

2021 ACTIVE TRANSPORTATION PLAN - PRELIMINARY DRAFT

For Discussion Only

INTRODUCTION

The City of Kirkland has been making great strides towards being a community where it is safe and desirable to walk and bicycle for recreation, connecting with transit, getting to and from school, and meeting everyday needs. Since the last time the Active Transportation Plan was updated in, a significant amount of progress has been toward achieving active transportation goals.

- Purchase of right-of-way for the Cross Kirkland Corridor (CKC) and completion of an interim trail and numerous neighborhood connections
- Installation of dozens of street crossing improvements, including additional lighting, curb extensions, and rapid flashing beacons
- Completion of sidewalks on at least one side of the street for nearly 90 percent of Kirkland's street network and 100% on school walk routes (on collector and arterial streets).
- Installation of over 70 miles of bike lanes, buffered bike lanes, and neighborhood greenways.

For a complete list of achievements please see Appendix XX.

PLAN PURPOSE

The purpose of this Active Transportation Plan (ATP) update is to reaffirm Kirkland's commitment to safely connect people to where they need to go and improve multi-modal mobility by creating an active transportation network that meets the needs of people of all ages and abilities, including children, older adults, and persons with disabilities. This ATP update recommends pedestrian and bicycle projects within the public right-of-way to enhance the connectivity and comfort of Kirkland's pedestrian and bicycle networks.

From an online community survey conducted for this plan update, many people expressed they would be interested in walking, biking, and rolling in Kirkland more if they felt it were safe and convenient to do so. The perception of safety from other roadway users (or lack thereof) was consistently identified as the primary consideration for deciding to walk or bike for a trip. Moreover, more connected sidewalks, more protected bicycle lanes, and safer crosswalks were identified as the top three improvements that would incentivize people to walk and bike more. Further insights on what we heard from the community is further discussed in Chapter 2.

Safe, convenient and comfortable travel of people of all ages and abilities traveling by any combination of foot, bicycle, transit, or motor vehicle shall be accommodated to the maximum extent practical in the scoping, planning, development, and construction, operation and maintenance of all transportation facilities, including the creation of new transportation linkages in order to create a more connected community-wide transportation network.

-Kirkland Complete Streets ordinance

The Active Transportation Plan addresses the City Council goal:

Balanced Transportation: Reduce reliance on single occupancy vehicles and improve connectivity and multi-modal mobility in Kirkland in ways that maintain and enhance travel times, safety, health and transportation choices.

Given safety improvements represent the largest potential for shifting trips from driving alone to walking and bicycling, this plan has three primary goals:

1. Create a safe, connected pedestrian network where walking is a comfortable and intuitive option as the first choice for many trips.
2. Create a connected bicycle network that accommodates people of all ages and abilities to get to destinations such as activity centers, parks, and transit.
3. Encourage and incentivize more people to walk and bike and encourage safe behavior for all users of the transportation system.

This approach directly responds to the community’s feedback and is backed by clear objectives and achievable strategies to realize a safer, more connected Kirkland.

This update accounts for all the progress the City of Kirkland has made since the adoption of the 2009 ATP and 2015 Transportation Master Plan (TMP) and identifies projects – sidewalks, street crossings, bikeways – that will further enhance the pedestrian and bicycle networks and make these modes more attractive for more people.

As such, the Plan puts more emphasis on a network designed for “Interested but Concerned” bicyclists, by integrating more neighborhood connections using less busy streets, and where feasible, creating more separation between bicyclists and motor vehicles on busier streets. This approach directly reflects the community’s feedback, which is discussed more in Chapter 2.

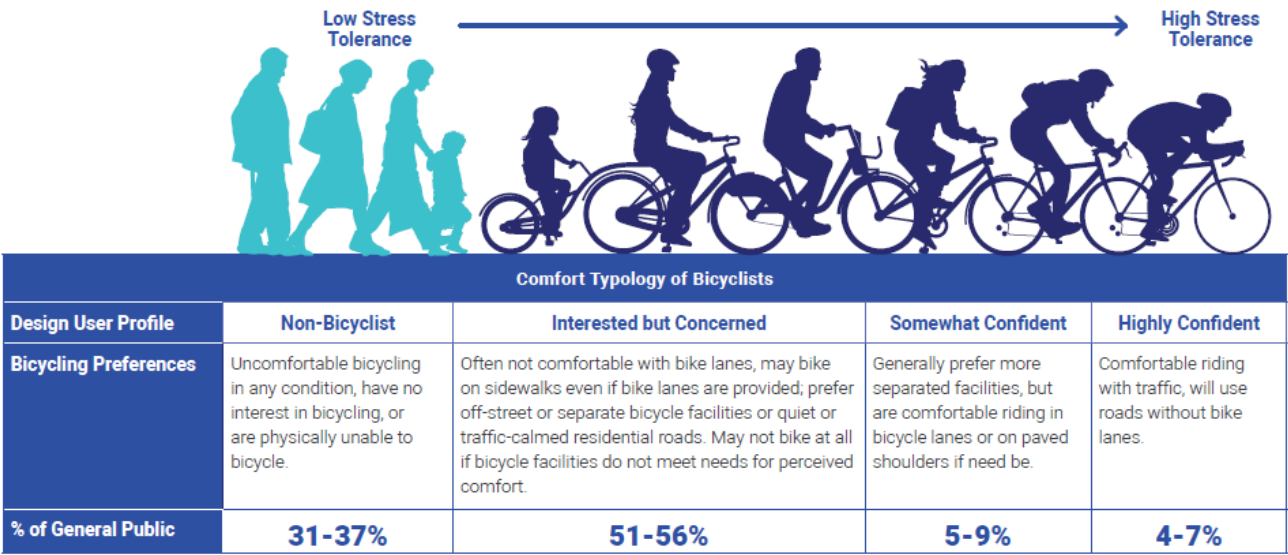


Figure XX: Comfort Typology of Bicyclists¹

¹ Dill, J. McNeil, N. “Revisiting the Four Types of Cyclists: Findings from a National Survey” Transportation Research Board 95th Annual Meeting, 2016. Note that children and elderly have not been surveyed as a separate category but are understood to have a very low tolerance of roadway stress.

This update accounts for all the progress the City of Kirkland has made since the adoption of the 2009 ATP and 2015 Transportation Master Plan (TMP) and identifies projects – sidewalks, street crossings, bikeways – that will further enhance the pedestrian and bicycle networks and make these modes more attractive for more people.

Other Programs and Initiatives Supporting Active Transportation in Kirkland

The Active Transportation Plan focuses on identifying opportunities to make walking, rolling and bicycling safer in Kirkland through the identification and development of bicycle and pedestrian networks, crossings, lighting improvements as well other amenities such as bicycle parking, wayfinding, etc. The plan also identifies opportunities with technology, education and encouragement. The ATP will focus primarily on walk and bike access through public right-of-way spaces.

There are other efforts that the City is working on that benefit people walking, rolling and bicycling but are addressed through other programs. These programs may be referenced in the ATP or have some overlap in the plan.

[Parks, Recreation and Open Space \(PROS\) Plan:](#)

The Parks, Recreation and Open Space (PROS) Plan is a six-year guide and strategic plan for managing and enhancing park and recreation services. It provides a vision for Kirkland's park and recreation system and establishes a path forward for providing high quality, community-driven parks, trails, open spaces and recreational opportunities. This plan will address trail access and maintenance through parks and green spaces.

The city is working together to identify how these plans work to create a connected system.

[Safer Routes to School Action Plans:](#)

The City worked in partnership with the Lake Washington School District, law enforcement, design professionals, students, parents, and neighborhoods to identify key steps to make walking, rolling, and riding the bus to school safer and more convenient. The outcome of this process was the development of the Safer Routes to School Action Plans (SRTS) for each neighborhood in Kirkland. These plans address education and encouragement, enforcement, evaluation and also identify projects based on equity and engagement that better connect kids to schools.

The development of the Active Transportation Plan was coordinated with the SRTS Action Plan development in terms of outreach and project development and prioritizes projects that overlap SRTS projects.

[Vision Zero:](#)

In 2015, Council adopted a Vision Zero policy to reduce serious injuries and fatalities in Kirkland by 2035. The Vision Zero Action Plan is being developed to identify safety improvements the City can make to reduce crashes in the city. There are some overlapping recommendations with the ATP but other actions noted only in the Vision Zero Action Plan still have benefits for people walking and bicycling by making our streets and communities safer.

[Cross Kirkland Corridor \(CKC\) Master Plan:](#)

The Master Plan outlines the community's vision for the corridor and will be used to guide development of the trail as well as transit and utility alignment. The plan also includes the location of access points, types and locations of amenities, and how road crossings and mixing zones are handled. The Master Plan was adopted by the City Council in June 2014 and retains its own body of work and recommendations. The Active Transportation Plan identifies some strategies for assessing the current status of the master plan and moving forward to implement it. The recommendations in the ATP are based on

[Neighborhood Greenways:](#)

Kirkland's [Greenways Guidelines](#), developed in 2017, provide the city with clear recommendations for building out the neighborhood greenway network using best practices. This document is intended to be updated as new best practices are better understood, including lessons learned as the city begins to build out the greenway network.

Neighborhood Greenways are street corridors, where walking and bicycling for all ages and all abilities are the priority modes of travel and driving a motor vehicle is the alternative mode of travel. These are often streets with low speeds and low traffic-volumes that are comfortable alternative to bike lanes on busy arterials. Greenways often have signs, pavement markings and traffic control measures that enhance the comfort and safety of walking and bicycling. As such, driving an automobile on a greenway, by design, is less convenient than driving on the other streets. Greenways are an important tool for implementation of the Active Transportation Plan.

Neighborhood Safety Program:

The Neighborhood Safety Program (NSP), authorized by the City Council in 2014, is created to re-energize Neighborhood Associations by empowering them to work collaboratively to identify, prioritize and address pedestrian and bicycle safety issues in Kirkland neighborhoods.

Each year there is a total of \$350,000 available for projects citywide under \$50,000, including \$150,000 funded by the voter approved 2012 Streets Levy. Eligible projects include bike facilities, intersection or crosswalk improvements, traffic calming, trail access or streetlights. Projects are restricted to City property, including streets, parks, community facilities, and the Cross Kirkland Corridor.

The SRTS and the ATP plans contribute to this process by providing the neighborhood associations more data driven recommendations at the neighborhood scale.

Sustainability Master Plan

When the Sustainability Master Plan was being developed, the update to the Active Transportation Plan had just started. As a proxy, the city opted to use the League of American Bicyclists – Bicycle Friendly Community rating and the Walk Friendly Communities rating as guides to communicate how the city will address the sustainability goals for active transportation and for the development of the ATP. The Bicycle Friendly Community and the Walk Friendly Communities ratings include aspects of engineering, education, encouragement and evaluation that are addressed in the goals and objectives in the ATP.

Transportation Demand Management:

Kirkland has a Transportation Demand Management (TDM) coordinator who works on programs to encourage more people to take alternatives modes to driving alone such as walking, bicycling, carpooling and taking transit. Kirkland's [Green Trip Program](#) provides incentives for people to take alternate trips and some of the rewards include transit passes or even REI gift cards. The TDM coordinator also works with major employers to encourage employees to walk, bike and take transit through commute trip reduction programs.

Crashes Involving People Walking and Biking

Every year dozens of people walking and bicycling in Kirkland are involved in collisions. Fortunately, many of these collisions don't result in injury, but far too many do. Three people who were walking were killed and another 25 were seriously injured in traffic collisions between 2015 and 2019. During the same period 11 bicyclists were seriously injured in traffic collisions. Figure XX shows the total number of collisions involving people walking and bicycling. On average there are nearly 60 collisions per year involving people walking or bicycling. Over a five-

year period bicycle and pedestrian collisions comprise 18% of all collisions, yet represent a small fraction of all trips taken in Kirkland. Figure XX shows the disproportionate share of serious and fatal injuries among people walking and bicycling.

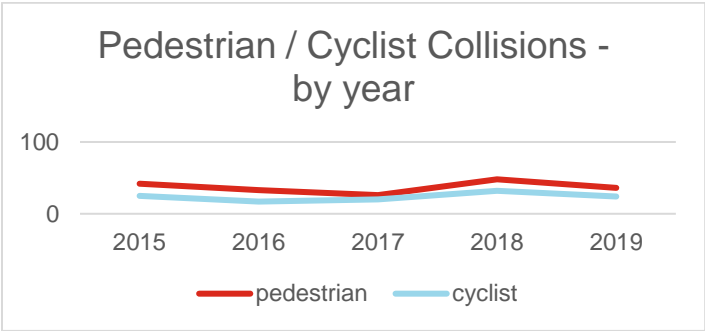


Figure XX – Pedestrian and Cyclist Collisions by Year (2015-2019)

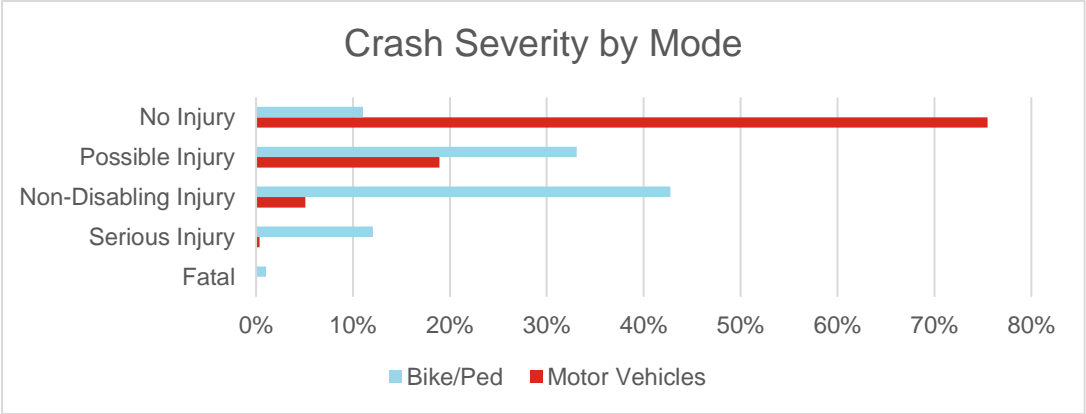


Figure XX – Crash Severity by Mode

People of all ages and abilities are making trips on foot or with mobility assistance devices in Kirkland. While the majority of people walking involved in traffic collisions are in the 21 to 60 year old range, about one-third are children or older adults. Figure XX shows the distribution of pedestrian collisions by age.

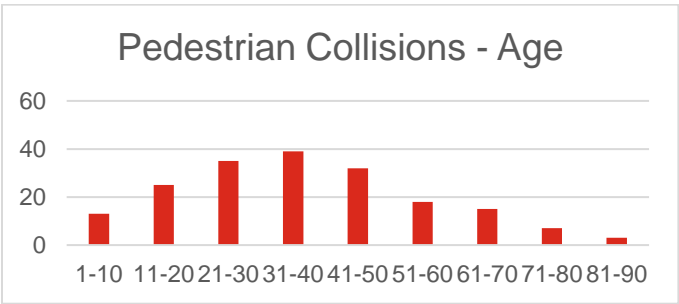


Figure XX – Pedestrian Collisions by Age

PLAN GOALS

This ATP update builds on goals, policies and actions adopted in the 2015 Transportation Master Plan related to active transportation and the 2009 ATP. With the implementation of this Plan's recommendations the following core goals are to be achieved:

Goal 1: Create a safe, connected pedestrian network where walking is a comfortable and intuitive option as the first choice for many trips.

OBJECTIVE: Prioritize **sidewalk gaps** that connect people to activity centers, transit, parks and the Cross Kirkland Corridor (includes equity score as part of prioritization process)

OBJECTIVE: Complete sidewalk on **both sides** of principal and minor arterials on transit routes. Complete at least one side of all remaining arterials. Addresses original goal from 2009 plan.

OBJECTIVE: Increase safety at **crossings** for pedestrians needed to complete pedestrian networks and access to destinations

- Strategy: Assess and **prioritize** additional crossings or improvements to existing crossings
- Strategy: Continue to utilize **a high standard** for crossing treatments such as RRFB's or HAWK signals. Explore additional safety measures such as in street signs for crosswalk enhancements
- Strategy: Upgrade crossings to address accessibility such as wheelchair ramps, aids for visual and hearing needs or other improvements to accommodate all people
- Strategy: Add sufficient lighting to all remaining light deficient crosswalks and assess any additional lighting needs
- Strategy: Continue to support and monitor the pedestrian flag program

OBJECTIVE: Provide additional pedestrian safety improvements at **intersections**

- Strategy: Explore opportunities for raised or painted intersections to increase safety and awareness at intersections with high pedestrian volumes
- Strategy: Identify opportunities to utilize technology and signals to increase safety at signalized intersections such as leading pedestrian intervals, pedestrian only phases

OBJECTIVE: Seek opportunities through tactical urbanism that explore **low-cost, creative solutions** for providing additional pedestrian safety

OBJECTIVE: Improve **lighting** on the CKC, on higher volume streets and in areas of low light pedestrian corridors where high pedestrian use is expected

OBJECTIVE: Make getting around on foot intuitive by planning and installing a pedestrian **wayfinding** system to and from the CKC and to other destinations

OBJECTIVE: Enhance pedestrian and bicycle facilities along Lake WA **Waterfront**

OBJECTIVE: Achieve a Platinum Walk Friendly Communities rating consistent with the goal in the Sustainability Master Plan.

OBJECTIVE: Monitor sidewalk **conditions** and repair as needed and ensure major obstructions are addressed. Continue to engage with the community to ensure people do not obstruct sidewalks and pedestrian facilities through parking, trash bins, etc.

Goal 2: Create a connected bicycle network that accommodates people of all ages and abilities to get to destinations such activity centers, parks, and transit.

OBJECTIVE: Complete a connected spine network of safe high comfort cycling facilities such as protected facilities, separated trails or pathways, neighborhood greenways and a denser network of additional bike lanes or other on-road bike facilities.

- Strategy: Seek opportunities to separate existing and future bike facilities on arterials from motor vehicle traffic with buffers or greater protection such as a curb, delineators or other more durable barriers. Use best practices when designing bicycle facilities.
- Strategy: Maintain all bike lane symbols, striping, green paint and buffers paint and ensure all bike lanes have bike symbols
- Strategy: Continue to look for opportunities to modify channelization markings to provide more street space for people bicycling.
- Strategy: Continue to build a network of greenways

OBJECTIVE: Make bicycling safer at controlled and uncontrolled intersections

- Strategy: Ensure all bike lanes connect to and through signalized intersections
- Strategy: Paint green lanes through controlled and uncontrolled intersections for all bike lanes on arterials
- Strategy: Make protected intersections a priority with major capital improvements
- Strategy: Paint green lanes where bike lanes cross dedicated right turn lanes
- Strategy: Consider two-stage bike boxes where high rates of left turn bike movements are expected

OBJECTIVE: Seek opportunities through tactical urbanism that explore low-cost, creative solutions for providing additional bicycle safety

OBJECTIVE: Ensure bike facilities are unobstructed and bike routes are accommodated through construction.

- Strategy: Accommodate bicyclists through construction zones by providing appropriate warning and detour signage, and temporary facilities where needed for improved safety for city-managed CIP projects. Work with developers to ensure the same accommodations are made through privately managed construction.
- Strategy: Coordinate with enforcement and communications team on community outreach to ensure people do not park in or obstruct bike facilities with trash bins or other obstructions.

OBJECTIVE: Ensure bicycling in Kirkland is intuitive through maps and wayfinding

- Strategy: Consider additional wayfinding that help cyclists navigate to nearby neighborhood greenways or other low volume bicycle routes. This would supplement other wayfinding on Greenways and other pedestrian wayfinding to access the CKC and other destinations.
- Strategy: Ensure the bike map is regularly updated and easily accessible through a variety of formats

OBJECTIVE: Explore opportunities to utilize technology to improve bike safety and accommodation

- Strategy: Upgrade bicycle detection system or other detection options at signalized intersections
- Strategy: Explore signal timing improvements that bicyclists such as leading intervals, bike only phases

OBJECTIVE: Continue to monitor the market to seek a bike share program for the city or as an option for access to high-capacity transit

OBJECTIVE: Achieve a Platinum Bicycle Friendly Communities rating consistent with the goal in the Sustainability Master Plan.

OBJECTIVE: Update bicycle parking policy and programs to ensure parking is available at both ends of bike trips:

- Strategy: Work with the planning department to update bike parking policy as it relates to long term parking (at transit facilities, residential buildings and other development)
- Strategy: Assess short-term parking needs in right-of-way to ensure short-term bike parking is available near amenities and at key destinations
- Strategy: Explore opportunities for bike parking at special events
- Strategy: Work with transit agencies to add secure bike parking at transit centers

Goal 3: Encourage and incentivize more people to walk and bike, encourage safe behavior for all users of the transportation system.

OBJECTIVE: Encourage and incentivize more people to walk and bike through education and encouragement activities (special events, Bike Everywhere Day, social media)

- Strategy: Conduct outreach with community groups, colleges in the city with encouragement and incentive programs
- Strategy: Continue to promote and grow the Kirkland Green Trip program

OBJECTIVE: Coordinate with Lake Washington School District and with the objectives in the Safer Routes to School Action Plans on communication, education, encouragement and activities focused on children taking active transportation to school and for other trips.

- Strategy: Participate in walk and bike to school month/ days
- Strategy: Coordinate with school resource officers by supporting pedestrian and bike safety curriculum that they can bring into the classrooms

- Strategy: Utilize the bike trailer received by Lake Washington School District (in coordination with the City of Kirkland) for special events and bike training education for kids

OBJECTIVE: Provide travel information about how people can get to downtown, special events and other activities through alternatives to driving.

OBJECTIVE: Coordinate with parks on opportunities for increase bike and pedestrian education such as a bicycle traffic garden for youth education

OBJECTIVE: Coordinate with communication team on public messaging related to pedestrian and bicycle safety education, sharing the road, safe travel behavior in general as well as encouragement and travel information

Supportive Goal 1: Achieve the Master Plan Vision of the Cross Kirkland Corridor.

The Cross Kirkland Corridor Master Plan outlines the community's vision for the corridor and will be used to guide development of the trail as well as transit and utility alignment. The plan also includes the location of access points, types and locations of amenities, and how road crossings and mixing zones are handled. The Master Plan was adopted by the City Council in June 2014. The Active Transportation Plan identifies some strategies for assessing where we are now and moving forward to implement the master plan but the Master Plan retains its own body of work and recommendations. The city will continue to monitor and take advantage of opportunities to further develop the trail (such as when new development occurs) and will begin to identify the next stages for capital project development.

OBJECTIVE: Create a Cross Kirkland Corridor Implementation / Action Plan that addresses the remaining unfinished investments noted in the CKC Master Plan

- Strategy: Identify unfinished connections and prioritize for future investments
- Strategy: Upgrade maps and other signs on the trail to encourage safe behavior and facilitate wayfinding to make access to destinations intuitive

Supportive Goal 2: Implement the recommendations in the Vision Zero Action Plan.

In 2015, Council adopted a Vision Zero policy to reduce serious injuries and fatalities in Kirkland by 2035. The Vision Zero Action Plan is being developed to identify strategies for how the City can reduce crashes in the city. There are some overlapping recommendations with the ATP but other actions noted only in the Vision Zero Action Plan still have benefits for people walking and bicycling by making our streets and communities safer. Specific strategies related to the Vision Zero objectives are found in other goals in the ATP framework.

OBJECTIVE: Prioritize Safe Street Design and Investments

OBJECTIVE: Operate Safe Streets

OBJECTIVE: Promote and Institutionalize a Culture of Safety

OBJECTIVE: Build a Robust and Transparent Data Framework

Supportive Goal 3: Utilize technology to support safety measures and supplement safe networks.

Technology can play a significant role in making transportation efficient and effective. For example, technology can help ensure people walking and bicycling have fewer interactions with drivers at signalized intersections. In addition, better understanding the number of people walking and bicycling in the city as well as where crashes occur can better facilitate decisions for where the needs are greatest. This information also helps the city make the case for new infrastructure through current programs or when seeking outside grant funds.

OBJECTIVE: Utilize opportunities with Intelligent Transportation Systems (ITS) infrastructure to facilitate safety improvements at signalized intersections

- Strategy: Explore opportunities with leading pedestrian/bike intervals, pedestrian/bike only phases
- Strategy: Explore technology that can better detect people bicycling on the roadway or pedestrians at crossings
- Strategy: Consider advances in technology that better accommodate people with disabilities

OBJECTIVE: Develop a program to gather bicycle volume at key points in the City in a manner that is meaningful for measuring safety and ridership trends.

- Strategy: Invest in permanent counters at various places along the Cross Kirkland Corridor
- Strategy: Upgrade signalized intersection counts to improve data analytics of pedestrian and bicycle volumes
- Strategy: Expand current count program to better measure other areas of the city not currently covered by existing count programs and to facility before/ after counts of projects.

OBJECTIVE: Build a Robust and Transparent Data Framework

- Strategy: Develop a dashboard on the city website to better communicate pedestrian and bicycle volumes, trends as well as crash data

Supportive Goal 4: Implement the recommendations in the Safer Routes to School Action Plans.

The City worked in partnership with the Lake Washington School District, law enforcement, design professionals, students, parents, and neighborhoods to identify key steps to make walking, rolling, and riding the bus to school safer and more convenient. The outcome of this process was the development of the Safer Routes to School Action Plans (SRTS) for each neighborhood in Kirkland. These plans address education and encouragement, enforcement, evaluation and also identify projects based on equity and engagement that better connect kids to schools.

The development of the Active Transportation Plan was coordinated with the SRTS Action Plan development in terms of outreach and project development. While there is significant overlap, the ATP does not focus on school access because of this specific body of work. However, the ATP does prioritize projects that overlap SRTS projects in order understand multiple benefits.

CHAPTER 2: COMMUNITY VOICES - SUMMARY OF PLANNING PROCESS AND PUBLIC ENGAGEMENT

HOW WAS THIS PLAN DEVELOPED?

The Plan was developed over a two-year period, beginning in 2019. Following a COVID-related pause in the ATP planning process, work resumed in spring of 2021. The process was guided by City of Kirkland staff, Transportation Commission, and community stakeholders. The project team paired community input with data-driven analyses and best practices in active transportation planning and design to create the 2021 ATP update and its recommendations.

Engagement with the community included a number of strategies to reach and hear from the community about interest and concerns related to walking and bicycling in Kirkland. This included a variety of neighborhood and interest group meetings, outreach at events such as “City Hall for All”, social media outreach (such as through the “This Week in Kirkland” newsletter which has 5,661 subscribers), two on-line community engagement meetings and opportunities to contact the city directly through an on-line comment form.

The city also conducted a Safe and Active Transportation survey between October 2019 and January 2020 which received 1,278 responses. The Transportation Commission also received regular briefings and staff briefed the City Council at of their study sessions in April 2021.

To develop the Plan’s recommendations, City staff and the project team conducted:

- Community outreach and engagement
- Needs and network analysis

Using the community input and data, the project team developed:

- Bicycle and pedestrian network and facility recommendations
- Program and Policy Recommendations
- Implementation Strategy

WHAT WE HEARD

There is much interest among the Kirkland community to continue to make the city a great place to walk, bike, and roll. Concerns about safety were prevalent in the public feedback received. Safety-related concerns varied and included comments related to:

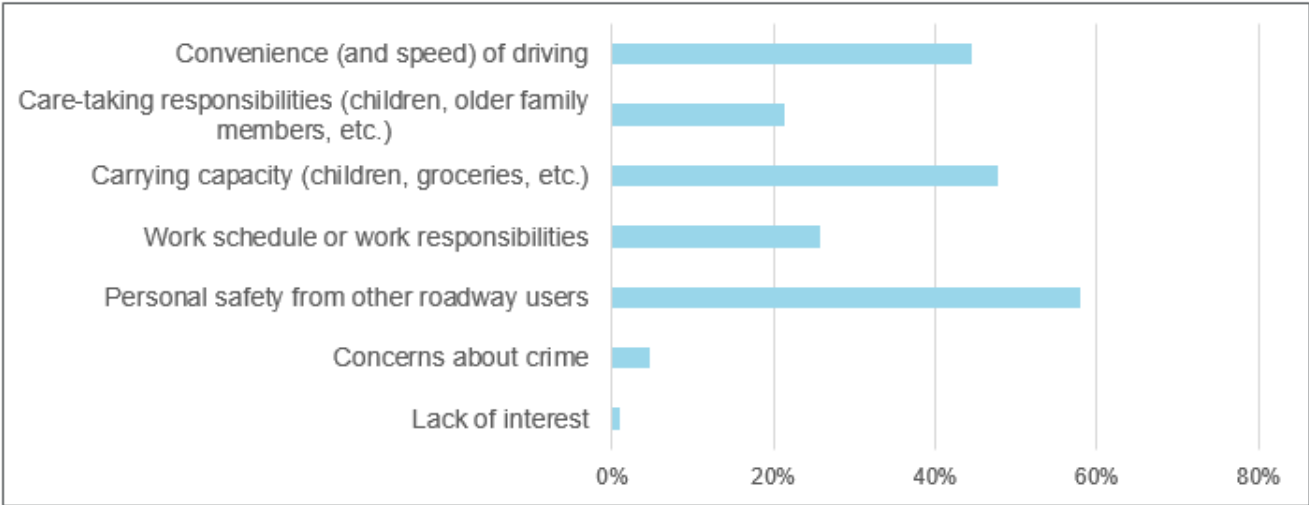
- lowering speeds
- separation of modes, including a desire for more protected bike lanes
- improved street crossings
- greater connectivity and filling sidewalk gaps in some areas
- human behavior such as cars failing to yield to pedestrians

The City also received many project / location specific comments and quite a few questions. Some questions/general comments included:

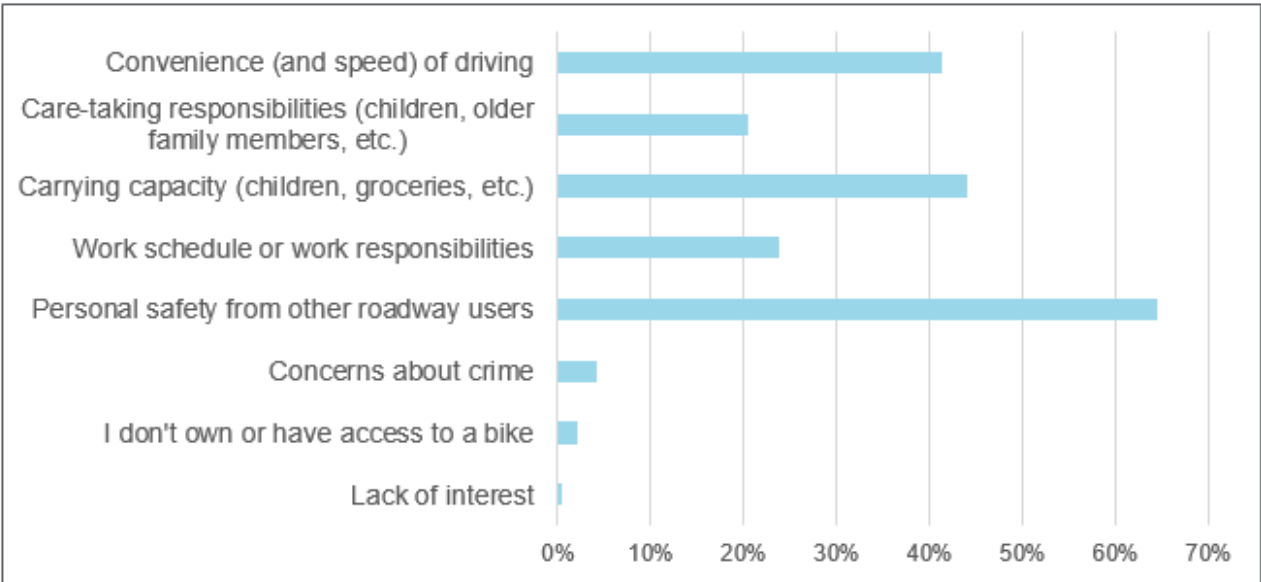
- proper use of e-bikes and scooters to reduce conflicts
- trade-offs between parking and other uses of right-of-way (people suggested removing parking to make space for bike lanes, others expressed concern about parking availability)
- a need to ensure bike lanes and sidewalks are not blocked by cars, trash bins or debris

The following questions were asked in the on-line survey. These responses help the city to better understand what the city can and cannot influence in terms of increasing the number of people who choose to walk or bike.

For those that are interested in **walking** more, what impacts your decision to walk more often?



For those that are interested in **bicycling** more, what impacts your decision to bike more often?



See Appendix **XX** for full survey results

CHAPTER 3: WALKING AND BICYCLING IN KIRKLAND TODAY

Since the Active Transportation Plan was adopted in 2009, the City annexed three previously unincorporated districts north of the city, Finn Hill, North Juanita, and Kingsgate. The annexation added 33,000 residents and nearly 7 square miles to Kirkland in 2011. The city has also seen unprecedented growth and development, particularly in Totem Lake, Juanita and downtown Kirkland. Future development is planned for the station area adjacent to the I-405/ 85th Station Area anticipating future Bus Rapid Transit service along I-405. As Kirkland continues to grow and add population it will be increasingly important to provide people with a range of safe and convenient transportation options, including walking and biking to get to destinations. There simply is not enough space within Kirkland's public rights-of-way to accommodate a growing number of automobile trips without resulting in severe congestion.

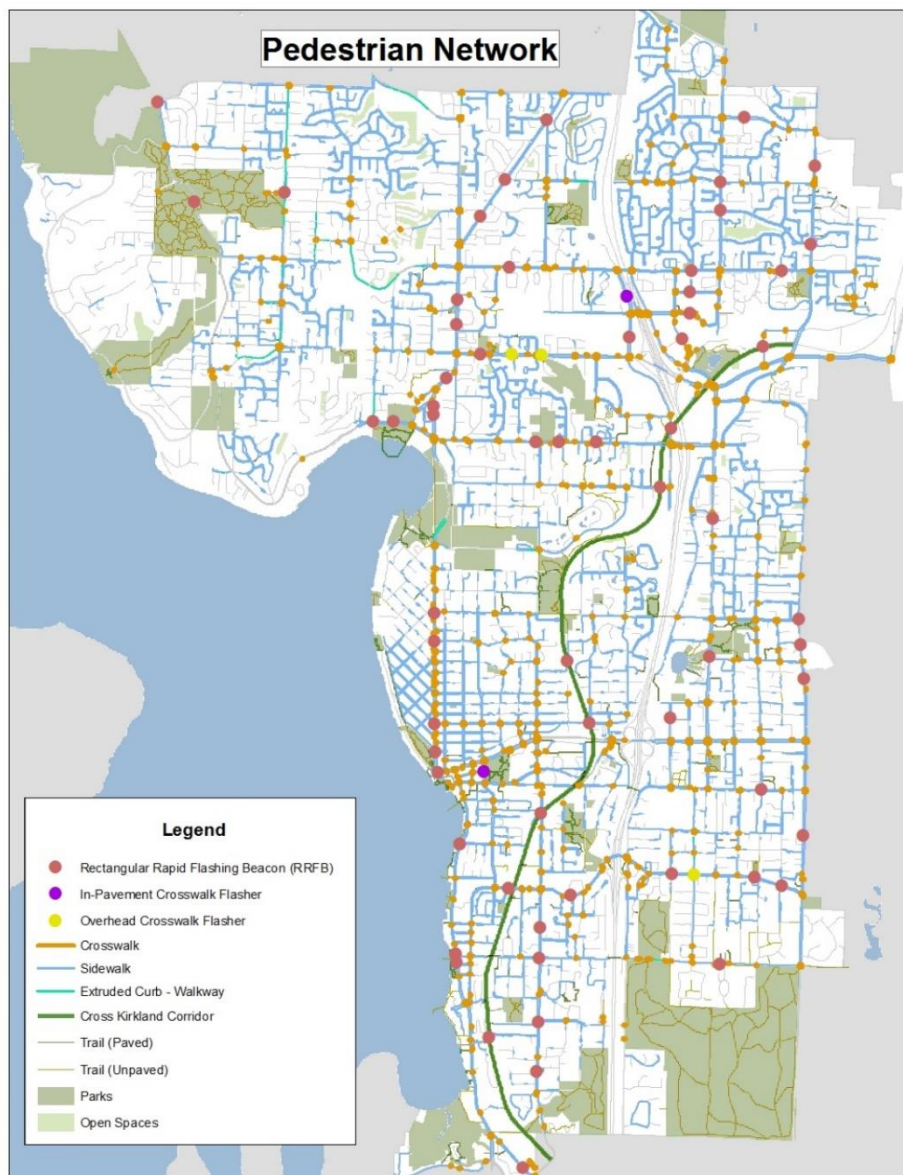
WHAT IS IT LIKE TO WALK IN KIRKLAND TODAY?

Currently, almost 86% of Kirkland's arterials and 81% of collectors have sidewalks on at least one side of the street. In some cases, the city uses extruded curbs to identify walkways as an interim treatment where no sidewalk currently exists. Many of these are on school walk routes.

When the 2009 ATP was adopted, the objective was to complete sidewalks on one side of all arterials. At that time, the city had not yet annexed the three previously unincorporated districts north of the city, Finn Hill, North Juanita, and Kingsgate. As the city evaluates how well this objective has been met, these annexed areas are included in this evaluation. Of the remaining sidewalk gaps on one side of arterials, 42% of those gaps are in the annexed areas.

The city has also installed 63 Rectangular Rapid Flashing Beacons (RRFB's), three overhead crosswalk flashers (two of which are funded to be upgraded) and two in-pavement crosswalk flashers. The overhead and in-pavement flashers are those identified to be upgraded.

In addition to the sidewalk network and crossing treatments, the city has a number of paved and unpaved pathways



that connect through neighborhoods and break-up long blocks. Many of these pathways include numerous access points to Lake Washington. As future development occurs, Kirkland's [Citywide Connections Map](#) identifies additional neighborhood connections that will be added to this system.

PEDESTRIAN NETWORK ANALYSIS

The pedestrian network in Kirkland is comprised of many different parts, including sidewalks, trails, short neighborhood connections, curb ramps and other intersection crossing infrastructure, as well as all the destinations that people access by foot, which is to say, just about everywhere in Kirkland. A key focus of this Plan is to identify improvements to increase safe and convenient access to transit, activity centers, and parks.

Planned Pedestrian Network

The planned pedestrian network aims to fill critical sidewalk gaps and strategically enhance street crossings that currently impede access to transit, activity centers, and parks and impact safe and comfortable pedestrian travel. As stated above, there are many other features that comprise the pedestrian network, which are also a focus for the City. For example, curb ramps and other infrastructure that improves access for persons with disabilities are acknowledged in the City's [Pathway to Transition](#), a step towards developing a Transition Plan for improvements that need to be made to bring the City into full compliance with Title II of the Americans with Disabilities Act. The [Safer Routes to School Action Plans](#) identify improvements specifically for increasing access to schools, many of which also improve access to other destinations in Kirkland. The City has also developed a [Citywide Transportation Connections Map](#) that identifies pathways to improve network connectivity. The [Cross Kirkland Corridor](#) is another facility that contributes significantly to Kirkland's pedestrian network. More work is being done by the City and its partners to improve connectivity to the trail such as the [Totem Lake Connector](#) and more localized neighborhood connections.

Sidewalk Gaps

Kirkland has made significant progress in meeting its policy goals focused on building out the sidewalk network along major streets, but there are still some important gaps to be filled. This plan identifies remaining sidewalk gaps, which are shown in Figure XX. Many remaining sidewalk gaps are on neighborhood streets that don't provide through connections or access to community destinations. Still others are along major streets with transit, within activity centers, or along other streets that provide direct access to these destinations, as well as parks. Sidewalk gaps were analyzed to determine which gaps, if filled, would provide the greatest benefits in terms of providing access to transit, activity centers, and parks. These high benefit sidewalks were then grouped into logical extents (Figure XX).

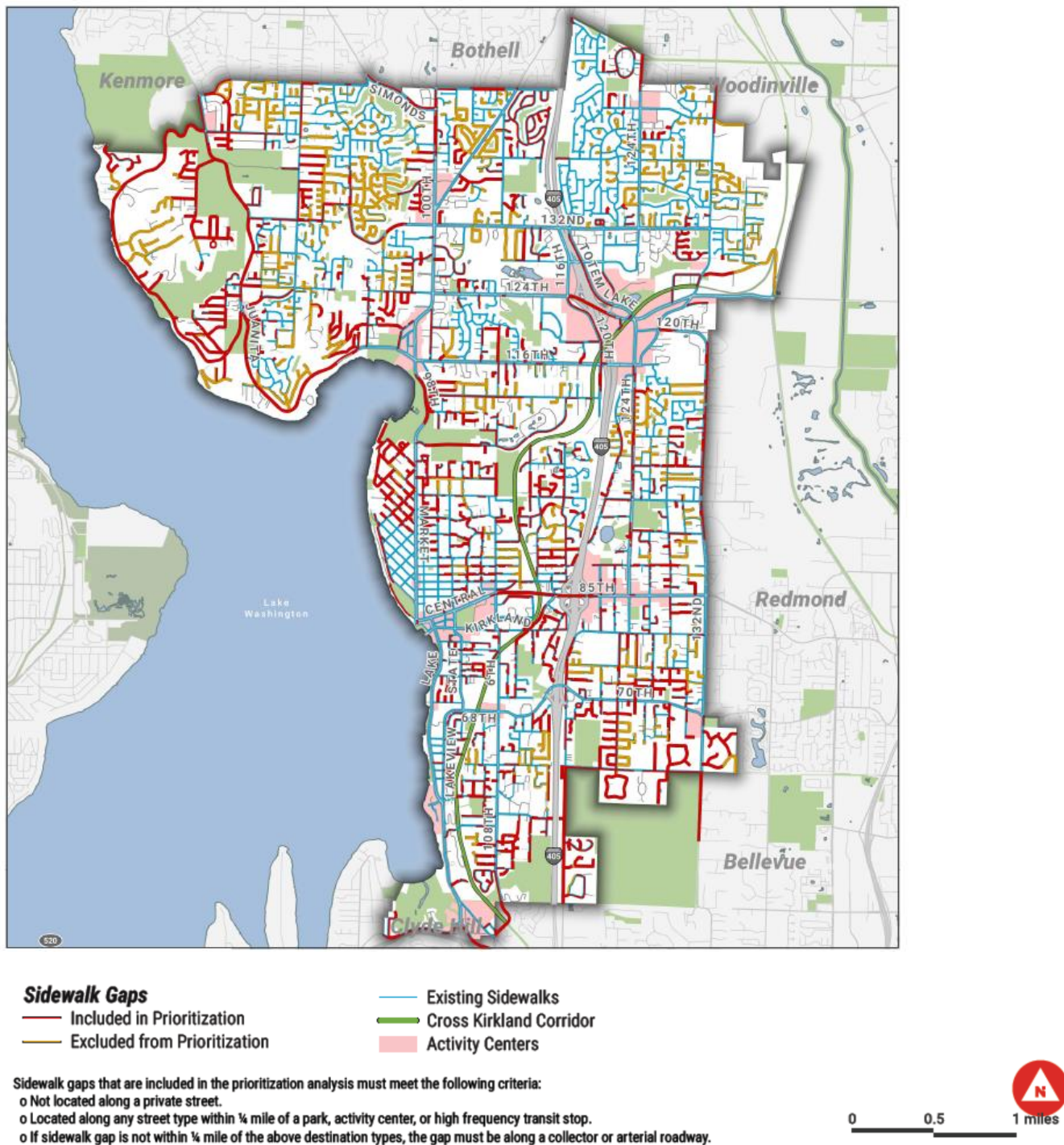


Figure XX – Remaining Sidewalk Gaps

Street Crossings

Being able to cross major streets without having to go too far out of direction and with confidence that drivers will stop or yield are two important factors that support walking. Kirkland has been a model for making street crossings safer and more convenient for people walking with its pedestrian flag program and widespread deployment of safety treatments such as crossing islands and rapid flashing beacons. There is still work to do. This plan identifies where additional street crossing enhancements are needed to improve access to high

frequency transit, activity centers, and parks. Similar to sidewalk gaps, there are street crossing enhancements identified in the *Safer Routes to School Action Plans* which also provide broader pedestrian network benefits and improve community access and safety.

WHAT IS IT LIKE TO BICYCLE IN KIRKLAND TODAY?

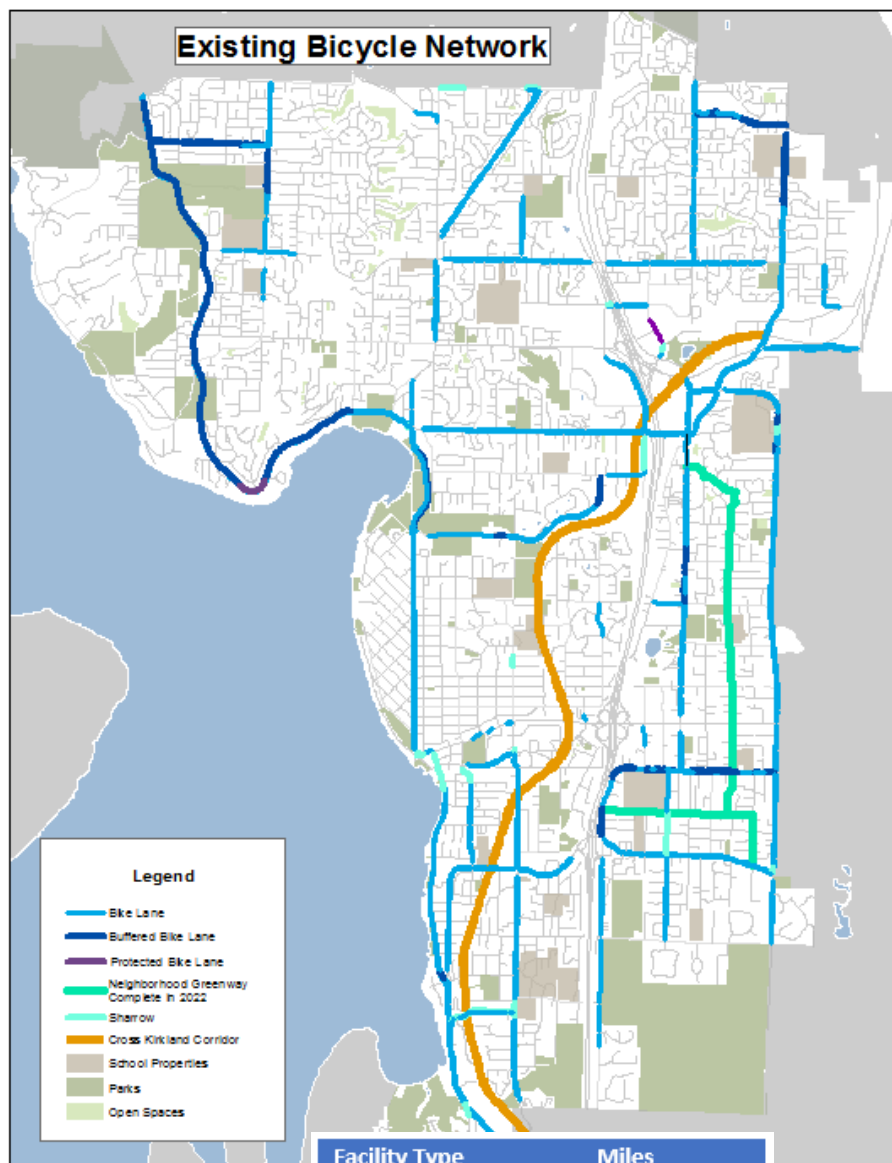
Kirkland has a growing bikeway network consisting primarily of bike lanes. Over time, the city has worked to add buffers to many bike lanes and green paint marking where the bike lane intersections.

The City has recently implemented the first of two neighborhood greenways – NE 75th St and 128th Ave NE – which are slated to be completed in early 2022. Taken together, these two greenways greatly improve all ages and abilities accessibility in the Rose Hill neighborhood. Neighborhood greenways prioritize a select network of residential streets for people of all ages and abilities to feel safe to walk and ride bicycles. These are often streets with low speeds and volumes that can provide a comfortable alternative to bike lanes on busy arterials.

The Cross Kirkland Corridor is a wildly popular trail facility that attracts mainly recreational walking and biking. As it becomes more integrated with the on-street bicycle network, and eventually is paved, it will play an increasingly important role in the bicycle network.

Table XX summarizes the mileage of the various bikeway types that comprise Kirkland's bicycle network. Figure XX shows Kirkland's existing bicycle network.

Table XX – Existing Bikeway Mileage

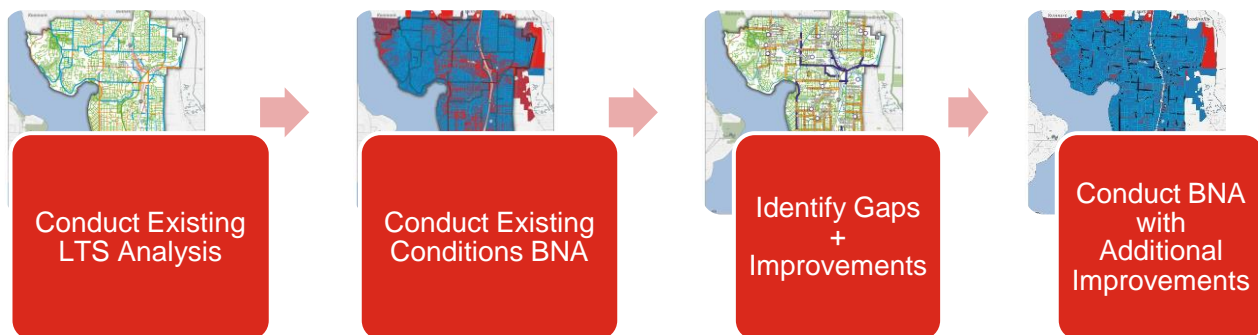


Facility Type	Miles
Bike Lane	55.97
Buffered Bike Lane	8.62
Protected Bike Lanes	0.19
Shared Lane Markings	2.08
Grand Total	66.86

Low-Stress Network Connectivity Analysis

A network analysis was conducted to determine how well the existing and planned network from the 2015 TMP provide connections to community destinations using “low-stress” bikeways, i.e., bikeways that less confident/more cautious bicyclists would feel comfortable using. An example of a low-stress bikeway would be a buffered bike lane on a street with a 25 MPH speed limit and not large amounts of traffic.

This analysis begins by assessing the level of stress (LTS) that takes into account the speed and volume of the roadway as well as existing bicycle facilities. Then, connectivity is assessed to see how well the existing network connects to destinations through unbroken low-stress routes. This is called the Bicycle Network Analysis (BNA). This process identified areas of Kirkland that are not well-served by low-stress bicycle connections. Areas with a low BNA score were assessed to determine what bicycle facility improvements are needed to create a low-stress connection, which informed the network recommendations of the ATP update presented in the next chapter.



Key Takeaways from the Bicycle Network Analysis Include:

There are few, yet significant areas, where existing and planned bicycle facilities (per the 2015 TMP) result in a low BNA score i.e., are not well-connected with low-stress bicycle facilities. These include:

- Totem Lake area
- Highlands neighborhood
- Finn Hill
- Portions of the Moss Bay, Everest, Market and South Juanita neighborhoods

This low connectivity is a result of one or more high-stress streets that provide critical connections to and from the neighborhood (e.g., NE 124th St, Market St, 116th Ave NE) or need to be crossed. In some cases, there are alternative connections within a reasonable distance of these high-stress corridors where it may be difficult to implement low-stress bikeways given space constraints, while in other cases there are not good alternatives. For example, providing a low-stress bicycle connection on NE 124th St would greatly improve connectivity to the Totem Lake area for many people. However, it would be challenging to install a low-stress bikeway on NE 124th St in the near-term given the volumes of traffic on that street and limited space. NE 116th St and NE 128th St offer alternative east-west connections that would greatly improve the Totem Lake area’s overall connectivity to the citywide network and are more feasible to implement low-stress bikeways.

Kirkland's Existing Bicycle Network is Mostly for Confident Bicyclists

Currently, the majority of Kirkland's neighborhood street network provides low-stress conditions; meaning they are streets that either don't have high vehicle speeds or volumes (mostly neighborhood streets). However, many of these streets are discontinuous and do not offer direct connections for bicyclists or have grades that present challenges for the casual bicyclists or families. Many of Kirkland's existing bike lanes do not offer a low-stress riding experience primarily because they do not provide sufficient separation given the speed and volume of adjacent motor vehicle traffic. These "higher stress" bikeways are displayed as orange and red in Figure XX. There are existing bike lanes (blue lines) that offer sufficient comfort for many adults, but these mostly occur as isolated segments, which can create stressful conditions for less confident bicyclists. The Cross Kirkland Corridor and new neighborhood greenways offer the lowest stress riding experience and are considered appropriate for people of all ages and abilities.

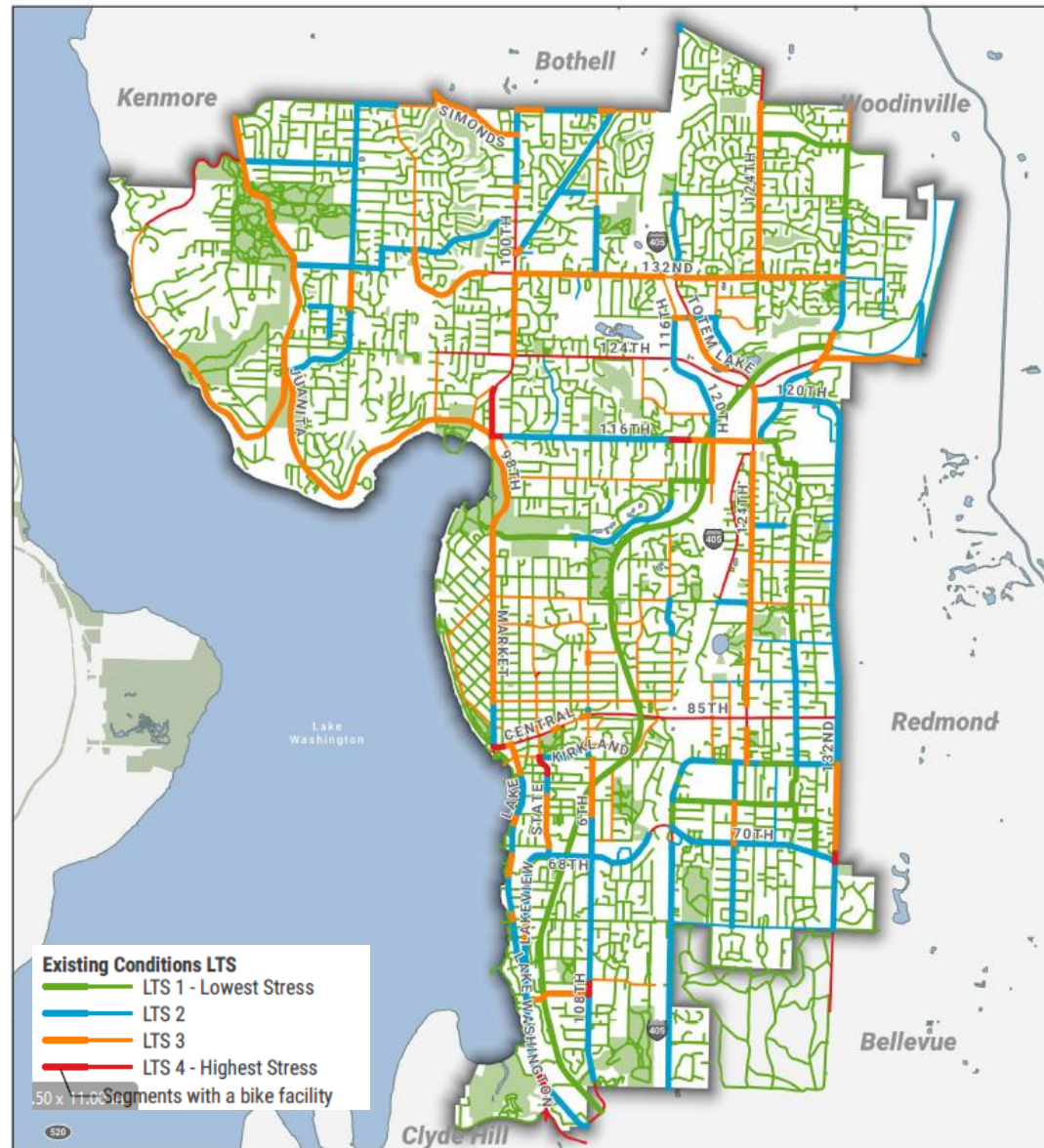


Figure XX – Level of Traffic Stress on Existing Network

CHAPTER 4: THE FUTURE OF WALKING AND BICYCLING IN KIRKLAND

This plan outlines two specific goals focused on completing pedestrian and bicycle networks.

Goal 1: Create a safe, connected pedestrian network where walking is a comfortable and intuitive option as the first choice for many trips.

Goal 2: Create a connected bicycle network that accommodates people of all ages and abilities to get to destinations such activity centers, parks, and transit.

As stated above, the ATP will focus on access in public right-of-way and will focus on access to activity centers, transit, parks and to the Cross Kirkland Corridor. Other plans focus on access to and through parks and green spaces as well as access to schools. The ATP is consistent with the 10-minute neighborhood concept where a focus is on accessing destinations within a reasonable 10-minute walk. The ATP project prioritization process assess access to destinations within that framework of a reasonable walk distance to destinations.

The pedestrian network analysis and the bicycle network analysis identify where the gaps are in creating walk and bike networks that are connected and comfortable. However, the needs are great so the city must evaluate how best to prioritize projects that should be addressed first to meet the ATP goals.

10-Minute Neighborhoods

A [10 minute neighborhood](#) is a community where residents can walk short distances from home to destinations that meet their daily needs. These walkable communities are comprised of two important characteristics:

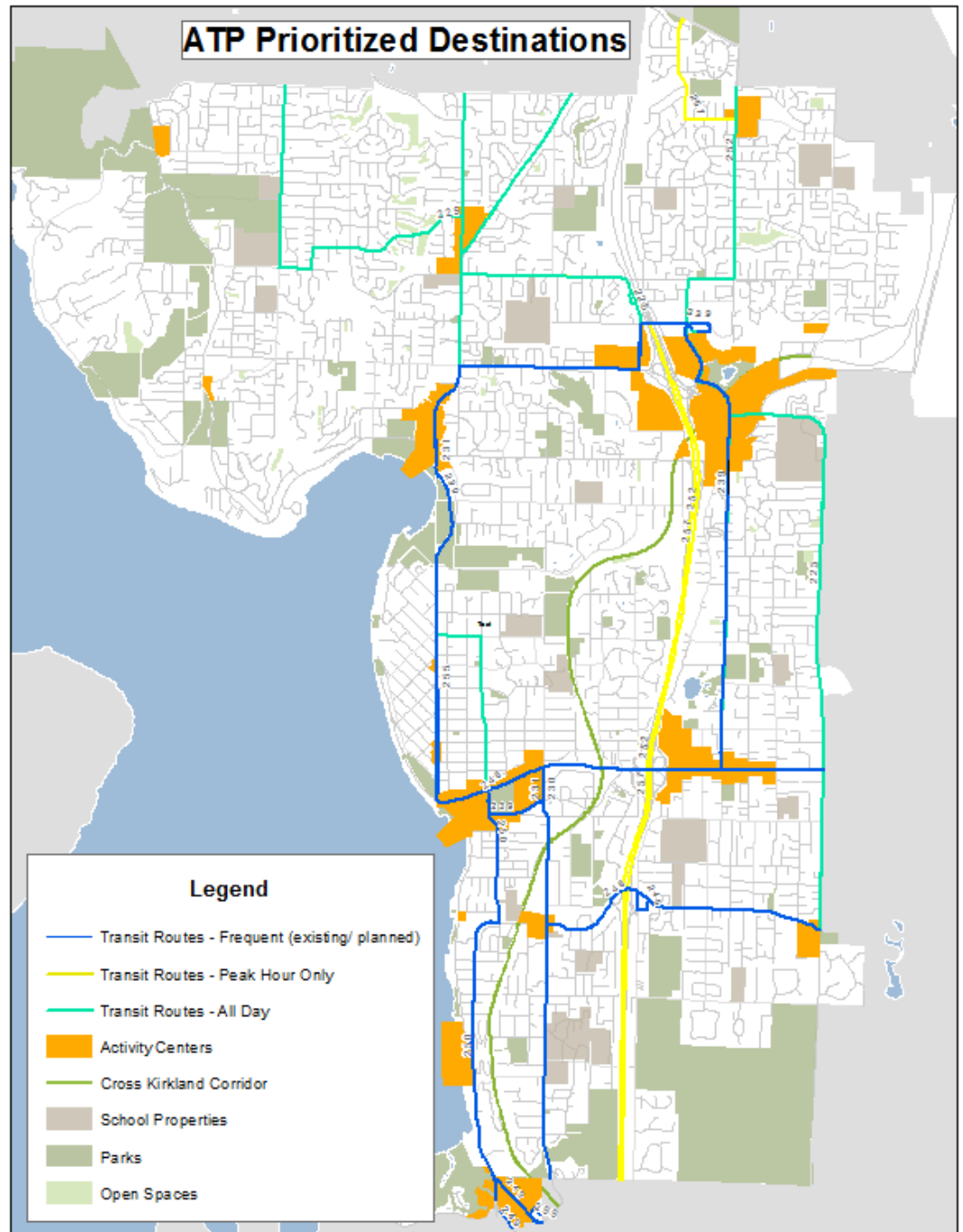
- Destinations – a walkable community needs places to walk to. Destinations may include places that meet commercial, educational, recreational, or transportation.
- Accessibility – the community needs to be able to conveniently get to those destinations.

PROJECT PRIORITIZATION

Prioritizing projects helps guide investments toward projects that provide the greatest benefits. In addition, the prioritization process can help identify projects and their applicability to different grant and funding opportunities. Both bicycle network and pedestrian network recommendations were prioritized by access to activity centers, parks, transit and to the Cross Kirkland Corridor. The prioritization process did include schools for the bike network prioritization. This is because the SRTS Action Plans focused on pedestrian connections. This process also considered the bike level of traffic stress and network analysis (BNA) noted in Chapter 3. For both the bike and pedestrian prioritization, equity was also a key component. Areas with higher concentration of people of color, people with low-incomes, people with disabilities were prioritized.

Access to transit routes that are more frequent were prioritized higher than other transit routes.

Activity Centers are those places that are zoned for commercial and mixed-use land uses.



Pedestrian Project Prioritization and Implementation

Pedestrian projects were prioritized based on walk distances to destinations identified above. This prioritization process identified both a set of prioritized sidewalk gaps and investments needed but also a set of crossings that help to complete pedestrian networks.

OBJECTIVE: Prioritize **sidewalk gaps** that connect people to activity centers, transit, parks and the Cross Kirkland Corridor

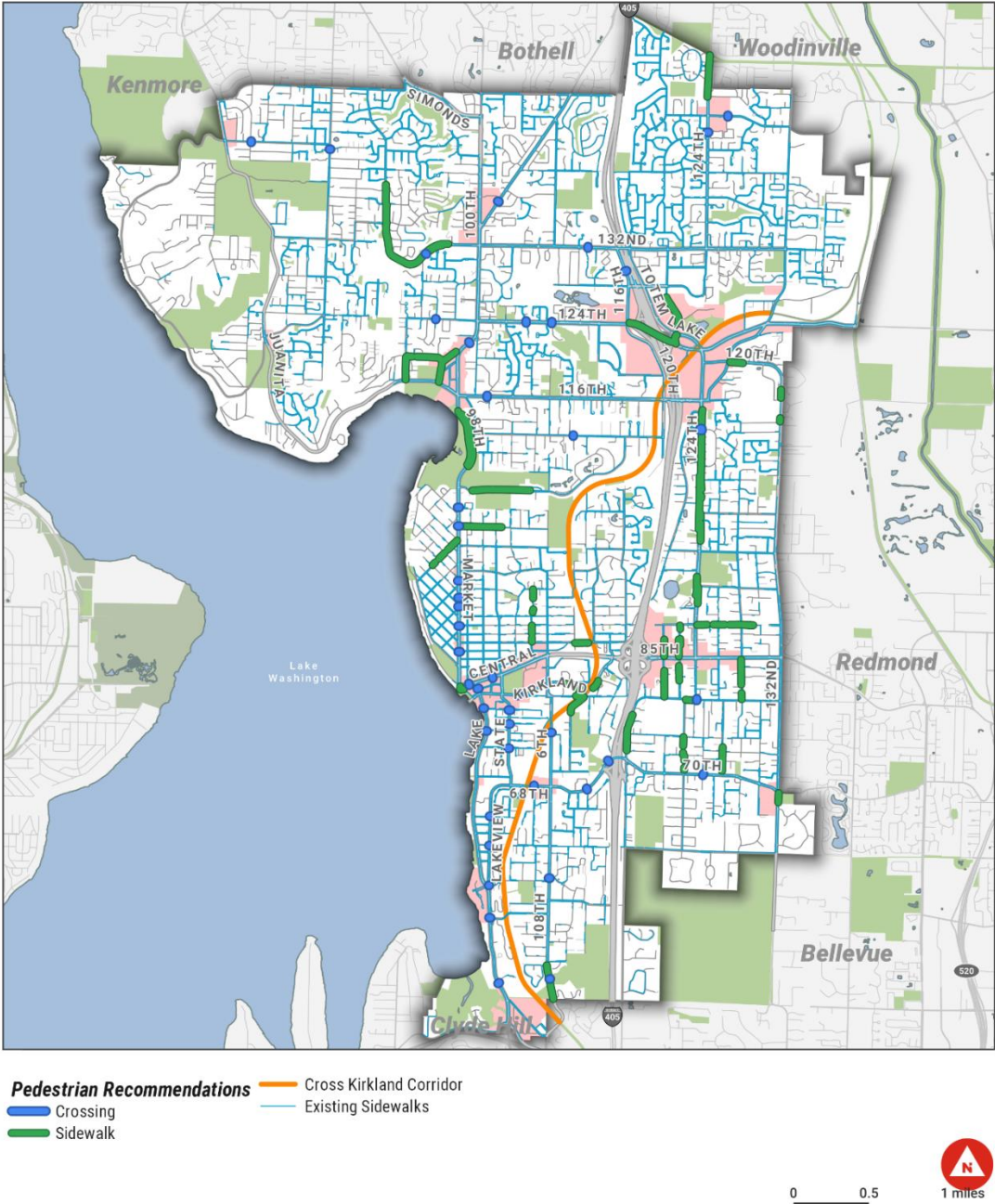


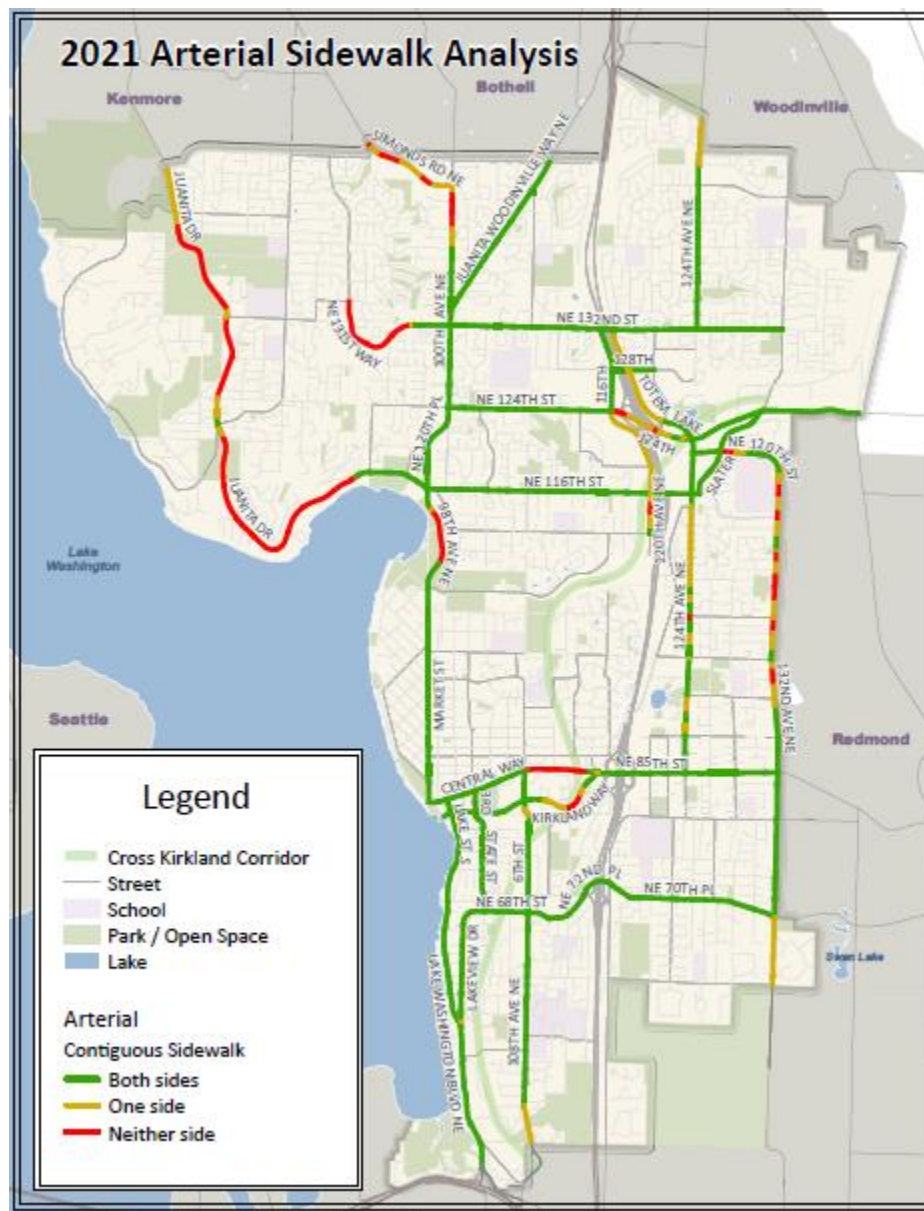
Figure XX – Planned Pedestrian Crossing and Sidewalk Network Improvements

Table XX: Prioritized Project List forthcoming

The 2009 ATP included a goal to complete sidewalks on one side of all arterials. This plan was adopted prior to the city annexing three previously unincorporated districts north of the city, Finn Hill, North Juanita, and Kingsgate. Currently, almost 86% of Kirkland's arterials have sidewalks on one side of arterials. This includes the new annexed area.

OBJECTIVE: Complete sidewalk on **both sides** of principal and minor arterials on transit routes. Complete at least one side of all remaining arterials.

While some arterials do not prioritize well based on the prioritization criteria outlined above, it is still important for Kirkland to continue to commit to this objective that was part of the 2009 adopted plan. There are quite a few overlapping segments with the prioritized project list but this objective does include corridors such as Juanita Drive. The city received a large number of comments for people requesting walk access along Juanita Drive. The 2021 ATP objective does take this goal one step further. The 2009 objective is to complete sidewalks on one side of all arterials. The ATP update includes both sides of arterials but prioritizes the second side of the street along transit routes. If Kirkland is to achieve the goal to increase the number of trips by walk, bike and transit modes, ensuring people that take transit can access bus stops with connected sidewalks is imperative.



Bicycle Project Prioritization and Implementation

Bicycle projects were prioritized based three categories that are tied to the goals of the Plan:

- » Connectivity- Does the bikeway support connectivity to transit and to/from areas where people are most likely to bike?
- » Safety and Comfort – Does the bikeway address a location with a past collision (s) or improve comfort for bicyclists?
- » Equity – Does the bikeway serve underserved neighborhoods?

OBJECTIVE: Complete a connected spine network of safe high comfort cycling facilities such as protected facilities, separated trails or pathways, neighborhood greenways and a denser network of additional bike lanes or other on-road bike facilities.

Figure XX shows the prioritized bicycle network. The higher a project scores for any given criteria, the greater benefit the project is likely to deliver.

Project benefits need to be weighed with project costs and the most likely mechanisms by which a project would be funded and constructed.

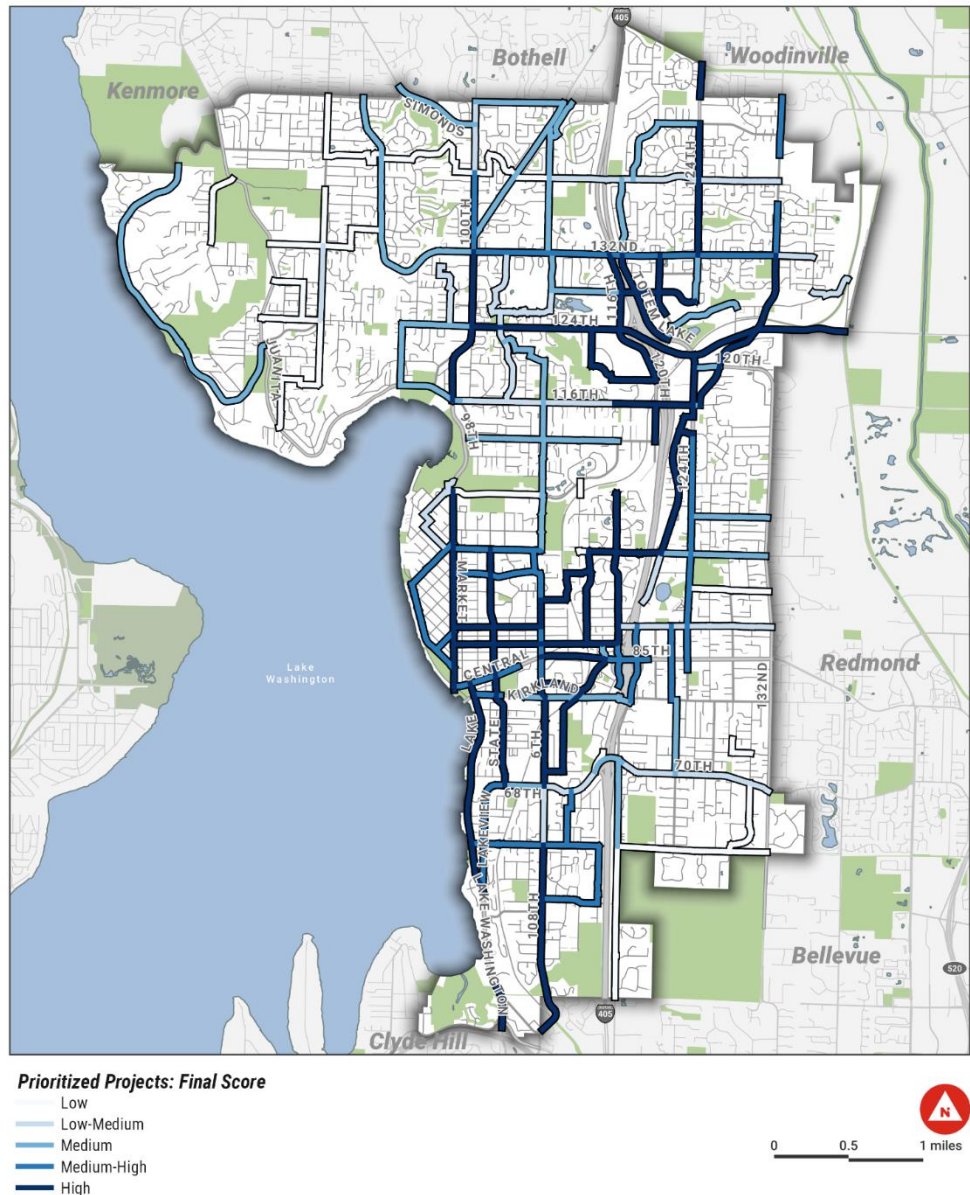


Table XX presents a ranked list of recommended bicycle projects, estimated costs, and the likely method(s) in which the project will be implemented. FORTHCOMING

Planned Bicycle Network

There is much support among the Kirkland community for creating a bicycle network that people of all ages and abilities would feel comfortable using. The planned network includes low-stress facilities such as neighborhood greenways, buffered bike lanes on lower speed streets, and protected bike lanes. In some cases, where there is sufficient space, recommendations call for upgrading an existing bike lane to a buffered or protected bike lane. Approximately X miles of the planned network consists of upgrades to existing bikeways. Figure XX shows the planned and existing bicycle network and Table XX summarizes the mileage of the planned network.

Neighborhood greenways will play an important role in Kirkland's low stress bicycle network. In many cases, a neighborhood greenway provides a parallel, alternative route to a busier street where it would be difficult to implement a low-stress bikeway. The neighborhood greenways on NE 75th St and 128th Ave NE (currently under construction) are good examples of this. Many of the neighborhood greenways in the planned bicycle network will require modifications to the streets, including traffic calming, removal of parking to improve visibility at street corners, and at intersections with major streets where crossings need to be upgraded for safety and convenience. Still others may require some level of traffic diversion to reduce the volume of cars to a level that is conducive for users of all ages and abilities.

A smaller portion of the planned network includes conventional bike lanes where there are severe space constraints. The City will evaluate these corridors over time, taking into account shifts in travel patterns or other opportunities that may make it more feasible to implement a higher comfort bikeway in the future. The City also plans to explore exploring speed limit policy and introducing traffic calming measures throughout its network, which would make corridors with conventional bike lanes more comfortable for more people.

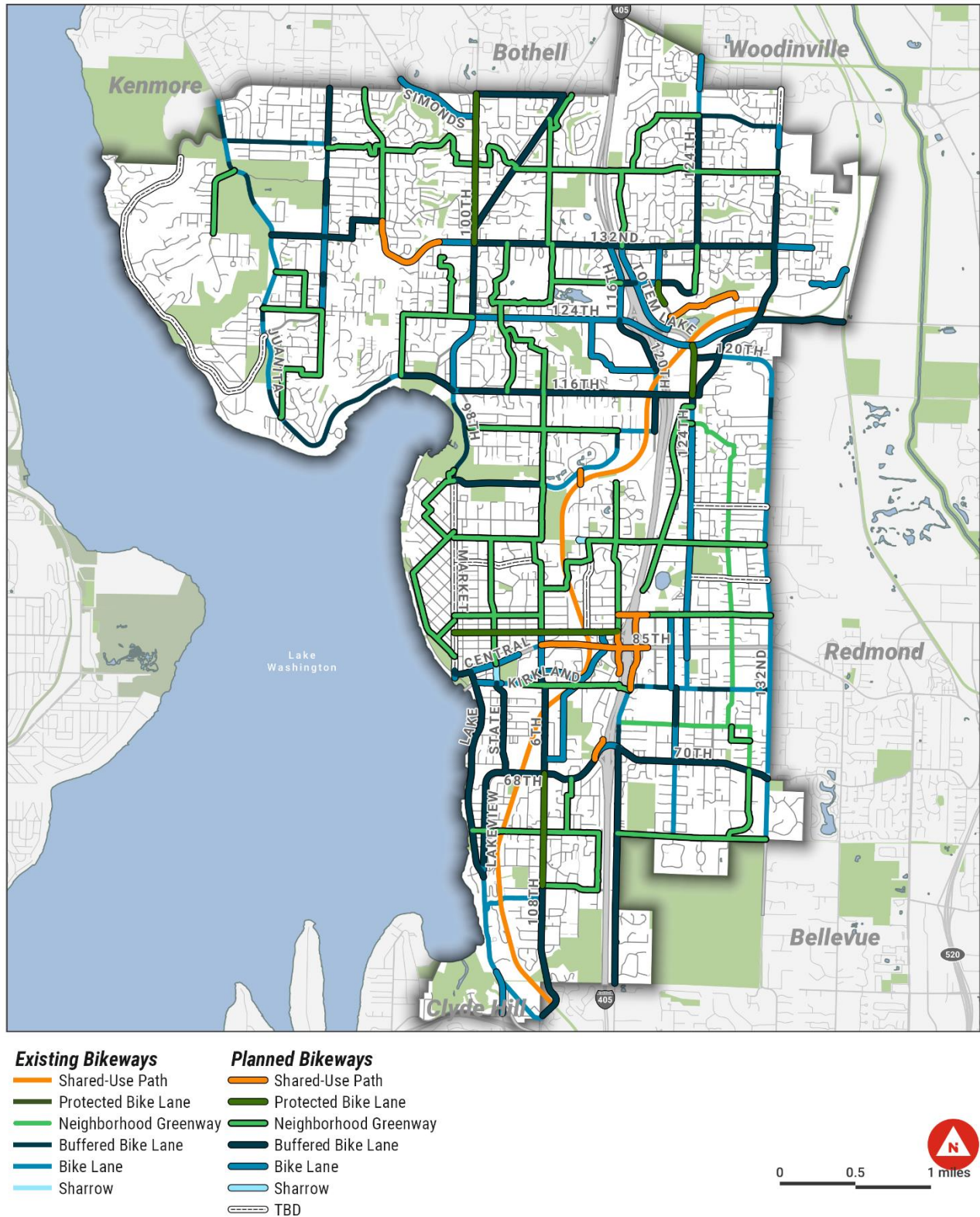


Table XX – Planned Bicycle Network Mileage Summary FORTHCOMING

Doing Better at Intersections

Intersections are often the most challenging locations to create bicycling conditions that are comfortable and safe for people of all ages and abilities. Existing bike lanes frequently end before the intersection and are not carried through to the other side, causing confusion and stress for bicyclists as well as drivers. Spot treatments that enhance safety and comfort at intersections can significantly improve the riding experience throughout the network. Intersection spot treatments could include low-cost changes such as painted pavement markings that continue the bikeway through the intersection or queue boxes which are a visible, designated space for bicyclists to wait at a red light. The City of Kirkland has made these types of enhancements at some intersections, including at **XX and XX**, and will continue this work at additional intersections within the bicycle network. Other intersection enhancements that can improve the bicycling experience in Kirkland include better signal detection and signal modifications to reduce delay, or geometric changes to create more space for bicyclists or reduce vehicle turning speeds.

In places where spaces are more constrained, intersection treatments go a long way toward improving safety and comfort for people bicycling and reduce interaction between people bicycling and motor vehicle through and turning movements. NACTO has also developed a menu of intersection strategies in its [“Don’t Give Up at the Intersection”](#) guide.

OBJECTIVE: Increase safety at **crossings** for pedestrians needed to complete pedestrian networks and access to destinations

OBJECTIVE: Provide additional pedestrian safety improvements at **intersections**

OBJECTIVE: Make bicycling safer at controlled and uncontrolled intersections

Current Projects Underway that Will Enhance Kirkland’s Bicycle Network Forthcoming

Programmatic Efforts

In addition to looking at implementation of physical infrastructure such as sidewalks, crossing enhancements and bike facilities, there are a number of other efforts the city can do to create a safer network. This includes advances in technology as well as education and encouragement.

Goal: Encourage and incentivize more people to walk and bike, encourage safe behavior for all users of the transportation system.

Supportive Goal: Utilize technology to support safety measures and supplement safe networks.

Technology can play a significant role in making transportation efficient and effective. For example, technology can help ensure people walking and bicycling have fewer interactions with drivers at signalized intersections. In addition, better understanding the number of people walking and bicycling in the city as well as where crashes occur can better facilitate decisions for where the needs are greatest. This information also helps the city make the case for new infrastructure through current programs or when seeking outside grant funds.

CHAPTER 5: IMPLEMENTATION STRATEGY

The next stage of the ATP process is to work with City Council and city leadership to identify sustainable funding sources to be able to build and maintain any additional infrastructure required to achieve these objectives.

This chapter provides an implementation strategy, or a way for the City to organize, fund, and build the projects and programs presented in Chapter 4. While all the projects and programs recommended in this Plan are important to improving Kirkland's pedestrian and bicycle network connectivity, safety, and access, realistically, the City of Kirkland has limits to its financial resources and staff capacity, so it will be necessary to implement projects gradually over time.

- Using prioritization process to identify CIP projects
- Candidates for future grant applications
- Opportunities through existing programs
- Opportunities through private development

COMPLETING THE NETWORK / IMPEMENTATION

What Will it Cost?

The cost of implementing the active transportation network varies based on the type of improvement that is planned, and the degree to which existing infrastructure needs to be modified or enhanced. Planning-level cost estimates were developed for the bicycle and pedestrian projects identified in this Plan and are summarized in Table XX.

Table XX – Summary of Planning – Level Bicycle and Pedestrian Project Costs FORTHCOMING

Facility Type	Construction Cost Subtotal	35% Construction Contingency & Traffic Control	15% Design Costs*	Total Cost Per Mile (Rounded)	MAINTENANCE
Sidewalk Infill					
Crosswalk Enhancements					
Bicycle Lane					
Buffered Bicycle Lane					
Protected Bike Lane					

Neighborhood Greenway					
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Table: Costs by major categories (e.g. bike lanes, sidewalks, crossings, etc)

- How Will Projects Get Built?
 - Paving and Striping Program
 - Modifications to Existing Capital Improvement Project
 - Other Coordination Opportunities
 - Grant Funding Opportunities and Candidate Projects
 - Quick build projects
- » On-Going Implementation Monitoring
 - Evaluation Framework

Appendices

- » Public Engagement Feedback Received
- » Network Analysis
- » Project Costs