. Lighting will be less frequent in rural areas, but alongside new development, lighting frequency

should increase. Light cones are roughly the same diameter as the height of the fixture, which will influence the maximum distance between streetlights to avoid dark areas.

Light Pollution and Energy Efficiency

“Dark sky friendly” lighting fixtures focus lighting directly downward onto the street to minimize flare and light pollution, while maximizing useful light. Shielded and cut-off fixtures with energy-efficient LED light bulbs are more cost-effective and reduce light pollution by directing light toward the ground. Solar powered fixtures should be installed when possible to take advantage of Brighton’s climate.

For more information, the city can refer to lighting design guidance in the Global Designing Cities Initiative’s *Global Street Design Guide*.



FIGURE 74: EXAMPLE OF PEDESTRIAN-SCALE LIGHTING & SIGNAGE ON BRIGHTON'S MAIN STREET





FIGURE 75: EXAMPLES OF WAYFINDING SIGNAGE

WAYFINDING & SIGNAGE

Signage is a practical component of a community’s transportation system, directing users to key destinations. However, it also offers an opportunity for the city to create a sense of place and cohesive, artistic system for orienting visitors and bringing people into the downtown core and commercial districts to explore shops and restaurants.

In this way, wayfinding can simultaneously act as an economic development driver and unite transportation and land use. Brighton should initiate a comprehensive wayfinding and signage study to create a consistent strategy for connecting

people walking, biking, and driving to downtown and other key destinations.

Signage at range of scales, including gateways, directional signs, street banners, pavement markings, map kiosks, and bikeway signage can assist all types of travelers with navigation. Signage should indicate where to find key destinations, such as shopping and dining, the town hall and post office, trailheads, the nearest bus stop, and more.

Thoughtful design and placement of this signage can help visitors and residents orient themselves downtown and easily locate key destinations. The left image in **Figure 75** shows how simple this kind of



FIGURE 76: EXAMPLE OF WAYFINDING ON THE COLORADO FRONT RANGE TRAIL



OBJECTIVE P7:

Install gateway signage that signals visitors and residents that they are entering town and highlights the downtown core.

OBJECTIVE P8:

Install wayfinding signage along the trail system, especially at key junctures to draw trail users into town to stop for a drink, a meal, or to explore local shops.

OBJECTIVE P9:

Install wayfinding signage with consistent standards as part of new trails and bike facility projects.

OBJECTIVE P10:

Consider initiating a comprehensive wayfinding and signage study to create a consistent strategy for connecting people walking, biking, and driving to downtown and other key destinations.

signage can be, while remaining aesthetically pleasing. The pedestrian scale of this signage caters to people walking downtown and in commercial districts, but it can also be read by those on a bike or in a car.

Wayfinding systems should also include estimated walking time to each destination listed to further highlight ease of pedestrian access. Using consistent colors for trails and bike routes can simplify comprehension.

Gateway signage (an example shown in **Figure 75** at right) signals to visitors and residents that they are entering town and highlights the downtown core. This type of signage could enhance the entrance to Brighton and provide a distinctive transition into the city. Possible locations for gateway signage include:

- Bridge Street just west of Main Street
- Main Street adjacent to Founders Plaza
- Main Street south of Longs Peak Street

Additionally, during the downtown walk audit, participants pointed out the disconnect between the Colorado Front Range Trail and the Brighton core. While there is signage along the trail (**Figure 76**), at several key turns, there are no signs indicating proximity to the City of Brighton or directing trail users to downtown.

Improved wayfinding signage at these junctures could draw trail users into town to stop for a drink, a meal, or to explore local shops. The *2016 Transportation Master Plan* recommended that Brighton install signage that promotes the community as a hub along the Colorado Front Range Trail and develop a custom local wayfinding system including “decision signs” with time and distance to local destinations.

Bikeway and trail signage is especially important to help people walking, rolling and biking reach major destinations and landmarks. As the city continues to build out bike facilities and new trails over time, they should incorporate additional signs with the same wayfinding standards at decision points – typically at the intersection of two or more bicycle facilities and at other key locations along bicycle routes.

Signage should be regularly refreshed or replaced as it becomes damaged,

faded, or out of date. Over time, outdated signage should also be replaced with new, updated information. Signs may be directional and related to routing users to key destinations, mile markers to help users self-locate, or pertaining to trail etiquette.

FIRST-AND-LAST MILE CONNECTIONS TO TRANSIT

The distance a person must cover from their origin to their primary form of transportation and/or from their primary form of transportation to their destination is called the first-and-last mile. First-and-last mile connections can include walking, biking, rolling, using micromobility, or even driving.

First-and-last mile connections to transit are important as they improve access to local and regional destinations, including jobs, shopping, public services, medical facilities, and other key destinations. By maximizing bicycle and pedestrian access to transit, transit’s reach widens to more members of the community, resulting in increased mobility options for Brighton residents and workers.

The improved bicycle and pedestrian facilities recommended through the plan, such as filling in sidewalk gaps and enhanced local bicycle connectivity, facilitate these needed first and last mile connections. Further, each recommended project was evaluated based on multiple criteria, including the project’s proximity to bus stops, scoring projects that provide access to transit higher in the prioritization process.

BICYCLE COUNTS

Collecting bicycle counts allows city staff to measure the number of riders before and after project implementation. These bicycle counts also help understand changes in bicycle ridership across the bike network. Land use and corridor planning decisions currently consider vehicular volumes, but not volumes of people biking. Collecting bicycle counts allows planners to factor bicyclists into these decisions. **Figure 78** displays optimal data collection technologies for bicycle counts, which vary depending on the mode type and the facility type.

CDOT collects bicycle volumes at count locations across Colorado and recommends supplementing this data with big data providers such as Strava. Strava is a mobile



app that enables users to track physical exercise including biking, running, hiking, and walking using GPS. The platform records these trips and allows users to share their activities. Users of the platform track recreational activities, but a growing share of users are tagging their activity as commutes. In many cities commutes are the primary activity recorded on Strava.

Through all of these public recordings, Strava collects data on origin-destination patterns and popular routes and corridors, aggregating and deidentifying unique users. They publish a publicly-available Global Heatmap and share some additional data with transportation planning firms or local jurisdictions by request.

Transportation planners recognize the value of this anonymized data to better understand pedestrian and bicycle demand in a transportation network. It should be acknowledged that there is an inherent bias in the data as it represents primarily recreational trips and all trips represented were made by users of the app, which is a small percentage of all walk and bike trips. However, the data is still useful as it can offer a proxy for larger active transportation patterns. For example, people walking and

biking for recreation often choose routes along streets that feel more comfortable and safe, in a way similar to people walking and biking for utilitarian reasons.

Beyond CDOT’s guidance on technology, there are multiple locations that have incorporated bicycle count programs, such as Denver, Fort Collins, Boulder County, and Arlington County, VA.

DENVER BICYCLE COUNT PROGRAM: DENVER, CO

The Denver Department of Transportation and Infrastructure (DOTI) established their bicycle count program in 2019 and collects bicycle data at 50 locations across the city. This data can be accessed publicly through their online dashboard, which displays the location of each counter, the type of bike facility, the street classification, the most recent collection date, and the hourly number of bicyclists over the course of the day.

The dashboard also shows the network-wide bicycle counts, displaying the top ten locations with the highest bicycle activity. This dashboard allows the user to filter by year, and can also display the monthly volume and average hourly volume.

TECHNOLOGY	MODE TYPE					FACILITY TYPE			
	PEDESTRIAN AND BICYCLE MIXED	PEDESTRIAN AND BICYCLE BY MODE	PEDESTRIAN ONLY	BICYCLE ONLY	BICYCLE IN MIXED MOTOR VEHICLE TRAFFIC	SHARED USE PATH	SIDEWALK	ON-STREET BIKE LANE	ON-STREET MIXED TRAFFIC
Passive infrared detectors	●		●			●	●		
Active infrared detectors	●		●			●	●		
Radio beam detectors	●	●	●			●	●		
Pneumatic tubes				●	●	●		●	●
Inductive loop detectors				●	●	●		●	●
Piezoelectric sensors				●		●		●	
Automated video	●	●	●	●	●	●	●	●	●
Combination inductive loop/infrared detectors	●	●	●	●		●	●		
Manual field data counts	●	●	●	●	●	●	●	●	●

FIGURE 77: PEDESTRIAN AND BICYCLE VOLUME DATA COLLECTION TECHNOLOGIES (SOURCE: CDOT)



OBJECTIVE W4:

Begin a bicycle count program by placing initial counters in known bicycle activity hotspots, and expanding counters to new areas where the city is planning major corridor projects with new bikeways to be able to track the difference in bicycle activity before and after projects are implemented.

REMINGTON BICYCLE COUNTY: FORT COLLINS, CO

The City of Fort Collins has a bike counter along the Remington Bikeway between E Lake Street and E Pitkin Street, and they report the data in the form of a publicly accessible dashboard. The data is consistently collected every hour of every day. The dashboard allows the user to access data at this location from December 2016, and to display the data by daily, weekly, or monthly counts. The data can also be filtered by direction of travel (northbound or southbound).

BICYCLE COUNTING PROGRAM: BOULDER COUNTY, CO

Since 2013, Boulder County has been utilizing its 300 county-wide vehicle counters to also collect bike count data. This data is collected at designated times, and it is then reported on an interactive map. The map can either display just bicycle counts and/or a user can compare these bicycle counts to vehicle counts. When a user clicks on a count location, the following information is displayed: the traffic station name, bicycle count, year collected, surface type, and street classification.

BIKE ARLINGTON COUNTER: ARLINGTON COUNTY, VA

Bike Arlington is Arlington County's system of continuous automatic counters used to detect and record bicycle and pedestrian volumes – every hour of every day – across its 32 permanent counter locations. The data is displayed in an interactive dashboard that allows the user to filter by mode, direction and range of dates and times.

BRIGHTON'S BICYCLE COUNT PROGRAM

As noted, collecting bicycle counts throughout the bicycle network helps city staff make better data-driven decisions and this can be done in a variety of ways. Brighton can look towards the bicycle count programs in Denver and Arlington County as examples for its own bicycle count program.

City staff should consider placing initial counters in known bicycle activity hotspots, and expand counters to new areas where the city is planning major corridor projects with new bikeways to be able to track the difference in bicycle activity before

and after projects are implemented. City staff can use this data to inform pre and post-installation studies of new bicycle infrastructure project to gauge ridership, safety benefits, and effectiveness.

The program should include the collection and storage of bicycle activity data at least every six months, and an annual analysis of bicycle activity across the network.

BIKE SHARE/BIKE LIBRARY

Scooters and bike share have been successfully deployed in several Front Range communities including Denver, Fort Collins, Boulder, and Longmont. Brighton has worked with Bird to provide electric scooters since June 2022. When these scooters were authorized for operation and licensing, Brighton modified its municipal code to require licensing of micromobility devices, established rules and regulations, set up safety and maintenance requirements, and outlined thresholds for penalties, fines, and suspension of the license. The city also provides safety rules for riders and established “no-ride zones” and “slow zones.”

Generally, sharing services are most successful and financially sustainable where there is a higher density of land uses, which may be a challenge in many parts of Brighton. In addition to the existing scooter share program, a small bike share program offered to the public, like Golden's Bike Library or the Northeast Transportation Connections (NETC) Bike Libraries that allow residents and visitors to check out a bike, could be successful in a lower-density city like Brighton.

DENVER'S SCOOTER AND BIKE SHARE PROGRAM

Denver initiated its license agreement with Lyft and Lime to operate the bike and scooter share system in May 2021. The fleet size currently includes approximately 2,930 scooters and 586 e-bikes per operator; there are up to 5,860 scooters and 1,172 e-bikes on Denver's streets. As part of the licensing agreement, Lyft and Lime must accomplish the following:

- Install 375 to 675 parking stations
- Fund and partner with the city on educating the public on how to ride and where to park these devices
- Offer reduced rates for residents in



need-based programs, in addition to free ride opportunities

- Supply a bike service at a rate of 20% of the scooter fleet, at minimum
- Make 30% of vehicles available daily in historically underinvested communities
- Equip vehicles with “geofencing” technology that automatically slows to 3mph in pedestrian-heavy areas
- Report data on trip location, distance, and speed that the city then uses to publicly display in its micromobility dashboard

Denver also manages a violation form for residents and visitors to document incorrectly parked micromobility devices, which then must be remedied by the device’s company.

Ultimately, the scooter and bike share program is a large investment in mobility from both the city and the device operators. A traditional bike share, like the program in Denver, might not be as successful nor financially sustainable in a lower density city like Brighton.

GOLDEN BIKE LIBRARY

The City of Golden maintains a bike library Thursday through Sundays between April and October. Residents and visitors can “check out” a bike for local use from the Golden Visitor Center. The rental is free for the first two hours or \$10 for the whole day, and reservations can be made online or by coming to the Visitor Center. Golden’s bike fleet includes 60 bikes between two models, and each bike rental comes with a helmet and a reusable water bottle.

NETC BIKE LIBRARIES

Northeast Transportation Connections (NETC) operates three bike libraries in the Denver neighborhoods of Globeville and Elyria Swansea out of the Prodigy Coffeehouse, Focus Points Family Resource Center, and the Beloved Community Village. The program allows patrons to borrow e-bikes and regular bikes on-demand for a week at a time, in addition to a required helmet and bike lock. NETC also facilitates bike safety training, rules of the road information, and route planning assistance.

BRIGHTON'S BIKE SHARE/BIKE LIBRARY

A bike library would require less of a financial and time investment from both the city and/or an external provider, and it would likely more closely align with the public’s interest.

For a bike library, Brighton would need to coordinate and consider the following:

- Location from which renters would check out bikes
- Duration of time a renter can check a bike out; whether the storage of all bikes needs to be in a city facility, or could be in the hands of the renter overnight
- Amenities to provide the renter alongside a bike, such as bike locks, helmets, water bottles, etc.
- Public outreach advertising the bike library, how to use the bike library, and riding safely
- Collection of community feedback on improvements to the bike library

If Brighton were to consider a more robust bike share program where the city would partner with an external operating company (such as Denver’s Lyft and Lime), Brighton would first work with a bike share provider to understand the feasibility of the program. If it were deemed feasible, Brighton would enter into a sole-provider licensing agreement which would require the operating company to:

- Deploy a set number of bikes
- Install of parking stations
- Partner with the city to educate the public on how to rent and how to ride safely
- Agree to collect and share the data with the city
- Geofence boundaries to restrict riding in congested or unsafe areas
- Deploy a percentage of the bikes in low-income neighborhoods

SAFE ROUTES TO SCHOOL (SRTS)

Safe Routes to School (SRTS) programs encourage students to walk and bike to school by implementing safety improvements and programs for a school community. Beyond supporting safety, SRTS

OBJECTIVE W5:

Explore potential locations and partners to develop a bike library.



OBJECTIVE S7:

Work with the 27J school district, interested parents, Bike Brighton, and other school community members to establish a robust SRTS program that incorporates elements from all of the “six Es” – Education, Encouragement, Engineering, Enforcement, Evaluation, and Equity.

programs can reduce traffic congestion, provide environmental benefits, and improve health outcomes by promoting habits of walking and biking that may influence travel decisions later in life.

The 27J school district, which covers all of Brighton, does not currently have an active Safe Routes to School program. SRTS programs and bicycle safety education for youth are essential components of becoming a Bicycle Friendly Community. The City of Brighton should work with the 27J school district, interested parents, Bike Brighton, and other school community members to establish a robust SRTS program.

The program should incorporate all of the “six Es,” which represent an integrated and comprehensive approach to making streets healthier and safer for everyone, regardless of their destination or travel mode. The following section describes each of the six Es and related initiatives.

EDUCATION

Providing students and the community with the skills to walk and bicycle safely, educating them about benefits of walking and bicycling, and teaching them about the broad range of transportation choices.

- Bicycle Rodeos or clinics to teach children the skills and precautions to safely ride a bicycle.

- Schools can launch advertising campaigns to promote travel to school by means other than driving.
- Public education can include information distributed to students about travel options, including safe walking and biking routes, transit services, and carpools.

ENCOURAGEMENT

Generating enthusiasm and increased walking and bicycling for students through events, activities, and programs.

- Walk Pools/Walking School Bus: Organized walking groups for children, chaperoned by an adult, that encourage students to walk together to school.
- Bike Bus: Organized bike rides to school chaperoned by an adult(s), that provide a fun morning experience and safety in numbers, helping to alleviate parental concerns about personal security and traffic safety.
- Walk, Roll, and Bike to School Day: Event that encourages participation and educates students on the benefits and ways to walk and bike to school comfortably and safely.
- Partner with local organizations to lead/help with SRTS programs.
- Engage parents as volunteer crossing guards and walk/bike bus leaders.
- Create a yard sign program.

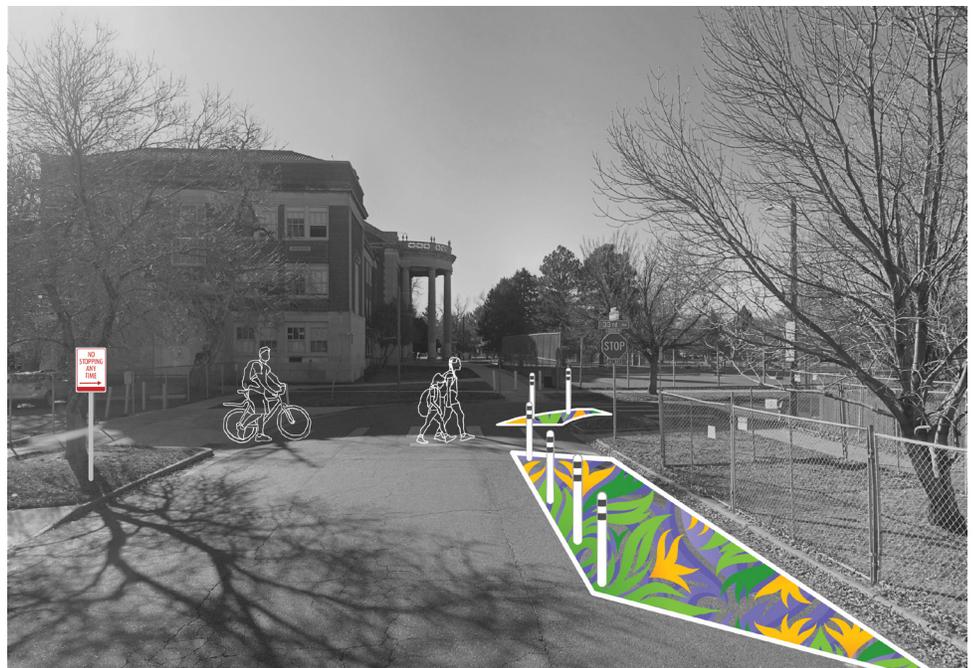


FIGURE 78: EXAMPLES OF TRAFFIC CALMING NEAR SCHOOLS



ENGINEERING

Creating physical improvements to streets and neighborhoods that make walking and bicycling safer, more comfortable, and more convenient.

- High quality sidewalks and crosswalks near schools: Refer to the recommended facility types and alignments in this plan – proximity to schools and crash history were both factors used in project identification and prioritization, with projects close to schools and near crash hot spots considered higher priority.
- High visibility signage and markings in school zones.
- Designated curb space outside schools for pick-up and drop-off zones.
- Traffic calming in neighborhoods around schools like curb extensions, pedestrian refuge islands, etc. (**Figure 78**).

ENFORCEMENT

Deterring unsafe traffic behaviors and encouraging safe habits by people walking, bicycling and driving in school neighborhoods and along school routes.

- The city can work with schools to identify if there are particular behaviors that cause safety issues that could be alleviated through a form of enforcement of better practices, and how to generally enhance awareness of school zones where children may be present.
- Crossing guards/police enforcement during peak travel times.
- Reduce school zone speed limits.

EVALUATION

Assessing which approaches are more or less successful, ensuring that programs and initiatives are supporting equitable outcomes, and identifying unintended consequences or opportunities to improve the effectiveness of each approach.

- Maintain an open forum to collect parent, teacher, staff, and student concerns.
- Conduct surveys on travel behavior to and from school and barriers to walking and biking.
- Evaluate barriers in the built environment to walking and biking near school properties.
- Conduct safety audits at pick-up and drop-off times to identify safety issues.
- Expand successful programs.

EQUITY

Ensuring that Safe Routes to School initiatives are benefiting all demographic groups, with particular attention to ensuring safe, healthy, and fair outcomes for low-income students, students of color, students of all genders, students with disabilities, and others.

- Ensure ADA access to school properties.
- Focus attention on schools in low-income neighborhoods/with many students of color.

Almost all funding for SRTS is federal but distributed at the state level. The Colorado Safe Routes to School (CSRTS) program had \$5 million available in FY 2023. There are a range of project types eligible for SRTS funding, including campaigns, educational initiatives, sidewalk and crossing repairs, and equipment pilot programs. It is recommended that the city apply for CDOT grant funding to develop their Safe Routes to School Program and eventually construct recommended infrastructure projects in this plan near schools.

The city is most likely to be successful for grants to implement infrastructure that improves bicycle and pedestrian safety by formalizing the SRTS program, including ongoing action items to collect data on travel behavior to and from schools. A well-organized and complete SRTS program will benefit transportation in Brighton by providing users with a range of transportation options and enhance the real and perceived safety of those options.

When the focus of transportation planning and design is on the most vulnerable users, children walking and biking, the safety benefits reach everyone. Increased walking and biking provide environmental and health benefits to students, but also provides the transportation benefits of reduced traffic congestion and lower transportation costs for school districts and families. Safer streets, reduced congestion, and a greater share of trips occurring through walking and biking all support the vision of the plan.

More information and resources on Safe Routes to School can be found through the Safe Routes to School National Partnership: <https://www.saferoutespartnership.org/>.



OBJECTIVE S8:

City law enforcement should work with local driving schools to expand the curriculum on laws governing interactions with people walking, rolling, and biking.

OBJECTIVE W6:

Increase the number of local League Cycling Instructors (LCIs) either by hosting an LCI seminar or sponsoring a city staff member, police officer, and/or local bike advocate to attend an existing seminar elsewhere.

OBJECTIVE W7:

Pursue new educational programs to grow awareness of active transportation options in the community.

OBJECTIVE W8:

Partner with large employers to implement a voluntary incentive program to support walking and biking to work.

ADULT EDUCATION & AWARENESS

Numerous comments received during the public engagement process referred to the need for education and awareness to establish a more positive culture around walking and biking in Brighton. Residents noted that drivers are often unaware of cyclists in the roadway and don't expect them, so with the construction of new bikeways, driver education on sharing the road will be critical. This includes clear communication of rules and expectations through education, encouragement, and enforcement.

EDUCATION

In addition to Safe Routes to School, the city should expand the audience for educational programs to include high school and college students, new drivers, and other adults. City law enforcement should work with local driving schools to expand the curriculum on laws governing interactions with people walking, rolling, and biking, such as:

- Three-foot passing distance regulation
- Permission for cyclists to occupy a full travel lane
- Permission for cyclists to treat stop signs and red lights as “yields” and rolling stop when no conflicting traffic
- Requirements for drivers to stop for people in the crosswalk
- Best practice of checking for cyclists before opening the driver-side door
- Danger of drivers running red lights and turning right on red during a walk cycle

Beyond stressing rules of the road in driving curriculum, it should also promote understanding and empathy for all road users, whether walking, biking, driving, or using another mode of transportation.

Additionally, not all adults may know how to ride bicycles or the rules of the road as a cyclist. A bicycle training curriculum for “interested but concerned” cyclists and underserved populations like families, women, seniors, low-income, and non-English speaking communities can expand the reach of bicycle education in Brighton.

The League of American Bicyclists recommends increasing the number of local League Cycling Instructors (LCIs) either by hosting an LCI seminar or sponsoring

a city staff member, police officer, and/or local bike advocate to attend an existing seminar elsewhere. Having active LCI instructors in the area can expand cycling education for youth and adults, deliver Bicycle Friendly Driver education to motorists, and have experts available to assist in encouragement programs.

The city could also pursue the following educational programs:

- City staff education on walking, walkability, and pedestrian safety and travel options to work
- Low-cost or free bicycle maintenance classes at already scheduled events & workshops at schools, parks, or neighborhoods
- General outreach and media campaigns that discuss current and new bikeways, Vision Zero, safe driver and bicyclist behavior, and events related to walking and biking
- Promotion and distribution of an online and printed city bicycle map of trails and bikeways

ENCOURAGEMENT

Through their Bicycle Friendly Community Designation, the League of American Cyclists encourages municipalities to develop a community-wide commute trip reduction (CTR) ordinance, incentive program, and/ or a Guaranteed Ride Home program to encourage and support bike commuters. Through this program, the city would partner with large employers to implement a voluntary incentive program to support walking and biking to work.

Incentives can include e-bike rebates, bike-themed events such as bike rodeos and Bike to Work Day, giveaways such as bike lights and helmets, and gift certificates for those who bike to city events. Guaranteed Ride Home provides commuters who did not drive to work with alternative means home in case of an emergency. This type of community program can help make cycling a viable part of daily life.

In collaboration with Bike Brighton, the city can also host Bike Month and Bike to Work events and create a Bicycle Friendly Business Program that recognizes local businesses, agencies, and organizations that promote cycling to their employees



and customers. The Greater Brighton Area Chamber of Commerce may be a funding or promotional partner for establishing a Bicycle Friendly Business program.

ENFORCEMENT

City staff should partner with law enforcement to increase enforcement of speeding and reckless driving in areas with high pedestrian volumes and/or safety issues and consider automated enforcement. Law enforcement should also conduct spot enforcement of cars parked in bike lanes to establish an understanding that the space is reserved for people biking.

The police department may also consider expanding their bike patrol unit to improve bicyclist/officer relations, and ensure that all law enforcement officers have basic training or experience with bicycling. This includes providing officer education about bicycle-specific enforcement, including the rights and responsibilities of bicyclists and ways for officers to intervene in unsafe riding through education rather than ticketing.

Policies

One of the most tangible and cost-effective ways to improve the bicycle and pedestrian environment in Brighton will be to implement effective policies. City policies influence everything from the design of streets to organizational philosophy.

Policies can be used by city departments as they perform street construction projects and routine maintenance. The policies can also be used to guide the private sector in new development or redevelopment projects. Adopting policies may assist in ensuring projects incorporate the city's goals for the bicycle and pedestrian environment and create a consistent experience for users.

Based on the existing conditions analysis and in collaboration with city staff, the following set of policies are recommended to support build-out of the future bicycle and pedestrian network and reflect the city's overall commitment to active transportation.

MULTIMODAL USE OF ACTIVE TRANSPORTATION SYSTEM

The active transportation network will ideally serve multimodal users beyond bicyclists and pedestrians. These multimodal users can include people on scooters, skateboards, shared micromobility devices, motorized wheelchairs, golf carts, and other alternative modes.

For some of these alternative modes, Brighton already has guidance through its municipal code.

ELECTRIC SCOOTERS

Electric scooters, per the municipal code, are to be operated only on streets, bike lanes where available, or sidewalks/bike paths that are greater than eight feet in width. People riding electric scooters are also required to stay to the right of street lanes and yield right-of-way to bikes in bike lanes.

ELECTRIC BICYCLES

Electric bicycles (or "electrical assisted bicycles" per the municipal code) are only allowed to be operated on paved multi-purpose trails. They also must be classified as "Class 1" or "Class 2", which have a maximum speed of 20 mph. These bicycles are required to follow a speed limit of 15 mph (unless otherwise posted), weigh less than 100 lbs, and be no wider than 40% of the width of the trail.

MOTORIZED WHEELCHAIRS & GOLF CARTS

There is limited guidance on motorized wheelchairs and golf carts in the municipal code; however, the code does specify that motorized vehicles, *except motorized wheelchairs*, are not allowed to operate on any bicycle or pedestrian facility.

RECOMMENDED GUIDANCE

City staff should ensure that all users of the active transportation network clearly understand which multimodal facilities can be used by which modes.

OBJECTIVE W9:

Plan and host three Bike Month events and a Bike to Work event each year.

OBJECTIVE P11:

Partner with the Greater Brighton Area Chamber of Commerce to establish a Bicycle Friendly Business program.

OBJECTIVE S9:

Partner with law enforcement to increase enforcement of speeding and reckless driving in areas with high pedestrian volumes and/or safety issues and consider automated enforcement. Consider expanding the police bike patrol unit.



OBJECTIVE W10:

Clearly communicate where electric scooters, electric bicycles, motorized wheelchairs, golf carts, and other future mobility devices are permitted to operate.

OBJECTIVE C2:

Codify the Complete Streets Policy and follow it on all roadway projects.

OBJECTIVE S10:

Formally adopt the 2018 *Vision Zero Action Plan*, complete the top five priority projects identified in the plan, join the statewide Moving Towards Zero Deaths program, and publicize Vision Zero efforts through a marketing campaign.

In general, trails will be designed to serve both pedestrians and bicyclists, including people on electric and non-electric mobility devices and electric bikes that meet city standards and obey a speed limit of 15 mph. It should also be made clear that motorized wheelchairs are to be operated on sidewalks or trails, and not permitted in bike lanes.

“Class 3” electric bicycles or golf carts may use bike boulevards or travel lanes in the roadway (Class 3 e-bikes may use bike lanes and trails if they follow a speed limit of 15 mph.

FUTURE TRANSPORTATION MODES

Brighton also recognizes that new transportation modes such as one-wheel skateboards and hoverboards will continue to emerge and grow popular, and will require their own guidance. In general, Brighton should require the proper operation of these modes that ensure safety for the user and their surroundings. The more powerful devices should be required to operate only on bike boulevards or trails with a maximum speed limit of 15 mph.

Further, the community engagement process of this plan received input on what they would like the multimodal network to look like in the future. Comments included an interest in car-free streets and pedestrian-only zones, as well as trolley system to connect to key destinations along major commercial corridors.

Although these are not recommendations within this plan, city staff may wish to consider these desired future transportation options with eventual urban growth.

COMPLETE STREETS

The current Complete Streets Policy within the 2016 Transportation Master Plan should be codified and better followed for all roadway projects. Ensuring compliance with this policy can be a cost-effective way to expand the bicycle network, since striping bicycle lanes as part of repaving operations can save 40% of the cost of adding a bicycle lane.

VISION ZERO

Through their Bicycle Friendly Community designation, the League of American Bicyclists encourages municipalities to adopt a comprehensive road safety plan or a Vision Zero policy. It is increasingly common for municipalities around the country to adopt Vision Zero policies and programs and implement engineering strategies to address safety like road diets, lane diets, and traffic calming treatments.

The 2018 *Brighton Vision Zero Action Plan* identifies strategies and an implementation framework to eliminate fatal and severe injury traffic crashes in the City of Brighton. Brighton should perform the following next steps:

- Complete the top five priority projects identified in the plan.
- Formally adopt the Vision Zero Action Plan.
- Join Colorado’s statewide program – Moving Towards Zero Deaths – to solidify the citywide commitment to Vision Zero.
- Publicize the city’s Vision Zero efforts through a marketing campaign.



CONSTRUCTION ZONES

To minimize construction impacts on bicycle and pedestrian travel, the City of Brighton should consider updating their construction zones policy. This policy would require developers and construction companies to reroute sidewalks and bicycle facilities with standards for detours, similar to the way that they must currently continue to facilitate roadway access for people driving.

This could mean accommodating people walking and biking with a temporary covered walkway (example shown in **Figure 79**) and bikeway adjacent to the construction zone, or at minimum signing alternate detour routes on either end of the construction zone. The city can also improve communication about construction closures and trail detours through social media and websites.

Pedestrian and bicycle accommodation in work zones is already a federal standard defined in the Manual on Uniform Traffic Control Devices. In Denver, developers must obtain a street occupancy permit and submit a plan for accommodating people driving and walking. City staff reviews engineered drawings, traffic control plan(s), and street occupancy requests. Their [Pedestrian Walkway Entrance Requirements](#) stipulate that construction sites must provide covered walkways and less often, fenced pedestrian

walkways to accommodate people walking and protect them from construction activity. The requirements include details on walkway dimensions and design features.

MODEL BEST PRACTICES

The city is demonstrating a commitment to improving walking, biking, and rolling by developing and adopting this plan, which develops the vision for the future bicycle and pedestrian networks and sets forth clear implementation strategies. There are several additional ways that the city can show this commitment, as suggested by members of the public during the engagement process.

First, the city should complete active transportation network facilities on its own properties and at the same time as corridor redesign and/or repaving projects. This means incorporating sidewalk and bicycle facilities as part of all street projects and capital improvements. Attendees of the stakeholder focus group at Eagle View Adult Center voiced concerns that many city-owned properties are not bike or wheelchair accessible due to placement of curbs, lack of ramps, and narrow sidewalks.

To model best practices, the city should ensure that all public facilities and spaces, especially schools, are accessible by alternative modes of transportation.

OBJECTIVE C3:

Consider adopting a construction zones policy that requires developers/ construction companies to provide sidewalks and bicycle facilities during construction.

OBJECTIVE C4:

Ensure that all public facilities and spaces, especially schools, are accessible by walking, biking, and rolling. Whenever a new street is constructed or an existing street is reconstructed, sidewalk and bicycle facilities should be included as guided by this plan.



FIGURE 79: EXAMPLE OF COVERED WALKWAY AT CONSTRUCTION SITE



OBJECTIVE P12:

Establish a dedicated, reliable funding source for construction and maintenance of active transportation infrastructure recommended in the plan.

OBJECTIVE W11:

Establish a city bicycle coordinator position to facilitate implementation of plan recommendations.

OBJECTIVE W12:

Improve reach of Bike Brighton to underrepresented communities so that the committee reflects the diversity and ability levels of cyclists in the community, and is inclusive of those who ride most often and are most familiar with biking conditions in Brighton.

OBJECTIVE C5:

Collaborate with nearby governments and jurisdictions through bi-annual meetings to achieve better regional connectivity of the system.

Whenever a new street is constructed or an existing street is reconstructed, sidewalk and bicycle facilities should be included as guided by this plan.

Other comments received through the first survey stressed the need for support and funding from City Council and city staff. While the Implementation & Prioritization chapter addresses funding opportunities, this comment highlights local interest in a reliable funding source for construction and maintenance of active transportation infrastructure.

The League of American Bicyclists also suggests “increasing the amount of staff time spent on improving conditions for people who bike and walk, either by creating a new dedicated position or expanding the responsibilities of current staff.” A city bicycle coordinator could facilitate implementation of plan recommendations.

The League also suggests that “members of your Bicycle Advisory Committee reflect the diversity and ability levels of cyclists in your community, and is inclusive of those who ride most often and are most familiar with biking conditions in Brighton.” As part of education and awareness strategies listed previously, Bike Brighton may be able to naturally expand its reach and representation in the Brighton community. Members of Bike Brighton can also spread the word about the committee with underrepresented communities.

Finally, comments received during outreach also pointed out the need for the City of Brighton to work with neighboring municipalities to improve walking and biking routes to Boulder, Fort Lupton, Thornton, Henderson, light rail stations, etc. Collaboration between nearby governments and jurisdictions will be critical to achieve better regional connectivity of the system, not just local connectivity. The city may consider establishing bi-annual meetings for coordination of active transportation networks.

WALKABLE & BIKEABLE LAND USE & DEVELOPMENT

Thoughtful land use planning is just as important to achieve a walkable and bikeable community as planning ahead for transportation connections. Members of the public described achieving walkability and bikeability via land use and transportation planning as a “chicken or the egg” problem, because improving one without the other is significantly less effective. Long distances between residences and popular destinations make walking and biking less convenient, but so does developing closer together without adequate sidewalks or comfortable bike lanes.

ESTABLISH URBAN CENTER(S)

Numerous comments received during the public engagement process pointed out the desire for better planning that integrates retail, restaurants, and homes within the same area to facilitate walking and biking access, as well as economic development of Brighton’s downtown. Respondents felt that the city planning paradigm is low-density, auto-dependent sprawl.

Be Brighton, the city’s comprehensive plan, addresses land use development and integration with transportation. *Be Brighton* recommended establishing urban centers, or higher-density neighborhoods with access to retail, restaurants, and amenities, near major arterials and bus stations. It also recommended locating senior housing within walking distance of bus stops.

This plan also recommends concentrating new development in areas of Brighton with existing transportation infrastructure to reduce construction and maintenance burden for the city and so that residents can more easily access popular destinations on foot or by bike. Currently, major shopping areas are challenging to access by walking or biking, and are convenient to access by car.

Stakeholders mentioned their desire for walkable commercial development and Main Street style shops. While this plan



aims to preserve Brighton’s small town feel, gentle density in Brighton’s core can enhance walkability and attract residents and visitors to the downtown area.

BUILD IT RIGHT THE FIRST TIME

The city has annual budget constraints on building and maintaining sidewalks, trails, and bikeways. Development and redevelopment of parcels in the city presents an opportune moment to complete missing facilities or upgrade deficient ones. It is also an opportunity to better connect the site to the active transportation network, and complete overall network gaps.

Prior to making corridor improvements that would otherwise be constructed by developers, the City shall investigate the opportunities to share the cost of corridor improvements with adjacent landowners. This could include collecting an escrow for roadway improvements as development occurs or utilizing any legal means to obtain a reimbursement from development which occurs after the improvements are constructed.

If a new development surrounds or abuts a missing or deficient sidewalk, trail, or bike facility identified in this plan, the city should require the developer to construct it or pay an escrow for their pro rata share of the improvements. This includes ensuring that traffic impact studies, analysis of proposed street changes, and development projects consider bicycle mobility to minimize adverse impacts on the bicycle network.

Additionally, the city should require developers to provide on-site bicycle parking conveniently located (such as near building entrances), just as they provide parking for motor vehicles.

CREATE EFFICIENT CONNECTIONS

Public input and an analysis of the existing transportation network highlighted the lack of connectivity of newer neighborhoods in Brighton due to the curvilinear street network, especially for people walking or bicycling.

Be Brighton recommends that city staff require new developments to frontload infrastructure construction into

OBJECTIVE C6:

Concentrate new development in areas of Brighton with existing transportation infrastructure to reduce construction and maintenance burden for the city and so that residents can more easily access popular destinations on foot or by bike.

OBJECTIVE C7:

Require developers to construct or contribute funding to construct missing or deficient sidewalks, trails, or bike facilities on their property that are recommended in the plan, regardless of the facility priority.

OBJECTIVE C8:

Encourage developers to increase street connectivity and “griddedness” to facilitate shorter trips – or at minimum provide bicycle and pedestrian connections from planned neighborhoods. Create these connections in established neighborhoods by finding existing easements or right-of-way or by acquiring new right-of-way or easements if none currently exists.

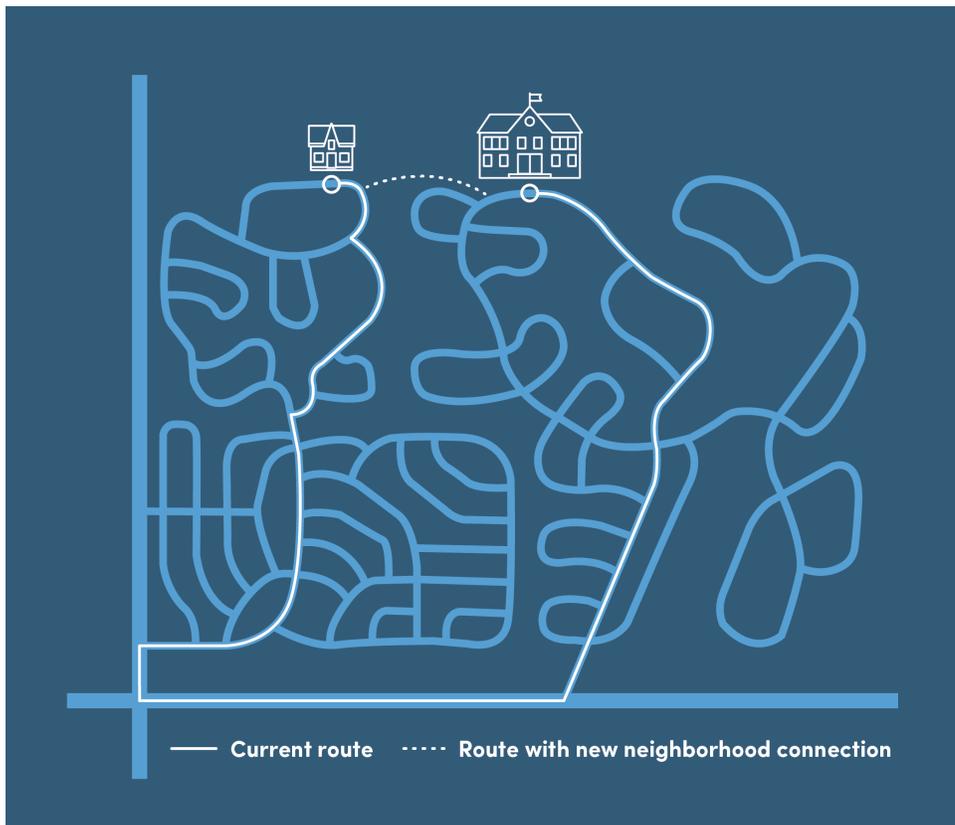


FIGURE 80: CONCEPTUAL ILLUSTRATION OF INCREASE IN CONNECTIVITY WITH BICYCLE/PEDESTRIAN CUT-THROUGH



OBJECTIVE P13:

Right-size the amount of off-street parking by reducing or relieving parking requirements, offering developers to pay a fee-in-lieu, and considering time-restricted or paid parking in high-demand areas.

OBJECTIVE S11:

Encourage developers to incorporate access management strategies on their property to reduce conflict points with people walking and biking.

phasing plans that prevents isolation or disconnection. The 2016 *Transportation Master Plan* recommends that the city develop walkable, complete neighborhoods that incorporate small blocks, mixed uses, continuous sidewalk networks, and traffic-calmed streets. That plan highlights how elements like small blocks, site layouts, mix of land uses, continuous sidewalk networks, traffic-calmed streets, and placemaking can enhance walkability of a development.

The city's existing Subdivision Standards already require through access within new developments and allow the city to require pedestrian walkways and bicycle connections through cul-de-sacs. City staff should encourage developers to increase street connectivity and "griddedness" to facilitate shorter trips – or at minimum provide bicycle and pedestrian connections from planned neighborhoods. Creating these connections between two otherwise unconnected streets/neighborhoods can greatly decrease the trip lengths for people walking, rolling, and bicycling, as illustrated in **Figure 80**.

In established neighborhoods, these connections can be created by finding existing easements or right-of-way or by acquiring new right-of-way or easements if none currently exists.

RIGHT-SIZE PARKING

Encouraging developments to right-size off-street parking increases the walkability of an area by increasing density, activating the pedestrian experience, prioritizing pedestrian infrastructure, and reallocating space for people instead of vehicles. The city's Municipal Code (7.03) currently identifies parking minimums for different land uses. Reducing or, in some cases, relieving all parking requirements is a strategy which may better align with the community's goals of mobility and affordability, as well as reduce one of the highest costs associated with new development. Other parking strategies that warrant further study include:

Fee-in-lieu

Fee-in-lieu allows a developer the choice to pay a fee into a municipal fund instead of providing on-site parking spaces required per Municipal Code. This policy is especially effective for small parcels where redevelopment may be less viable due to parking requirements. This fee can assist in financing public parking spaces or/and fund other transportation demand management and multimodal investments that will help to reduce single occupancy vehicle use.

Time-restricted & paid parking

Time-restricted and paid parking is a management approach to shift behaviors and encourages more walking and biking. This may be appropriate in specific high-demand areas of downtown Brighton, such as Main Street.

MINIMIZE CONFLICT POINTS

Frequent driveways and curb cuts along major commercial corridors can compound stress for people walking and biking, since entering and exiting vehicles may not see or yield to them. Access management is an important strategy to mitigate curb cut frequency and conflicts between pedestrians, bicyclists, and turning vehicles.

The city should consider requiring developers to provide access on the lower street classification when a property is adjacent to multiple streets to minimize curb cuts on arterials and corridors on the active transportation network and/or High Injury Network.

Potential access management strategies typically include redirecting access to side-streets and alleys, consolidating driveways among single and adjacent property owners, and adding medians. Additionally, encouraging developers to front streets with buildings rather than surface parking minimizes conflict points and enhances visual interest of a streetscape.



IMPLEMENTATION & PRIORITIZATION

This section will guide the city's buildout of the future pedestrian and bicycle network through the following three elements:

1. Performance measures to allow the community to track the plan's progress toward achieving the vision and goals set out in this plan.
2. Project prioritization to define the highest priority bicycle and pedestrian projects.
3. Federal, state, regional, and local funding opportunities.



Performance Measures

This section outlines specific performance measures to quantitatively track progress over time toward goals defined in this plan. Tracking performance measures will provide accountability and transparency to the community and provide valuable information to the city about whether the implementation strategy should be adjusted over time.

The performance measures are organized by each plan goal. For posterity, each performance measure is based on easy-to-collect data and is simple to calculate. Many of the following metrics align with those in the League of American Bicyclists Bicycle Friendly Community Report Card, for ease of reporting.

It is recommended that city staff collect data annually and publish findings through a report, dashboard, and/or via the city website.

SAFE

The active transportation network will be comfortable for all ages and abilities, offering pedestrians and cyclists well-lit spaces separate and protected from vehicle traffic on higher-stress streets. The city will reduce, and eventually eliminate serious crashes involving people walking, rolling, and biking.

SHARE OF ARTERIALS WITH A HIGH-COMFORT FACILITY:

Share of high-speed roads (arterials) with a high-comfort bicycle facility (scoring LTS 1 or 2), with a goal of 20% or more.
0% in 2019, according to the Bicycle Friendly Communities Report Card.

SHARE OF ACTIVE TRANSPORTATION NETWORK WITH A HIGH-COMFORT FACILITY: Share of the active transportation network with a high-comfort bicycle facility (scoring LTS 1 or 2).

BICYCLIST & PEDESTRIAN-INVOLVED COLLISIONS: Bicyclist and pedestrian-involved collisions each year, with a goal of 100 or fewer crashes per 1,000 bicycle commuters.
158 in 2019, according to the Bicycle Friendly Communities Report Card. Refer to American Community Survey Table B08006.

SERIOUS OR FATAL BICYCLIST & PEDESTRIAN-INVOLVED COLLISIONS:

Bicyclist and pedestrian-involved crashes resulting in serious injuries or fatalities each year, with an intermediate goal of 2 or fewer fatalities per 1,000 bicycle commuters and ultimate goal to eliminate them.
4.7 in 2019, according to the Bicycle Friendly Communities Report Card. Refer to American Community Survey Table B08006.

CONNECTED

The active transportation network will provide direct north-south and east-west connections to key destinations in the city, signed with clear wayfinding. The city will complete network gaps along streets and ensure comfortable crossings.

BICYCLE NETWORK MILEAGE: Total bicycle network mileage to total road network mileage.
28% in 2019, according to the Bicycle Friendly Communities Report Card.

PRIORITY PROJECT COMPLETION: Miles of bikeways and walkways installed or upgraded.

KEY DESTINATIONS NEAR A LOW-STRESS FACILITY: Number of key destinations (schools, childcare facilities, healthcare facilities, grocery stores, shopping centers, parks & recreation centers, libraries & public buildings, trailheads, and bus stops) within a quarter mile of a low-stress bike facility (LTS 1 or 2).

MILES OF MISSING SIDEWALKS COMPLETED:

Miles of missing sidewalks completed within a half mile of key destinations (schools, childcare facilities, healthcare facilities, grocery stores, shopping centers, parks & recreation centers, libraries & public buildings, trailheads, and bus stops).

WELCOMING

The active transportation network will foster a sense of community by welcoming people of all ages, abilities, and incomes. Affordable, convenient travel options and ADA-accessible infrastructure will be available in all areas of the city.

DEDICATED SPENDING: Average annual share of transportation budget spent on walking and biking infrastructure, programs, and policies.
2% in 2019, according to the Bicycle Friendly Communities Report Card.

ENCOURAGEMENT: The city will host 3 Bike Month events and a Bike to Work event each year.
The city hosted Bike to Work Day as of 2023.

BICYCLE & PEDESTRIAN MODE SHARE: Share of commute trips made by bicycle and share of commute trips made by walking.
In 2021, 0.2% of commute trips were made by bicycle and 0.6% were made by walking (refer to American Community Survey Table B08006).

BICYCLE COUNTS: Weekly bicycle and pedestrian counts prior to project implementation compared to those following installation.

ADA CURB RAMPS: Percentage of curb ramps that meet ADA requirements.

PLEASANT

The active transportation network will be high-quality, well-maintained, and draw users by creating an enjoyable and leisurely space to appreciate Brighton's natural beauty and access local businesses.

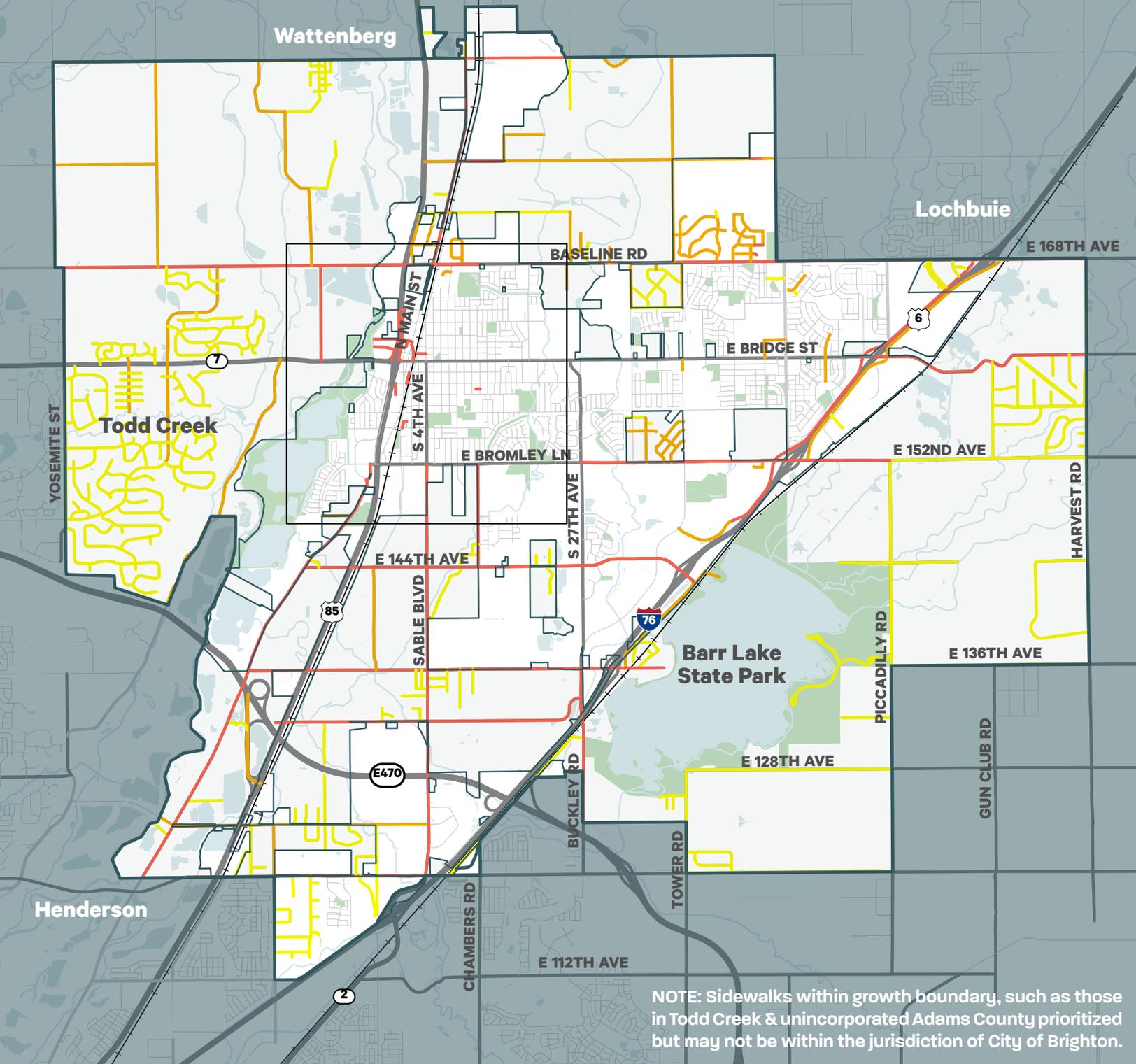
BICYCLE NETWORK MILEAGE: Share of high-comfort bike facilities in the overall bicycle network.

ACTIVE RECREATION: Share of residents who regularly walk and/or bike recreationally.

BICYCLE FRIENDLY BUSINESSES: Share of all Brighton businesses that offer secure bicycle parking or storage and share of all Brighton businesses recognized as a Bicycle Friendly Business.



MISSING SIDEWALK PROJECT PRIORITIZATION



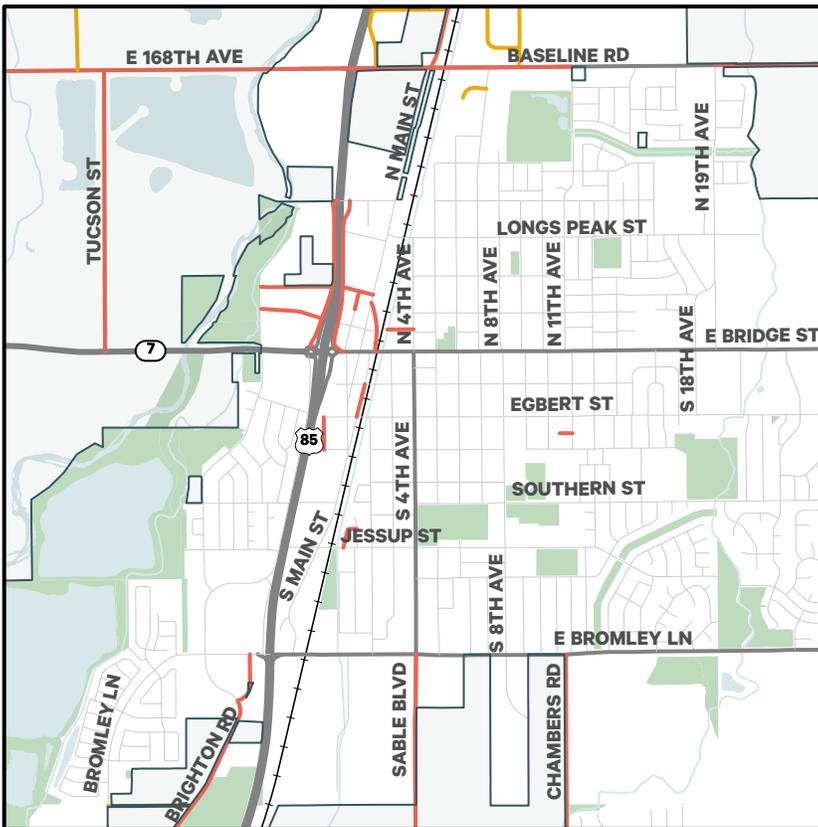


FIGURE 81: MISSING SIDEWALK PROJECT PRIORITIZATION

PRIORITIZATION FACTORS

The prioritization factors in **Table 11** were developed based on input from the public and city staff reflecting the community’s priorities. These inputs were used to prioritize proposed bicycle and sidewalk projects into three tiers: low, medium, and high priority. Prioritization factors rated highly in the second online survey were weighted double in the prioritization to reflect their relative importance to the public compared to other factors.

As shown in **Table 11**, these include projects that provide access across barriers and that provide access to parks/open space, recreation centers, libraries and public buildings, schools, grocery stores and shopping centers, and trailheads. For more information on the project prioritization methodology, refer to **Appendix A**.

PRIORITIZED PEDESTRIAN NETWORK

A pedestrian prioritization analysis was conducted for all roadways, regardless of whether sidewalks already exist, based on the criteria in **Table 11** and according

TABLE 11: PRIORITIZATION FACTORS & RELATED GOALS

Factor	Weight	Safe	Connected	Welcoming	Pleasant
Located in low-income neighborhoods			+	+	
Located near low-income housing			+	+	
Provides access across barriers	x2		+	+	
Access to bus stops			+	+	
Frequent & severe crash locations		+			
On active transportation network			+		
Access to parks/open space & recreation centers	x2		+		+
Access to libraries & public buildings	x2		+		+
Access to social services			+	+	+
Access to schools	x2		+		+
Access to childcare facilities			+	+	+
Access to healthcare facilities			+	+	+
Access to grocery stores & shopping centers	x2		+		+
Access to trailheads	x2		+		+
Access to major employers			+	+	+

to the methodology in **Appendix A**.

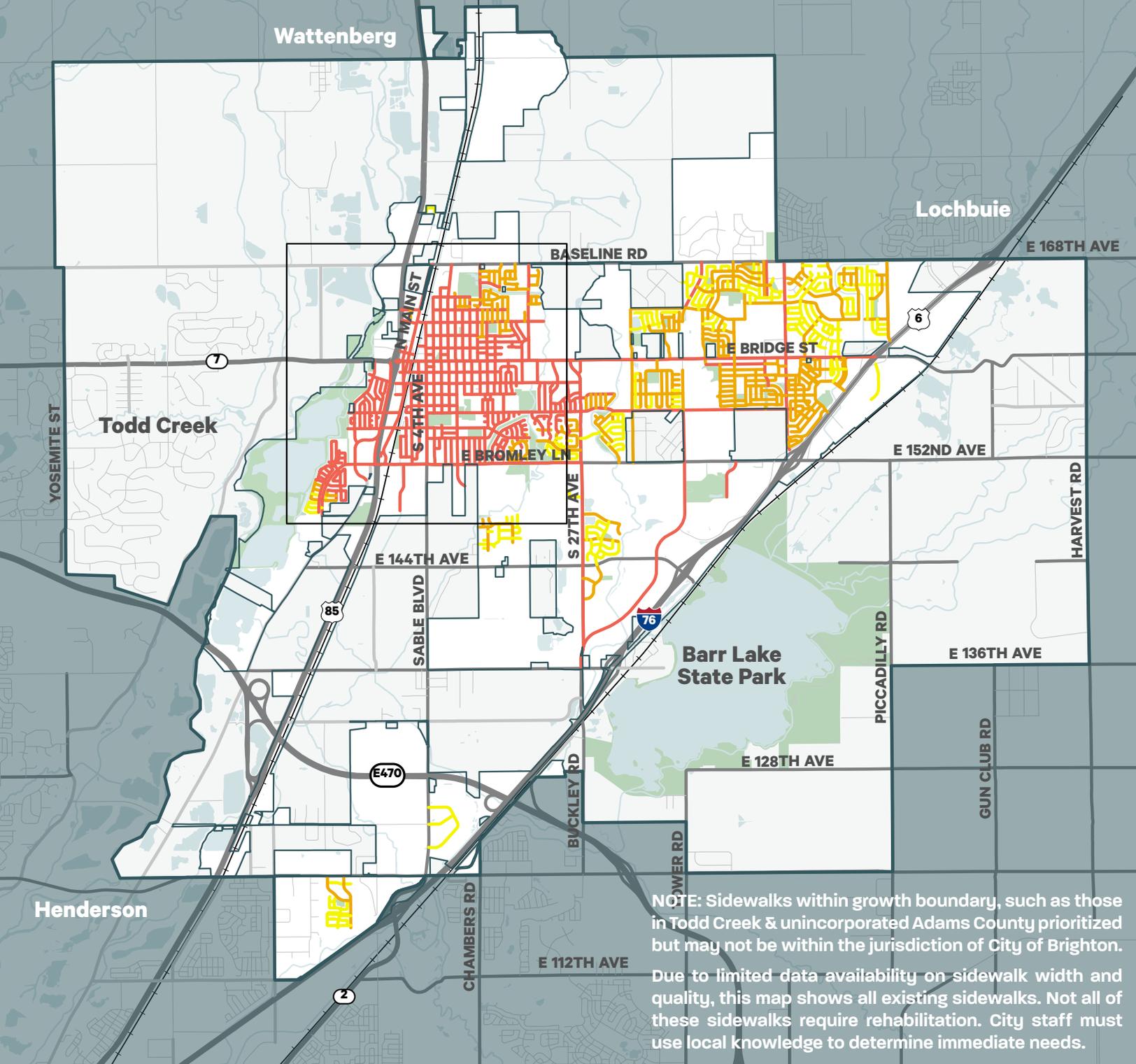
This prioritization resulted in two maps – first, of the highest priority missing sidewalks to complete (**Figure 81**), and second, of the highest priority existing

sidewalks to upgrade or rehabilitate to meet ADA requirements and standards defined in this plan (**Figure 82**).

Given there are hundreds of miles of streets in Brighton, the initial focus should



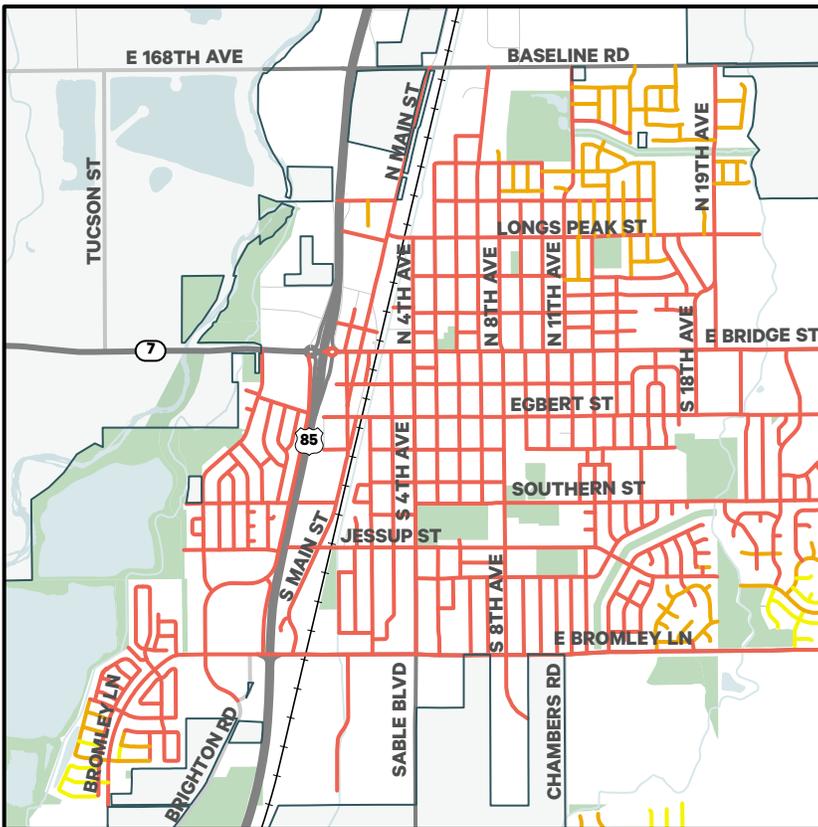
SIDEWALK REHABILITATION PROJECT PRIORITIZATION



OBJECTIVE C9:

Prioritize locations for sidewalk gap completion or rehabilitation according to the strategy outlined in the Prioritized Pedestrian Network section. Dedicate additional funding to the sidewalk links program to complete and rehabilitate priority sidewalks.





LEGEND

- City Boundary
- Growth Boundary
- Waterways
- Parks & Open Space
- Railroads
- Street Classification**
- Highway
- Arterial
- Collector
- Local
- Pedestrian Project Priority**
- Existing Sidewalks
- Low
- Medium
- High

FIGURE 82: SIDEWALK REHABILITATION PROJECT PRIORITIZATION

be on completing sidewalks and trails on the Active Transportation Network, many of which are arterial streets with high traffic speeds and volumes.

As shown in **Figure 83**, the city should first complete missing sidewalks shown in **Figure 81**, then perform priority sidewalk retrofits shown in **Figure 82** as needed. It should be noted that due to data availability, **Figure 82** shows all existing sidewalks, irrespective of sidewalk quality and buffer width.

Following completion of sidewalk gaps, the city will need to determine which existing sidewalks are deficient. Within each of the six categories in **Figure 83**, the city should review and prioritize specific locations for gap completion or rehabilitation annually and on a case-by-case basis.

In addition to the designated tier, decision makers should also consider the following factors that may shift when a sidewalk is completed, regardless of its tier:

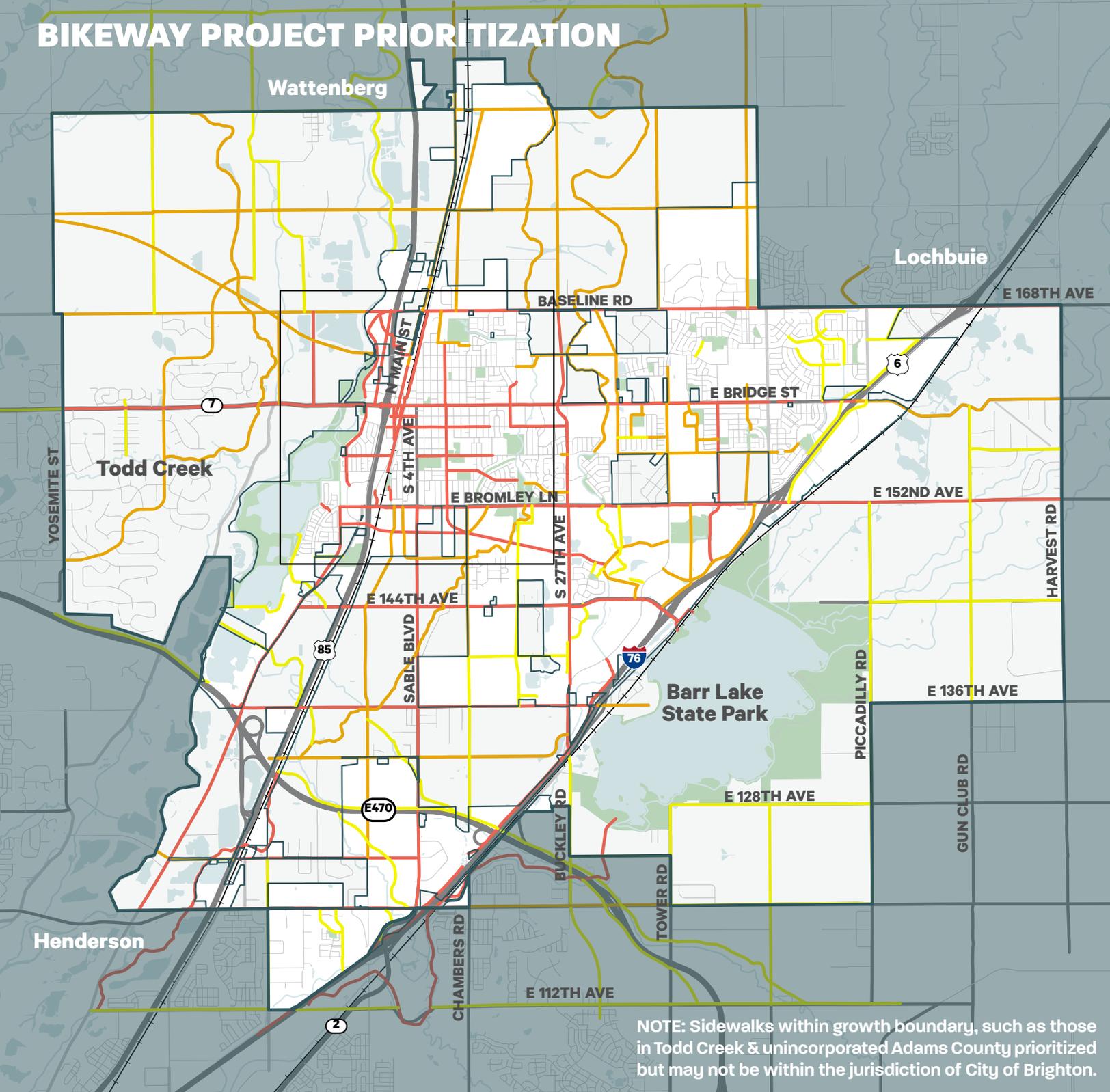
- Is there new development and/or a property owner willing to fund sidewalk enhancements adjacent to the sidewalk location?
- How/when does this location tie into the street paving/rehabilitation schedule?
- Is the existing condition of the sidewalk posing a safety risk?
- Is there a funding source available such as a Safe Routes to School grant?
- Could partnerships be formed with local entities to perform upgrades?

	High Priority	Medium Priority	Low Priority
Fill gaps in pedestrian network	1	2	3
Sidewalk, trail, or crossing rehabilitation	3	4	5

FIGURE 83: ORDER IN WHICH TO PRIORITIZE SIDEWALK PROJECTS



BIKEWAY PROJECT PRIORITIZATION



OBJECTIVE C10:

Prioritize bike project locations according to the tiers established in the Bikeway Project Prioritization Map.



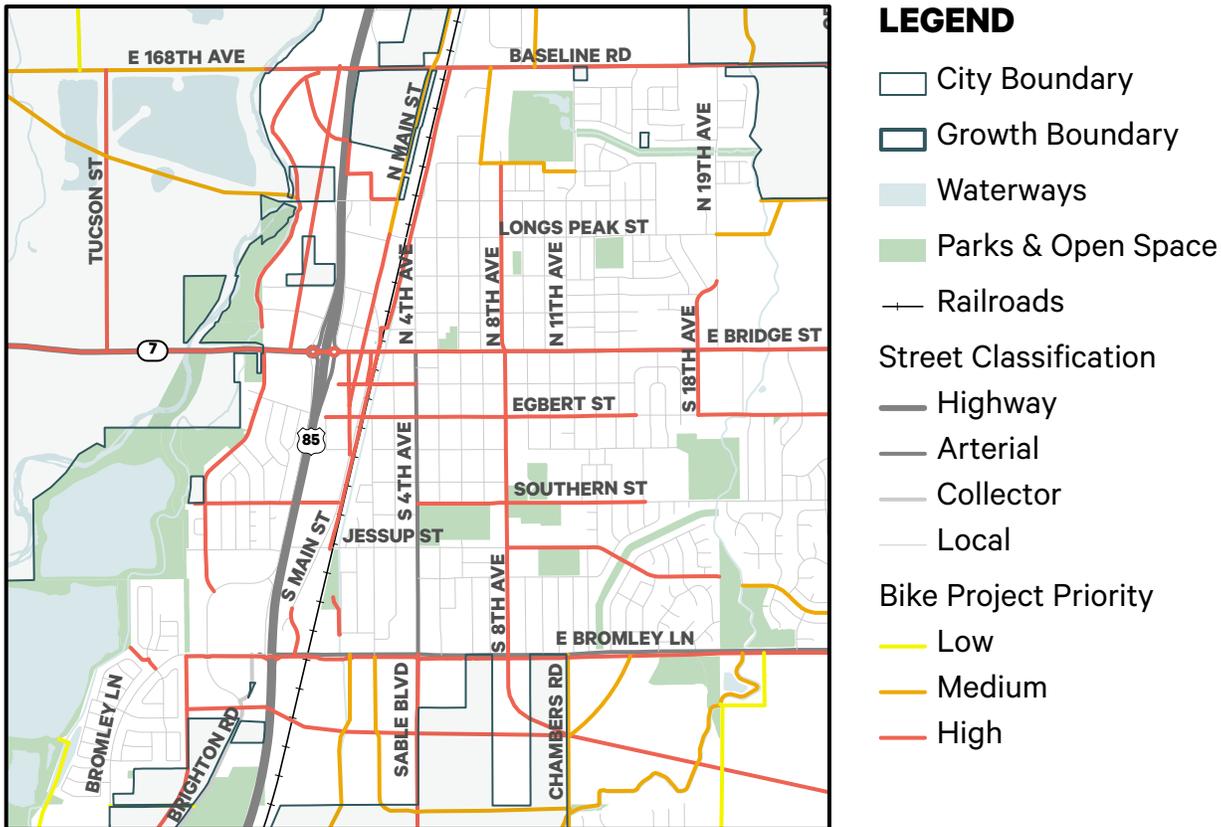


FIGURE 84: BIKEWAY PROJECT PRIORITIZATION

The city's 50/50 sidewalk repair program is intended to share costs of repairing and replacing sidewalks between residents and the city. To complete priority missing sidewalks and perform priority sidewalk retrofits, the city will need to dedicate additional funding to the sidewalk links program.

BIKEWAY PROJECT PRIORITIZATION

Figure 84 illustrates the prioritization of the planned bicycle corridors in Brighton based on the criteria in **Table 11** and methodology in **Appendix A**.

Figure 84 details High, Medium, and Low Priority bike projects. The city will prioritize implementing the highest priority bicycle corridors first.

While the city will use this prioritization to allocate funding specifically for bicycle improvements, it is possible that opportunities will arise to implement low priority and medium priority projects sooner as part of new street construction or reconstructions projects or other opportunities. In these situations, bicycle facilities should be implemented on these corridors as defined in the Bike Network Plan.



Funding Opportunities

Comments received through the first survey stressed the need for support and funding from City Council and city staff. This comment highlights local interest in a reliable funding source for construction and maintenance of active transportation infrastructure.

As additional funding becomes available, the city can allocate new funding resources toward implementing currently unfunded projects. The funding landscape is competitive and often requires city departments to enter the planning phase thinking about grant requirements that will set the city up for success to be awarded grants. A critical step is identifying clear project priorities in the adopted *Bicycle, Pedestrian, and Multimodal Plan*. Many of the projects in this plan could be funded by grants.

The city should have projects planned, designed and “shovel-ready” so that funding can be used for implementation. In most cases, the list of external funding sources requires local matching funds. Many grants will also require the city to report on safety, equity, and sustainability performance measures—another reason to implement the data collection effort described in the Performance Measures section. Funding sources will continue to change between 2023 and 2050, but this section identifies grant and funding streams available as of August 2023.

This section identifies potential funding sources that supplement existing funding streams in Brighton. The descriptions provided for grant opportunities come from federal, state, and regional sources.

FEDERAL

FEDERAL HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

Eligible projects in this category include improvements or corrections to safety issues on any local or regional public roads and trails or paths. Funded activities must be consistent with Colorado’s Strategic Highway Safety Plan. Projects are selected competitively through CDOT.

USDOT REBUILDING AMERICAN INFRASTRUCTURE WITH SUSTAINABILITY AND EQUITY (RAISE) (FORMERLY BUILD AND TIGER)

Since 2009, USDOT has distributed grants for planning and capital investments in surface transportation infrastructure. Grants are awarded on a competitive basis for projects that will have a significant local or regional impact. RAISE funding can support roads, bridges, transit, rail, ports, or intermodal transportation.

INFRASTRUCTURE FOR REBUILDING AMERICA (INFRA)

The FAST (Fixing America’s Surface Transportation) Act established the Nationally Significant Freight and Highway Projects (NSFHP) program to provide financial assistance—competitive grants, known as INFRA grants, or credit assistance—to nationally and regionally significant freight and highway projects that align with the program goals to improve safety, efficiency and reliability of freight; improve global competitiveness; reduce highway congestion; improve connectivity; and address growing demand for freight.

SAFE STREETS AND ROADS FOR ALL (SS4A)

The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. SS4A requires an eligible Action Plan be in place before applying to implement projects and strategies – which Brighton has through the 2018 Vision Zero Action Plan. The SS4A program provides funding for interim demonstration activities and to implement projects and strategies identified in an Action Plan to address a roadway safety problem.

RECONNECTING COMMUNITIES AND NEIGHBORHOODS (RCN)

The RCN program funds projects that reconnect communities by removing, retrofitting, or mitigating highways or other transportation facilities that create barriers to community connectivity. The grant aims to develop local economies by improving access to jobs, education, healthcare, food, and recreation. The RCN program provides grants for capital construction of projects, community planning of future projects, and regional partnerships between agencies.

OBJECTIVE P12:

Explore and pursue funding opportunities to support continual capital construction and maintenance of the projects listed in this plan.



STATE

CDOT FUNDING ADVANCEMENTS FOR SURFACE TRANSPORTATION AND ECONOMIC RECOVERY ACT (FASTER)

This category includes safety-related projects, such as: asset management, transportation operations, intersection and interchange improvements, and shoulder and safety-related widening, and pedestrian and bicycle facilities. Projects are advanced by local governments and selected based on priority and data within each CDOT Region.

SAFE ROUTES TO SCHOOL (SRTS)

This program was formed to: Enable and encourage children to walk and bike to school; make walking and biking safer and more appealing; facilitate planning, development, and implementation of projects that improve safety, and reduce traffic, fuel consumption, and air pollution around schools. There is no longer dedicated federal SRTS funding, but the Colorado SRTS program has been continued with state funding and a local agency match requirement. This is a competitive program where projects are screened by a statewide selection advisory committee.

GREAT OUTDOORS COLORADO (GOCO)

Funding from the Colorado Lottery is awarded to a variety of project types, including trail projects, across the state by the GOCO Board. GOCO Board members are appointed by the Governor and confirmed by the Colorado State Senate.

REGIONAL PRIORITIES PROGRAM (RPP)

The goal of this program is to implement regionally significant projects identified through the transportation planning process. These funds are flexible in use and are allocated to the regions by the Colorado Transportation Commission on an annual basis. The allocations are based on regional population, CDOT on-system lane miles, and CDOT on-system truck VMT.

HIGHWAY USERS TAX FUND (HUTF)

Revenues generated from the Road Safety Surcharge, Oversize Overweight Surcharge, Rental Car Surcharges, and late vehicle registration fees are credited to the Highway Users Tax Fund (HUTF) and distributed per statute to the Colorado Department of Transportation, counties, and municipalities.

REVITALIZING MAIN STREETS

Revitalizing Main Streets grant program, run by CDOT as a part of Colorado's COVID-19 Recovery Plan, enhances active transportation safety and strengthens the connection of people to main streets and central economic hubs. The program encourages physical activity and enhances local economic vitality in towns and cities across Colorado through funding infrastructure improvements to make walking and biking easy, yielding long-term benefits that bolster community connections.

REGIONAL

TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

DRCOG's Transportation Improvement Program (TIP) identifies projects that will receive state and federal funding over a four-year period, based on priorities established in the current Regional Transportation Plan. Over \$236 million in funding was available in the calls for projects to develop the FY 2024-2027 TIP.

DRCOG TIP SET-ASIDES (MMOF)

The TIP also funds set-aside programs for Transportation Demand Management (TDM) programs that encourage people to choose alternate modes, Transportation Corridor Planning, Community-Based Transportation Planning, and Innovative Mobility.

LOCAL

ADAMS COUNTY OPEN SPACE SALES TAX

When shopping in Adams County, consumers must pay a sales tax of 0.25% (25 cents per \$100 purchase) that is distributed for use on parks and open space projects. This funding source can be used on infrastructure for walking and bicycling, trailheads, and safety improvements such as lighting and wayfinding.

MILL LEVY

Since property taxes are a major funding source for all municipal services, a higher mill levy could translate to a meaningful source of funding for transportation improvements.

VEHICLE REGISTRATION

The number of registered vehicles in Adams County continues to grow with population and jobs. Increasing license and ownership fees would help generate more funding.

UTILITY FEES

Household utility fees are monthly or annual surcharges for transportation similar to annual assessments for local sewer or waste services could be levied in Adams County. Peer communities in Colorado like Loveland and Fort Collins use this practice as a funding source.

DEDICATED SALES TAX

If the public wishes to support construction and maintenance of transportation infrastructure, a city or citizen-sponsored ballot initiative could establish a dedicated sales tax for those specific uses. Funds generated by sales, use, specific ownership, and property taxes can be transferred to general funds or directed towards capital projects. These can either be permanent or a local option tax that is subject to voter approval.

GREATER BRIGHTON CHAMBER OF COMMERCE & TOURISM

The Greater Brighton Area Chamber of Commerce is the principal voice of the Brighton area business community. In a spirit of cooperation and through a collective effort, their mission is to provide leadership, education, and resources for members while promoting economic development, investment and stewardship in the community. The Chamber may be a funding or promotional partner for establishing a Bicycle Friendly Business program.

Other funding options that could be considered with further analysis are parking fees or a parking benefit district, public-private partnerships, transportation impact fees, and special assessments. Parking benefit districts use the revenue from paid parking to fund transportation improvements, such as sidewalk/ bikeway maintenance, pedestrian/bikeway/landscape/transit enhancements, free bus passes, etc. Public-private partnerships could be agreements with large employers, businesses, or services that can fund transportation projects.



PROJECT PRIORITIZATION METHODOLOGY

The prioritization factors in **Table 1** were developed based on input from the public and city staff reflecting the community's priorities. These inputs were used to prioritize proposed bicycle and sidewalk projects into three tiers: low, medium, and high priority.

Prioritization factors rated highly in the second online survey were weighted double in the prioritization to reflect their relative importance to the public compared to other factors. For more information on the project prioritization methodology, refer to **Appendix A**.

Each section below describes how projects receive prioritization points for each input. For each individual score, thresholds for scores 1-5 were defined based on the breaks established in the data.

TABLE 1: PRIORITIZATION FACTORS & RELATED GOALS

Factor	Weight	Safe	Connected	Welcoming	Pleasant
Located in low-to-moderate income census tracts from DOLA/HUD clipped to growth boundary <i>Median percent of low/moderate income is 35%. Intersect with any that are higher than 35%.</i>			+	+	
Provides access across barriers <i>Intersect with highways. Out of those, intersect with railroads added in attribute table</i>	x2		+	+	
Access to bus stops <i>From RTD bus stops clipped to growth boundary.</i>			+	+	
Frequent & severe crash locations <i>Manually selected linework on HIN</i>		+			
On active transportation network			+		
Access to parks/open space & recreation centers <i>Within a distance of 0.5 mile of parks/ open space layer. Then selected/ added +1 to those within 0.5 mile of the two rec centers</i>	x2		+		+
Access to libraries & public buildings <i>Including libraries, courts, City Hall, city museum</i>	X2		+		+
Access to social services <i>Including food bank, community resources, housing program, abuse center</i>			+	+	+
Access to schools <i>From DRCOG. Cleaned up to not include higher education or churches coded as schools</i>	x2		+		+
Access to childcare facilities <i>Mixed with DRCOG and Google Maps</i>			+	+	+
Access to healthcare facilities <i>Mixed with CDPHE and Google Maps</i>			+	+	+
Access to grocery stores & shopping centers <i>Included Main Street shops too</i>	x2		+		+
Access to trailheads <i>Looking at existing trails layer (not on the side of streets) and verifying through Google aerial view</i>	x2		+		+
Access to major employers https://www.brightonchamber.com/living-in-brighton and survey comments			+	+	+
Access to affordable housing https://affordablehousingonline.com/housing-search/Colorado/Brighton#summary			+	+	



Connected

DOES THE PROPOSED PROJECT PROVIDE ACCESS TO KEY DESTINATIONS?

Number of the following destinations within a ½ mile buffer of each project:

- Bus stops
- Parks & recreation centers (weighted x2)
- Libraries & public buildings (weighted x2)
- Social services
- Schools (weighted x2)
- Childcare facilities
- Healthcare facilities
- Grocery stores & shopping centers (weighted x2)
- Trailheads (weighted x2)
- Major employers

TABLE 2: FINAL KEY DESTINATIONS SCORING SYSTEM

Score	Number of Key Destinations, Weighted	
	Bike Projects	Sidewalk Projects
1	0	0
2	1-6	1-6
3	7-17	7-16
4	18-35	17-31
5	36-153	32-124

DOES THE PROJECT IMPROVE ACCESS ACROSS BARRIERS?

Does the project cross a river, railroad, and/or highway? Weighted double to account for importance of this measure.

TABLE 3: BARRIER SCORING SYSTEM

Score	Crosses Barrier
0	N
2	Y

IS THE PROJECT ON AN ACTIVE TRANSPORTATION CORRIDOR(S)? (PEDESTRIAN PROJECTS ONLY)

TABLE 4: ATC SCORING SYSTEM

Score	ATC
0	N
2	Y

Equitable

DOES THE PROPOSED PROJECT SERVE LOW-INCOME AREAS AND PEOPLE LIVING IN AFFORDABLE HOUSING LOCATIONS?

This measure assesses the number of low or moderate income census tracts and the number of locations of affordable housing each project serves. A low or moderate income census tract is one where the percent of the population living with 80 percent of the area median income or less is higher than the Brighton average of 35%.

Projects are weighted more heavily in the following table based on the number of intersected census tracts where 35% or more of the population are living with low to moderate income and affordable housing locations within a half mile. Weighted double to account for importance of this measure, as stressed by the survey results.

TABLE 5: EQUITY SCORING SYSTEM

Score	Low Income Neighborhoods and Affordable Housing Locations Served	
	Bike Projects	Sidewalk Projects
0	0	0
2	1-2	1
4	3-7	2-7

Safe

DOES THE PROPOSED PROJECT ADDRESS SAFETY CONCERNS IN THE CITY?

Is the project on the High Injury Network? Weighted double to account for importance of this measure.

TABLE 6: HIN SCORING SYSTEM

Score	HIN
0	N
2	Y

Final Scores

BIKE PROJECTS

7-15: HIGH PRIORITY
4-6: MEDIUM PRIORITY
1-3: LOW PRIORITY

SIDEWALK PROJECTS

7-19: HIGH PRIORITY
4-6: MEDIUM PRIORITY
1-3: LOW PRIORITY



TABLE 7: BIKE PROJECTS SUMMARY

Bikeway Type	High Priority	Medium Priority	Low Priority	All
Miles of Shoulder	0	17.98	18.39	36.37
Miles of Bike Lanes (BL)	11.45	22.17	5.64	39.26
Miles of Buffered Bike Lanes (BBL)	0.56	0.20	0.13	0.89
Miles of Bike Boulevards (BB)	2.27	0	0	2.27
Miles of Trails, Cycle Tracks, Protected Bike Lanes (T or CT or PBL)	65.45	43.47	60.5	169.42
Total Miles	79.73	83.82	84.66	248.21
Total Number of Projects	40	49	65	154

TABLE 8: HIGH PRIORITY BIKE PROJECTS

FULLSTREET	Extent1	Extent2	BikeFacilityRec	Miles	AfrdHous_Ct	Employer_Ct	Trailhead_Ct	Grocery_Ct	HealthFac_Ct	ChildFac_Ct	Schools_Ct
E Bridge St	US 85	I-76	T or CT or PBL	4.32	3	3	5	5	4	4	11
Sable Blvd	E Bromley Ln	I-76	T or CT or PBL	4.00	2	1	0	1	1	1	0
E 120th Ave	W of Fulton Ditch	Chambers Rd	T or CT or PBL	2.86	0	0	0	0	0	0	2
S 27th Ave	Baseline Rd	I-76	T or CT or PBL	4.46	2	0	2	1	4	0	1
Egbert St	Pavillions Pl	S 14th Ave	BL	1.03	3	3	4	3	3	3	6
SH 7	Yosemite St	W Bridge St	T or CT or PBL	3.29	1	1	2	2	0	1	1
E Bromley Ln	Macaw St	N Frontage Rd	T or CT or PBL	4.23	5	2	5	1	1	1	1
E 168th Ave	South Platte River	Hayesmount Rd	T or CT or PBL	6.91	0	0	2	0	0	1	1
Brighton Rd	W Bromley Ln	E 120th Ave	T or CT or PBL	4.56	2	0	4	0	0	0	0
S 8th Ave	E 160th Ave	E Bromley Ln	BB	0.99	2	1	1	2	1	3	5
Miller Ave	W Bridge St	Platte River Blvd	BL	0.87	3	1	5	2	0	1	0
Future Trail	E 168th Ave	Jessup St	T	1.66	2	2	4	2	1	3	2
Future Roadway	Quail Cir	Chambers Rd	T	1.28	3	0	3	1	1	1	0
S Main St	W Bridge St	Skeel St	BL	0.34	1	2	2	2	0	1	1
S 18th Ave	N 19th Ave	E Egbert St	BL	0.48	2	1	2	2	4	1	4
Kite St	E Bromley Ln	Peregrine Dr	BL	1.82	2	0	2	1	1	1	1
Southern St	Colorado Front Range Trail	S Kuner Rd	BL	0.44	3	2	3	1	1	1	1
Southern St	S 4th Ave	S 14th Ave	BL	0.75	3	2	3	1	3	3	6
N 8th Ave	Midland St	E 160th Ave	BB	0.62	0	0	1	1	0	1	3
S 1st Ave	W Bridge St	S Main St	BL	0.18	1	2	2	2	0	1	1
Fulton Ave	Mayeda Park	Cherry Pl	T	0.13	2	1	1	1	1	1	0
N Main St	Longs Peak St	W Bridge St	BB	0.40	0	1	2	2	0	1	1
Bush St Bike Boulevard	Pavillions Pl	S 4th Ave	BB	0.26	1	2	2	2	0	2	3
Egbert St	S 18th Ave	S 27th Ave	BBL	0.56	2	1	2	2	4	1	3
Future Roadway	E 168th Ave	W Bridge St	BL	0.95	1	1	3	2	0	1	0
Kinglet Ct	Ken Mitchell Park	Mockingbird St	BL	0.12	2	0	3	0	0	0	0
E 144th Ave	Brighton Rd	Barr Pl	T or CT or PBL	4.18	0	1	0	1	0	0	0
Future Trail	CO E470	E 112th Ave	T	3.55	0	0	0	0	0	0	1
Future Trail	E 168th Ave	N Main St	T	0.63	0	0	2	1	0	0	0
S Main St	S of Mayeda Park	E Bromley Ln	BL	0.16	3	0	2	0	1	1	0
E 136th Ave	CO E470	I-76	T or CT or PBL	3.71	0	0	1	0	0	0	0
E 124th Ave	US 85	Sable Blvd	BL	1.85	0	0	0	0	0	0	3
Judicial Center Dr	E 160th Ave	Medical Center Dr	BL	1.63	1	3	1	0	1	1	1
E 152nd Ave	N Frontage Rd	Harvest Rd	T or CT or PBL	3.03	0	2	0	0	0	0	0
Tucson St	E 168th Ave	E 160th Ave	T or CT or PBL	0.93	0	0	1	0	0	0	0
S Cabbage Ave	W Bridge St	Bush St	BL	0.11	1	2	2	2	0	1	2
Jessup St	S 8th Ave	Mattive Open Space	BL	0.73	1	1	3	0	1	2	5
I-76	Prarie Center Pkwy	Peoria St	T	5.16	0	0	0	0	0	0	0
Future Trail	Barr Lake	E 112th Ave	T	5.57	0	0	0	0	0	0	0
Future Trail	E 168th Ave	E 160th Ave	T	0.99	0	1	3	2	0	1	0



	Social Services_Ct	Libr_Pub Bldg_Ct	ParksRecs_Ct	BusStop_Ct	Barriers_Ct	LowModInc_Ct	HIN_Ct	KeyDestination Score	Barrier Score	Equity Weight	Equity Score	HIN Score	KeyDestination Weight	BIKE SCORE
	2	3	28	36	2	4	1	5	4	7	4	2	153	15
	1	1	3	19	2	1	1	4	4	3	4	2	33	14
	0	0	1	8	3	1	1	3	6	1	2	2	14	13
	0	1	10	9	1	1	1	5	2	3	4	2	43	13
	3	4	21	25	1	2	1	5	2	5	4	2	113	13
	2	3	10	10	2	2	0	5	4	3	4	0	50	13
	2	3	23	28	1	0	1	5	2	5	4	2	100	13
	0	0	10	0	2	5	0	4	4	5	4	0	27	12
	0	0	7	11	1	1	1	4	2	3	4	2	33	12
	2	4	13	18	0	2	1	5	0	4	4	2	75	11
	1	1	12	18	1	2	0	5	2	5	4	0	61	11
	3	4	16	28	1	3	0	5	2	5	4	0	93	11
	0	0	11	13	1	0	0	5	2	3	4	0	45	11
	3	4	11	20	0	2	1	5	0	3	4	2	66	11
	0	0	6	8	0	2	0	5	0	4	4	0	42	9
	0	0	11	7	0	1	0	5	0	3	4	0	39	9
	1	1	8	23	0	1	0	5	0	4	4	0	56	9
	2	2	11	21	0	2	0	5	0	5	4	0	77	9
	1	3	11	10	0	3	0	5	0	3	4	0	50	9
	3	4	11	15	0	2	0	5	0	3	4	0	61	9
	1	1	4	19	0	1	0	5	0	3	4	0	37	9
	2	3	10	12	0	1	1	5	0	1	2	2	52	9
	3	4	13	16	1	1	0	5	2	2	2	0	71	9
	0	0	5	10	0	1	0	5	0	3	4	0	40	9
	2	3	10	8	0	2	0	5	0	3	4	0	48	9
	0	0	6	7	0	1	0	4	0	3	4	0	25	8
	0	0	5	9	2	0	0	4	4	0	0	0	22	8
	0	0	0	3	2	1	0	2	4	1	2	0	5	8
	1	2	7	0	1	1	0	4	2	1	2	0	25	8
	0	0	5	18	0	1	0	4	0	4	4	0	34	8
	0	0	0	6	2	0	0	3	4	0	0	0	8	7
	0	0	0	8	1	1	0	3	2	1	2	0	14	7
	1	1	13	15	0	0	0	5	0	1	2	0	53	7
	1	1	2	5	1	0	1	3	2	0	0	2	14	7
	0	0	6	0	1	1	0	3	2	1	2	0	14	7
	3	4	9	16	0	1	0	5	0	2	2	0	60	7
	1	1	11	8	0	1	0	5	0	2	2	0	53	7
	0	0	2	9	2	0	0	3	4	0	0	0	13	7
	0	0	1	5	2	0	0	3	4	0	0	0	7	7
	1	1	9	6	0	1	0	5	0	1	2	0	39	7



TABLE 9: MEDIUM PRIORITY BIKE PROJECTS

FULLSTREET	Extent1	Extent2	BikeFacilityRec	Miles	AfrdHous_ Ct	Employer_ Ct	Trailhead_ Ct	Grocery_ Ct	HealthFac_ Ct	ChildFac_ Ct	Schools Ct
N Main St	CR 6	Longs Peak St	BL	262	0	1	2	1	0	0	0
Telluride St	Baseline Rd	Southern St	BL	1.48	0	0	0	0	0	1	2
S 40th Ave	E Bridge St	E Bromley Ln	BL	1.00	1	1	0	0	0	0	1
S 35th Ave	Prairie Center Pkwy	Eagle Blvd	BL	1.31	1	2	0	1	1	0	0
Chambers Rd	E Bromley Ln	Future Roadway	BL	1.50	2	0	1	1	0	1	1
Longs Peak St	N 19th Ave	Future Roadway	BL	0.29	0	1	0	2	2	0	2
Future Trail	CR 12	Southern St	T	6.80	1	0	0	1	1	1	2
Future Trail	E Bromley Ln	E 132nd Ave	T	4.03	1	0	2	0	0	0	0
Future Trail	CR 6	E 164th Ave	T	4.97	0	0	0	0	0	0	0
Future Trail	E Bromley Ln	Eagle Blvd	T	1.14	1	3	0	1	1	0	0
Longs Peak St	Fulton Ditch	Telluride St	BL	0.85	0	0	0	1	1	1	2
Fulton Ave	E Bromley Ln	E 144th Ave	T	1.08	0	0	0	1	1	1	0
Future Roadway	E 168th Ave	CO 7	BL	0.91	0	0	0	0	0	0	0
Future Roadway	E Bromley Ln	Kite St	BL	0.34	1	0	2	1	0	0	0
Southern St	S 26th Ave	S 27th Ave	BL	0.06	1	0	1	1	2	0	1
CR 6	US 85	CR 33	SHLDR	3.56	0	1	0	0	0	0	0
Future Roadway	E Bromley Ln	Future Roadway	T	0.51	1	0	0	1	1	1	0
E 164th Ave	CR 23	Yosemite St	BL	4.18	0	0	0	0	0	0	0
Cr 4	US 85	CR 87	SHLDR	3.77	0	0	0	0	0	0	0
Mt Bierstadt St	Bowie Dr	Mt Cameron Dr	BL	0.45	0	0	1	1	0	1	1
Cr 4	CR 19	US 85	SHLDR	3.60	0	0	0	0	0	0	0
Future Roadway	CR 12	E 168th Ave	SHLDR	3.02	0	0	0	0	0	0	0
Future Trail	Southern St	Judicial Center Dr	T	1.28	0	2	1	0	1	1	1
Future Trail	CR 19	South Platte River	T	3.53	0	0	2	0	0	0	0
Future Roadway	S 2nd Ave	Chambers Rd	T	0.62	1	0	0	1	0	0	0
Midland St	N 7th Ave	N 11th Ave	BL	0.34	0	0	1	0	0	0	2
Future Roadway	CR 6	E 168th Ave	SHLDR	2.03	0	1	1	0	0	0	0
Southern St	Telluride St	Southern St	BL	1.59	0	1	1	0	0	1	4
N 7th Ave	E 168th Ave	Midland St	BL	0.32	0	0	1	0	0	0	0
E 168th Ave	Yosemite St	South Platte River	T	3.03	0	0	1	0	0	0	0
Rio Grande St	E Bridge St	Estrella St	BL	0.46	0	1	0	0	0	0	2
Cr 31	CR 6	E 168th Ave	T	2.00	0	0	0	0	0	1	0
E 160th Ave	I-76	Harvest Rd	T	2.18	0	0	0	0	0	0	0
Mt Oxford St	Mt Elbert St	Judicial Center Dr	BL	0.21	0	1	1	0	0	0	1
E 124th Ave	South Platte River	US 85	BL	0.79	0	0	0	0	0	0	1
Potomac St	E 144th Ave	E 124th Ave	BL	2.51	0	0	0	0	0	0	0
E 136th Ave	I-76	Barr Lake	BL	0.50	0	0	0	0	0	0	0
Cr 27	CR 10	CR 8	T	1.07	0	1	0	0	0	0	0
E 132nd Ave	US 85	S 27th Ave	T or CT or PBL	3.10	0	0	0	0	0	0	0
Estrella St	Las Lomas St	S 40th Ave	BBL	0.20	0	1	0	0	0	0	2
Medical Center Dr	Prairie Center Pkwy	Judicial Center Dr	T or CT or PBL	0.60	0	2	0	0	1	0	0
Jessup St	Fulton Ditch	S 27th Ave	BL	0.45	0	0	1	0	0	0	1
Future Trail	CR 12	E 168th Ave	T	3.60	0	0	0	0	0	0	1
Tower Rd	Garcia Ave	E Bridge St	T	0.35	0	1	0	0	0	0	1
E 120th Ave	Chambers Rd	Tower Rd	T or CT or PBL	1.99	0	0	0	0	0	0	0
Golden Eagle Pkwy	Southern St	Longspur Dr	T	0.17	0	1	1	0	0	1	1
Future Trail	Stagecoach Ave	E 168th Ave	T	0.60	0	0	0	0	0	0	0
N 42nd Ave	E Bridge St	Southern St	T	0.83	0	1	0	0	0	0	2
Future Roadway	CR 6	E 168th Ave	SHLDR	1.99	0	0	0	0	0	0	0



	Social Services_Ct	Libr_Pub Bldg_Ct	ParksRecs_Ct	BusStop_Ct	Barriers_Ct	LowModInc_Ct	HIN_Ct	KeyDestination Score	Barrier Score	Equity Weight	Equity Score	HIN Score	KeyDestination Weight	BIKE SCORE
	2	3	8	2	0	2	0	4	0	2	2	0	33	6
	0	1	4	6	0	1	0	4	0	1	2	0	21	6
	0	0	11	10	0	0	0	4	0	1	2	0	35	6
	0	1	9	10	0	0	0	4	0	1	2	0	35	6
	0	0	7	3	0	0	0	4	0	2	2	0	24	6
	0	0	2	6	0	1	0	4	0	1	2	0	21	6
	0	1	5	8	0	1	0	4	0	2	2	0	28	6
	0	0	6	4	0	0	0	4	0	1	2	0	20	6
	0	0	2	0	1	1	0	2	2	1	2	0	4	6
	1	1	6	9	0	0	0	4	0	1	2	0	30	6
	0	0	4	5	0	1	0	4	0	1	2	0	21	6
	0	0	3	20	0	1	0	4	0	1	2	0	30	6
	0	0	1	0	1	1	0	2	2	1	2	0	2	6
	0	0	8	0	0	0	0	4	0	1	2	0	22	6
	0	0	6	0	0	0	0	4	0	1	2	0	20	6
	0	0	0	0	1	2	0	2	2	2	2	0	1	6
	0	0	3	14	0	0	0	4	0	1	2	0	24	6
	0	0	0	0	1	1	0	1	2	1	2	0	0	5
	0	0	0	0	1	2	0	1	2	2	2	0	0	5
	0	0	10	10	0	0	0	5	0	0	0	0	37	5
	0	0	0	0	1	2	0	1	2	2	2	0	0	5
	0	0	4	0	0	1	0	3	0	1	2	0	8	5
	1	1	12	11	0	0	0	5	0	0	0	0	46	5
	0	0	4	0	0	2	0	3	0	2	2	0	12	5
	0	0	3	4	0	0	0	3	0	1	2	0	12	5
	0	0	5	0	0	1	0	3	0	1	2	0	16	5
	0	0	3	0	0	2	0	3	0	2	2	0	9	5
	0	1	9	14	0	0	0	5	0	0	0	0	46	5
	0	0	5	0	0	1	0	3	0	1	2	0	12	5
	0	0	1	0	0	2	0	2	0	2	2	0	4	4
	0	0	6	8	0	0	0	4	0	0	0	0	25	4
	0	0	1	0	0	1	0	2	0	1	2	0	3	4
	0	0	1	0	1	0	0	2	2	0	0	0	2	4
	0	0	7	5	0	0	0	4	0	0	0	0	24	4
	0	0	0	3	0	1	0	2	0	1	2	0	5	4
	0	0	1	4	1	0	0	2	2	0	0	0	6	4
	0	0	0	2	1	0	0	2	2	0	0	0	2	4
	0	0	0	0	0	1	0	2	0	1	2	0	1	4
	0	0	0	3	1	0	0	2	2	0	0	0	3	4
	0	0	4	6	0	0	0	4	0	0	0	0	19	4
	1	1	6	5	0	0	0	4	0	0	0	0	23	4
	0	1	7	0	0	0	0	4	0	0	0	0	20	4
	0	0	1	0	0	2	0	2	0	2	2	0	4	4
	0	0	7	6	0	0	0	4	0	0	0	0	23	4
	0	0	0	1	1	0	0	2	2	0	0	0	1	4
	0	0	5	8	0	0	0	4	0	0	0	0	24	4
	0	0	1	0	0	1	0	2	0	1	2	0	2	4
	0	0	8	6	0	0	0	4	0	0	0	0	27	4
	0	0	1	0	0	1	0	2	0	1	2	0	2	4



TABLE 10: LOW PRIORITY BIKE PROJECTS

FULLSTREET	Extent1	Extent2	BikeFacilityRec	Miles	AfrdHous_Ct	Employer_Ct	Trailhead_Ct	Grocery_Ct	HealthFac_Ct	ChildFac_Ct	Sch
E 148th Ave	W Bromley Ln	Brighton Rd	BL	0.28	0	0	0	0	0	0	
Cr 21	CR 8	E 168th Ave	T	3.02	0	0	0	0	0	0	
Southgate Blvd	E 120th Ave	Alpine Aven St	BL	0.53	0	0	0	0	0	0	
Elmira St	E 160th Ave	Todd Creek	BL	0.55	0	0	0	0	0	0	
Cherry Blossom Dr	Gamle Oak St	Wind River Ct	BL	0.43	0	0	0	1	0	0	
Cr 23.5	CR 23	E 168th Ave	T	1.88	0	0	0	0	0	0	
Peoria St	E 124th Ave	E 112th Ave	T or CT or PBL	1.51	0	0	0	0	0	0	
Peregrine Dr	Eagle Blvd	S 27th Ave	BL	0.44	0	1	0	1	0	0	
Buckley Rd	I-76	E 124th Ave	T or CT or PBL	1.02	0	0	0	0	0	0	
Cr 23	1st St	E 164th Ave	SHLDR	2.66	0	0	0	0	0	0	
Foley Rd	E 120th Ave	Southgate Blvd	BL	0.38	0	0	0	0	0	0	
Longs Peak St	Tall Spruce St	Colorado River Ave	BL	0.51	0	0	0	1	0	0	
Frontage Rd	E 160th Ave	E 152nd Ave	T or CT or PBL	1.32	0	1	0	0	0	0	
Buckley Rd	E 124th Ave	E 111th Ave	T	1.69	0	0	0	0	0	0	
Future Roadway	E Bromley Ave	Future Roadway	BL	1.65	0	0	2	0	0	0	
E-470	I-76	E 112th Ave	T	3.68	0	0	0	0	0	0	
E 112th Ave	Brighton Rd	Peoria St	T	1.76	0	0	0	0	0	0	
E 112th Ave	I-76	First Creek	T	1.02	0	0	0	0	0	0	
E 112th Ave	First Creek	Gun Club Rd	T	4.66	0	0	0	0	0	0	
CR 8	CR 19	US 85	SHLDR	3.65	0	0	0	0	0	0	
CR 8	US 85	CR 33	SHLDR	3.55	0	0	0	0	0	0	
Hwy 6	Wagon Trail Ave	Longspur Dr	T	1.63	0	1	0	0	0	0	
Future Trail	1st St	CR 4	T	3.27	0	0	0	0	0	0	
Future Trail	Waxwing Ave	E 144th Ave	T or CT or PBL	0.96	0	0	2	0	0	0	
Apache Plume St	Longs Peak St	E Bridge St	T	0.35	0	0	0	1	0	0	
Oxbow Dr	Midland St	Longs Peak St	T	0.16	0	1	0	0	0	0	
Future Trail	E Bromley Ln	S 35th Ave	T	0.96	0	1	0	1	0	0	
Future Trail	S 35th Ave	Prairie Center Village	T	0.11	0	1	0	1	0	0	
Future Trail	1800 S, N of 35th Ave	Prairie Center Pkwy	T	0.13	0	2	0	1	1	0	
E Bridge St	Quebec St	Yosemite St	T	1.01	0	0	0	0	0	0	
Estrella St	Telluride St	Rio Grande St	BBL	0.13	0	0	0	0	0	0	
Estrella St	Rio Grande St	Las Lomas St	BL	0.15	0	1	0	0	0	0	
Telluride St	E Bromley Ln	S 35th Ave	BL	0.42	0	0	0	0	0	0	
CR 6	CR 19	US 85	SHLDR	3.61	0	0	0	0	0	0	
N Golden Eagle Pkwy	Cherry Blossom Dr	Longs Peak St	BL	0.30	0	0	0	1	0	0	
Future Roadway	Future Roadway	CO E470	T	1.59	0	0	0	0	0	0	
E-470	US 85	I-76	T	2.36	0	0	0	0	0	0	
Future Trail	CO E470	E 120th Ave	T	1.28	0	0	0	0	0	0	
S 27th Ave	Peregrine Dr	Prarie Center Pkwy	T	0.31	0	0	0	0	0	0	
Future Trail	Potomac St	CO E470	T	1.37	0	0	0	0	0	0	
E-470	Yosemite St	South Platte River	T	1.70	0	0	1	0	0	0	
Future Roadway	N 60th Ave	I-76 Frontage	T	0.52	0	0	0	0	0	0	
Future Roadway	E 168th Ave	Hourglass Dr	T or CT or PBL	0.35	0	0	0	0	0	0	
Future Trail	Colorado Front Range Trail	W of 144th Ave	T	0.77	0	0	0	0	0	0	
Future Roadway	Chambers Rd	S 27th Ave	T	0.99	0	0	0	0	0	0	
Speer Canal	E 168th Ave	Longs Peak St	T	0.96	0	0	0	0	0	0	
Future Trail	E 120th Ave	CO 2	T	0.37	0	0	0	0	0	0	



hools_Ct	Social Services_Ct	Libr_Pub Bldg_Ct	ParksRecs_Ct	BusStop_Ct	Barriers_Ct	LowModInc_Ct	HIN_Ct	KeyDestination Score	Barrier Score	Equity Weight	Equity Score	HIN Score	KeyDestination Weight	BIKE SCORE
0	0	0	3	1	0	0	0	3	0	0	0	0	7	3
0	0	0	0	0	0	1	0	1	0	1	2	0	0	3
2	0	0	1	1	0	0	0	3	0	0	0	0	7	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
1	0	0	3	0	0	0	0	3	0	0	0	0	10	3
0	0	0	0	0	0	1	0	1	0	1	2	0	0	3
2	0	0	0	3	0	0	0	3	0	0	0	0	7	3
0	0	0	2	4	0	0	0	3	0	0	0	0	11	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
0	0	0	0	0	0	1	0	1	0	1	2	0	0	3
2	0	0	1	2	0	0	0	3	0	0	0	0	8	3
1	0	0	2	0	0	0	0	3	0	0	0	0	8	3
1	0	0	3	8	0	0	0	3	0	0	0	0	17	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
0	0	0	6	0	0	0	0	3	0	0	0	0	16	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
2	0	0	3	6	0	0	0	3	0	0	0	0	17	3
0	0	0	0	0	0	1	0	1	0	1	2	0	0	3
0	0	0	5	2	0	0	0	3	0	0	0	0	16	3
2	0	0	2	0	0	0	0	3	0	0	0	0	10	3
0	0	0	5	3	0	0	0	3	0	0	0	0	14	3
0	0	1	3	3	0	0	0	3	0	0	0	0	14	3
0	0	0	2	0	0	0	0	3	0	0	0	0	7	3
0	0	0	3	4	0	0	0	3	0	0	0	0	15	3
0	0	0	0	0	1	0	0	1	2	0	0	0	0	3
2	0	0	3	6	0	0	0	3	0	0	0	0	16	3
2	0	0	4	4	0	0	0	3	0	0	0	0	17	3
0	0	1	4	3	0	0	0	3	0	0	0	0	13	3
0	0	0	0	0	0	1	0	1	0	1	2	0	0	3
1	0	0	1	0	0	0	0	2	0	0	0	0	6	2
0	0	0	0	2	0	0	0	2	0	0	0	0	2	2
0	0	0	0	2	0	0	0	2	0	0	0	0	2	2
0	0	0	0	2	0	0	0	2	0	0	0	0	2	2
0	0	0	1	2	0	0	0	2	0	0	0	0	4	2
0	0	0	0	6	0	0	0	2	0	0	0	0	6	2
0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
0	0	0	1	0	0	0	0	2	0	0	0	0	2	2
0	0	0	1	0	0	0	0	2	0	0	0	0	2	2
0	0	0	1	0	0	0	0	2	0	0	0	0	2	2
0	0	0	1	0	0	0	0	2	0	0	0	0	2	2
0	0	0	1	2	0	0	0	2	0	0	0	0	4	2
1	0	0	1	0	0	0	0	2	0	0	0	0	4	2
1	0	0	1	2	0	0	0	2	0	0	0	0	6	2



TABLE 9: LOW PRIORITY BIKE PROJECTS CONTINUED

Southgate Blvd	Alpine Aven St	I-76	T	0.14	0	0	0	0	0	0	0	0
Peregrine Dr	Kite St	Shikra Pl	T	0.10	0	0	0	0	0	0	0	0
Future Trail	South Platte River	E 139th Ave	T	1.47	0	0	0	0	0	0	0	0
E 128th Ave	Tower Rd	Piccadilly Rd	T or CT or PBL	2.00	0	0	0	0	0	0	0	0
E 120th Ave	Tower Rd	Picadilly Rd	T or CT or PBL	1.98	0	0	0	0	0	0	0	0
Tower Rd	E 128th Ave	E 120th Ave	T or CT or PBL	1.00	0	0	0	0	0	0	0	0
Gun Club Rd	E 160th Ave	E 152nd Ave	T	0.94	0	0	0	0	0	0	0	0
E 156th Ave	Gun Club Rd	Harvest Rd	T	0.91	0	0	0	0	0	0	0	0
Future Trail	Brighton Lateral	CR 6	T	0.40	0	0	0	0	0	0	0	0
Future Trail	E 136th Ave	E 132nd Ave	T	0.36	0	0	0	0	0	0	0	0
E-470	N of Burlington O'Brian Canal Ditch	E 112th Ave	T	1.72	0	0	0	0	0	0	0	0
Future Roadway	Future Roadway	E 136th Ave	T	0.78	0	0	0	0	0	0	0	0
Piccadilly Rd	E 152nd Ave	E 120th Ave	T or CT or PBL	4.00	0	0	0	0	0	0	0	0
Future Roadway	Buckley Rd	Tower Rd	T	0.99	0	0	0	0	0	0	0	0
Gun Club Rd	E 152nd Ave	E 136th Ave	SHLDR	2.00	0	0	0	0	0	0	0	0
E 144th Ave	Piccadilly Rd	Harvest Rd	SHLDR	1.92	0	0	0	0	0	0	0	0
Himalaya St	E 128th Ave	E 120th Ave	SHLDR	1.00	0	0	0	0	0	0	0	0
Himalaya St	E 120th Ave	E 112th Ave	T	1.00	0	0	0	0	0	0	0	0



