

- a. 2044 Comprehensive Plan Update Public Hearing - Transportation Element, File No. CAM22-00032

Address: Purpose: Hold a public hearing to receive public testimony on the 2044 Comprehensive Plan Update Public Hearing - Transportation Element.

Action: Staff Contact:



Transportation Element

1. Purpose

The Transportation Element articulates the vision for the future of Kirkland's transportation system. Investments in Kirkland's transportation system, which are incorporated in the Capital Facilities Element, are designed to make travel in Kirkland safer, more comfortable, and more reliable. The citywide transportation goals and policies in the Transportation Element support Kirkland's land use vision and planning to accommodate growth through 2044. A complementary piece of the transportation vision is the Transportation Strategic Plan (TSP), which is referenced within the Transportation Element and contains more in-depth and detailed discussion on the future of transportation in Kirkland, including the "universe" of future transportation capital projects beyond the 20-year fiscally constrained list. It is incorporated herein as a reference, but is a stand-alone document adopted separately by the Kirkland City Council.

The City Council's adopted values and goals include a balanced transportation goal among the key policy and service priorities.

Balanced Transportation Goal

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

This Transportation Element considers how people get around today and how that may change in the future. The vision for Kirkland's transportation system is safe, connected, and multimodal. With limited roadway space, Kirkland's transportation system must accommodate people walking, rolling, bicycling, riding transit, and driving. The element reviews existing conditions in the City's transportation system and outlines a vision for Kirkland's transportation future. This element charts a course for the City to accommodate future growth and to keep people in Kirkland moving safely and equitably regardless of their mode of choice.

2. Vision and Approach

2.1. Transportation Vision

The Kirkland Transportation vision for 2044 is a safe, accessible, well-maintained, and fully connected transportation system for everyone in Kirkland. The safety of all road users is fundamental to the future of Kirkland's transportation system and to create a safe and welcoming environment for people walking,

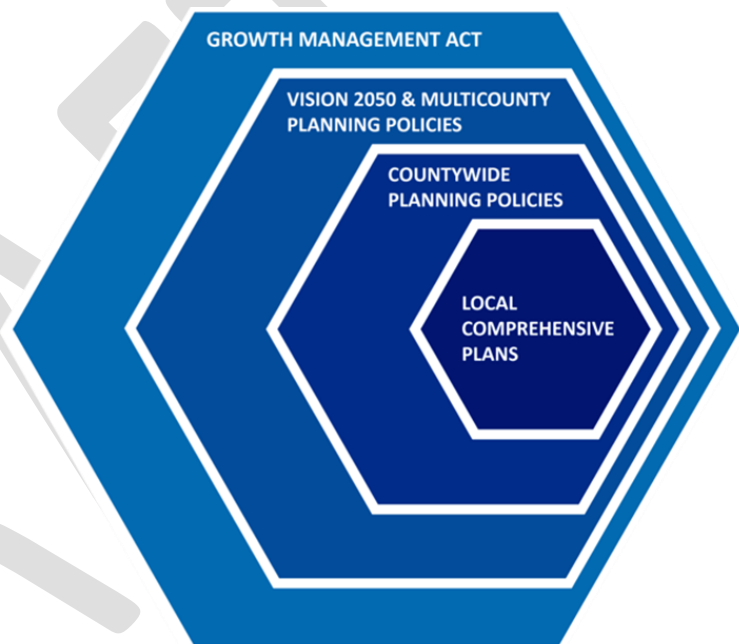


rolling, and bicycling. Active transportation connections designed for people of all ages and abilities and access to frequent and reliable transit can offer a range of transportation choices.

The future transportation network will serve the community's transportation needs and improve the safety of people getting around Kirkland on foot, by bicycle or rolling, on transit, and in cars. Sustainability is embedded in the City's transportation goals and policies through a focus on environmentally sustainable transportation modes and financially sustainable investments in maintenance and new facilities that offer the greatest benefit to the community.

2.2. Approach

The City of Kirkland plans within the framework of the Washington State Growth Management Act (GMA), which is codified in Chapter 36.70A of the Revised Code of Washington. The GMA is a law containing, among many other things, requirements for the preparation of a Comprehensive Plan's Transportation Element. In addition to requiring consistency with the Land Use Element, some of the GMA requirements for a Transportation Element include an inventory of facilities by mode of transportation, multimodal level of service (MLOS) standards for arterials, and proposed actions to bring deficient facilities into compliance with adopted MLOS standards. Other requirements include traffic forecasts based on land use, identification of transportation infrastructure needs to meet current and future demands, and a funding analysis for needed improvements as well as possible additional funding sources.



Additionally, the Puget Sound Regional Council (PSRC) adopts a regional vision for the four-county region (King, Kitsap, Pierce, and Snohomish Counties) called VISION 2050. According to PSRC, VISION 2050 is the region's plan for growth. By 2050, the region's population is expected to reach 5.8 million people. The plan establishes multicounty planning policies, actions, and a regional growth strategy guide for how and where the region grows through 2050. The plan informs updates to the Regional Transportation Plan (RTP) and Regional Economic Strategy. VISION 2050 also sets the stage for updates to countywide planning policies and local comprehensive plans done by cities and counties.

Consistent with VISION 2050, King County adopts Countywide Planning Policies (CPPs). The CPPs create a shared framework for growth management planning for all jurisdictions in King County. King County



and the cities and towns in King County develop their comprehensive plans within the CPP framework. An essential component of the CPPs and regional growth strategy is an efficient transportation system that provides multiple options for moving people and goods into and among the various centers. The CPPs primarily focus on supporting growth, mobility, and system operations. The overarching goal of transportation in the CPPs states, "The region is well served by an integrated, multimodal transportation system that supports the regional vision for growth, efficiently moves people and goods, and is environmentally and functionally sustainable over the long term."

Kirkland also coordinates more locally at the subregional level with adjacent jurisdictions, such as Bellevue, Bothell, Kenmore, Redmond, and Woodinville. This coordination includes development review, land use planning, and, in the case of Bellevue and Redmond, coordinated transportation modeling via the Bellevue-Kirkland-Redmond (BKR) travel demand model. Other agencies with whom Kirkland coordinates include King County Metro (Metro), Sound Transit, PSRC, King County, and the Washington State Department of Transportation (WSDOT). Kirkland coordinates and will continue to coordinate with these agencies, namely on regional projects such as the I-405 Stride Bus Rapid Transit project as part of the NE 85th Interchange project, Metro's RapidRide K Line, and others.

In the 2015 Transportation Master Plan (TMP), Kirkland adopted a framework for decision-making based on a hierarchy of modes that prioritizes the most vulnerable road users. This hierarchy prioritized four primary modes of travel in the city in the following order: (1) walking, (2) bicycling and rolling, (3) transit, and (4) driving. This hierarchy helps ensure that the needs of all users are considered in the City's transportation planning processes, and helps guide decision-making on future investments in the transportation system to ensure the safety and comfort of people using all modes of travel. The City has recommitted to the hierarchy identified in the 2015 TMP, as there are more investments to be made to achieve the City's vision for multimodal transportation.

Additionally, Kirkland is committed to achieving Vision Zero, a future with zero traffic deaths or serious injuries. The safety of all road users is fundamental to the future of Kirkland's transportation system; therefore, the City has adopted a Safe Systems Approach to achieve this goal as part of the Vision Zero Action Plan. The U.S. Department of Transportation (USDOT) developed the Safe System Approach to address roadway safety and achieve vision-zero goals of safe transportation for all, particularly those walking, rolling, and bicycling, regardless of age or ability. The Safe System Approach works by focusing on the safe design and management of transportation systems to reduce the risk of injury from human error and requires a human-centered culture that prioritizes safety in decision-making. The City of Kirkland uses this approach as overarching guidance in planning for the future of the City's transportation system.



3. Existing Conditions

3.1. Pedestrian Facilities

Facilities for people walking and rolling in Kirkland include sidewalks, neighborhood greenways, on-street walkways, and separated trail or shared-use path facilities. Table 1 shows sidewalk and on-street walkway availability in mileage on arterial and collector roadways. Sidewalks are provided on many of Kirkland's streets but are intermittent or on one side only in some areas, as shown in Figure 1.

TABLE 1. EXISTING SIDEWALK FACILITIES ON ARTERIALS AND COLLECTORS

Facility Type	Miles
Both sides	45.1
One side	21.2
None	10.7



Some sidewalk gaps exist on designated school walk routes as well as on arterials, including significant gaps along Juanita Drive, 132nd Avenue NE, and 100th Avenue NE. Kirkland is working to address gaps in the sidewalk network through the City's Sidewalk Completion Program and other ongoing programs for pedestrian safety. Extruded curb treatments have been used as interim pedestrian facilities within the Finn Hill and North Juanita neighborhoods. These interim strategies help define walkways until sidewalks are installed. Kirkland Zoning Code Chapter 110 requires public improvements, including sidewalks, in the right-of-way adjacent to new development, based on street classifications. Kirkland also has a number of other paved and unpaved trails and pathways that connect street ends and neighborhoods (see Figure 2). Additional sidewalks are being built through the Transportation Benefit District funding, grants, and private development agreements.

The Rose Hill Greenways on NE 75th Street and 128th Avenue NE serve as key pedestrian-bicycle corridors through the North and South Rose Hill neighborhoods. Neighborhood Greenways are a select network of low-speed, low-volume residential streets that are prioritized for walking and bicycling through the use of signage, pavement markings, and traffic calming and control devices.

The Cross Kirkland Corridor (CKC) is a 5.75-mile crushed-gravel interim trail that provides an important pedestrian and bicycle connection to local destinations and a larger regional trail network. The CKC is part of the regional Eastrail corridor, a 42-mile rail-to-trail corridor spanning from Renton to Snohomish County, with a spur to Redmond. The Eastrail is currently under development with several sections open, including the CKC. As a 10-foot-wide separated facility, the CKC currently provides a connection through the city for all active transportation modes. The long-term vision in the Cross Kirkland Corridor Master Plan is to use the 100-foot-wide corridor for multimodal use, which could include a paved shared-use path or transit uses to improve accessibility for all users. The Totem Lake Connector bridge, completed in July 2023, connects two sections of the CKC with a bicycle and pedestrian bridge over the intersection of Totem Lake Boulevard NE and NE 124th Street, which is Kirkland's largest and busiest intersection.



FIGURE 1. EXISTING SIDEWALK AVAILABILITY ON MAJOR ROADWAYS

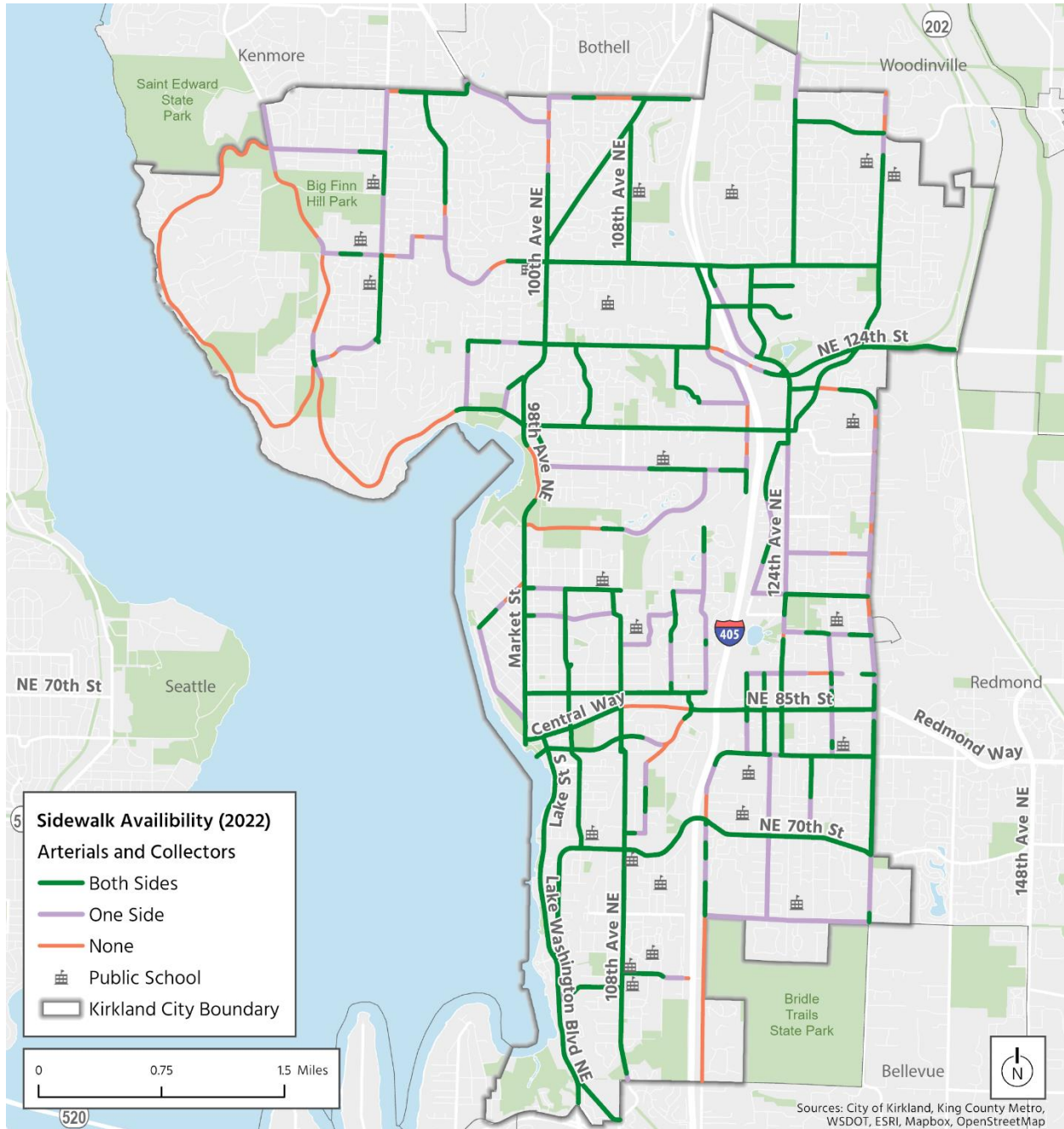
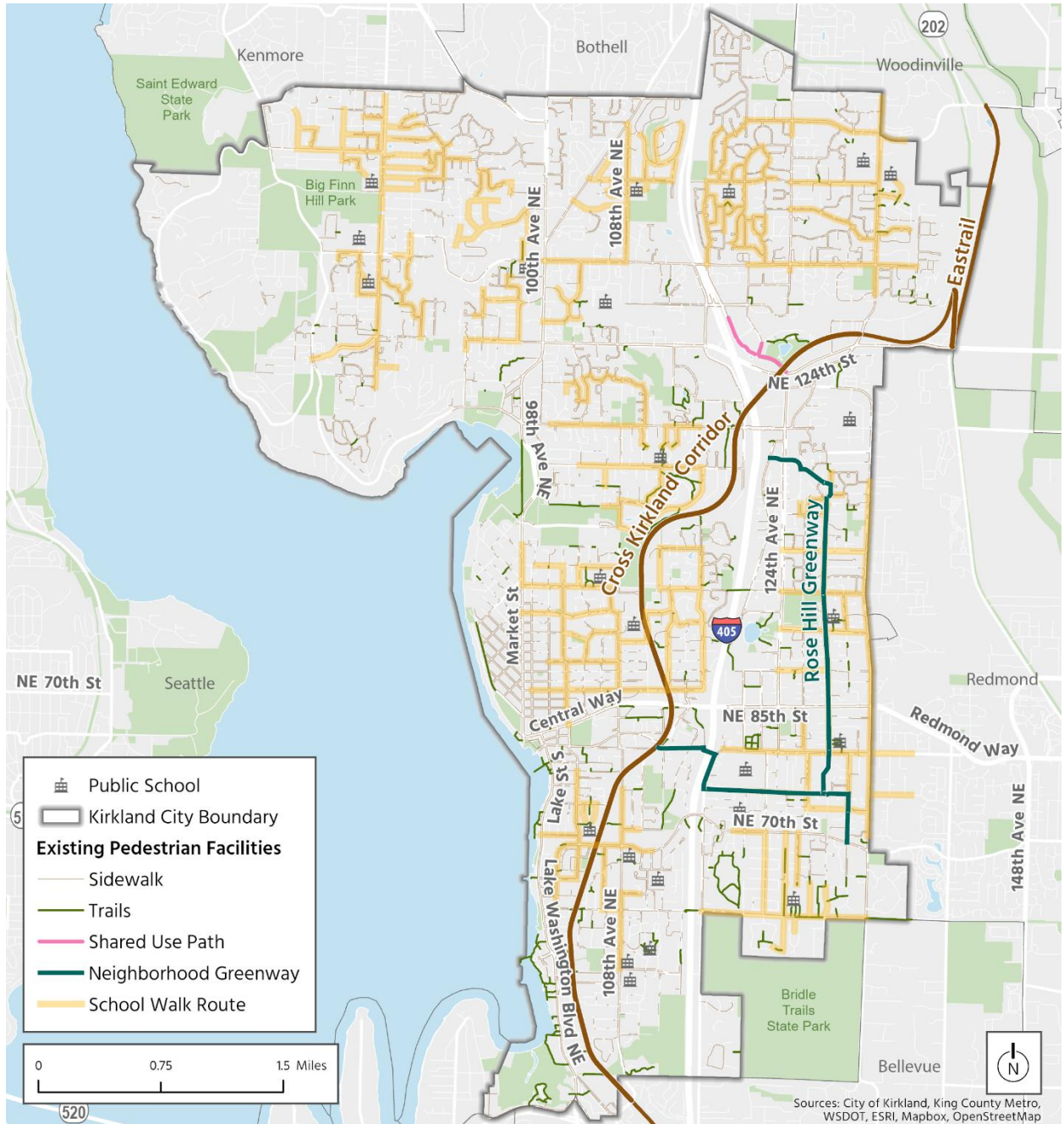




FIGURE 2. EXISTING PEDESTRIAN FACILITIES





3.2. Bicycle Facilities

Kirkland’s bicycle network consists of on-street bicycle lanes, buffered bicycle lanes, protected bicycle lanes, shared-use paths, and shared on-street facilities, such as neighborhood greenways, as well as green conflict zone markings at intersections (Figure 3). Bicycle lanes are the most prevalent bicycle infrastructure type within the city (Table 2).

TABLE 2. EXISTING BICYCLE FACILITIES

Facility Type	Miles
Bicycle lane	56.8
Buffered bicycle lane	8.8
Protected bicycle lane	0.3
Shared-use path	0.7
Neighborhood greenway	3.4
CKC	5.7

The regional Lake Washington bicycle loop provides a route around Lake Washington via a combination of trails and on-street facilities. Within Kirkland, the Lake Washington loop is served by on-street bicycle lanes, buffered bicycle lanes, and shared lanes along Lake Washington Boulevard, Market Street, and Juanita Drive. The CKC serves as a major north-south bicycle corridor within the city, connecting to the Eastrail at both the north and south ends, the SR 520 trail in Bellevue to the south, and the Redmond Central Connector to the north.

The Rose Hill Greenways on NE 75th Street and 128th Avenue NE are key bicycle corridors. Neighborhood Greenways are a select network of low-speed, low-volume residential streets prioritized for walking and bicycling through the use of signage, pavement markings, and traffic calming and control devices.

Gaps in the bicycle network are present along several principal arterials, including NE 85th Street, NE 124th Street, and 100th Avenue NE. Ongoing construction projects in Kirkland are working to address these gaps and improve existing facilities, with planned protected bicycle lanes on 100th Avenue NE (winter 2025) and 124th Avenue NE (summer 2025) as well as a shared-use path on NE 85th Street (2025). Additionally, the new I-405 interchange at NE 132nd Street will feature protected bicycle lanes, and at the interchange at NE 85th Street, there will be wide shared sidewalks to reach the future Stride S2 Line bus rapid transit station.

Public short-term bicycle parking is available within the city, concentrated primarily in downtown Kirkland. The Kirkland Public Works Department has established guidelines for bicycle parking at both on- and off-street locations in Policy R-36. Kirkland Zoning Code Chapters 57 and 105 also include bicycle parking and covered bicycle storage requirements for new development.



FIGURE 3. EXISTING BICYCLE FACILITIES



3.3. Transit

Transit Service and Ridership

Kirkland is served by transit routes that connect to Seattle, Bellevue, Redmond, and other eastside destinations in King County. Metro, Sound Transit, and Community Transit provide transit service within Kirkland. The transit service provided by Metro is guided by three primary policy documents: [Metro Connects](#), [King County Metro Service Guidelines](#), and [King County Metro Strategic Plan for Public Transportation](#).¹ These policy documents assist Metro in providing service countywide, including Kirkland. Metro and local jurisdictions coordinate closely, but Metro, as the transit agency, is ultimately responsible for the type and quality of the transit service provided.

Three Metro routes and one combined route (Route 230/231) in Kirkland provide bus service with 15-minute frequencies, considered frequent service, as shown in Table 3 below. Six routes serve Kirkland all day, with frequencies of 30 minutes or more. All-day and peak-only bus routes in Kirkland are shown in Figure 4. Several other bus routes serving Kirkland operate only at certain times of day, including peak-only commuter routes and dedicated routes that serve schools once a day.

TABLE 3. BUS TRANSIT SERVICE

Frequency and Service Hours	Bus Routes
Frequent all-day routes	Metro Routes: 255, 245, 250, 230/231 (combined from NE 132nd Street to Downtown)
All-day routes	Metro Routes: 225, 239, 249, 230/231 (north of NE 132nd Street) Sound Transit Route: 535
Peak-only routes	Metro Routes: 257, 311 Sound Transit Route: 532 Community Transit Route: 424
Dial-a-Ride (DART)	Metro Route: 930
Custom routes	Metro Routes: 893, 895, 981, 986

Kirkland has three transit centers: Kirkland Transit Center in downtown Kirkland, Totem Lake Transit Center in Totem Lake, and Totem Lake Freeway Station in the median of I-405. There are also three park and rides in Kirkland: Kingsgate Park & Ride (502 stalls), Kirkland Way Park & Ride (20 stalls), and South Kirkland Park & Ride (785 stalls). The routes that connect to amenities available at these transit centers and park and rides are shown in Table 4.

¹ <https://kingcounty.gov/en/dept/metro/about/policies>



TABLE 4. ROUTES SERVING TRANSIT FACILITIES IN KIRKLAND

Transit Facility	Bus Routes
Kirkland Transit Center	Metro Routes: 230, 231, 239, 245, 250, 255
Totem Lake Transit Center	Metro Routes: 225, 239, 255, DART 930
Kirkland Freeway Station	Metro Routes: 311 Sound Transit Routes: 532, 535 Community Transit Route: 424
Kirkland Way Park & Ride	Metro Routes: 239, 250
Kingsgate Park & Ride	Metro Route: 257, 225, DART 930
South Kirkland Park & Ride	Metro Routes: 249, 250, 255

Additionally, Kirkland benefits from flexible transit programs, such as Community Van and Metro Flex. These programs complement fixed-route bus service in Kirkland because they do not adhere to fixed schedules or routes. The Community Van program provides 6-passenger and 12-passenger vans for prescheduled rides involving a minimum of two passengers plus a volunteer driver. Trip destinations can be anywhere within a 2-hour drive of Kirkland and can occur during the daytime, evenings, and weekends. Metro Flex is an on-demand transit service in King County that offers affordable, accessible, and comfortable minivan rides to various local destinations. Within Kirkland, Metro Flex operates in the Juanita service area, which includes Juanita, Finn Hill and parts of Totem Lake, as shown in Figure 5. Metro Flex operates in the Juanita service area from 7 a.m. to 7 p.m. on weekdays only.

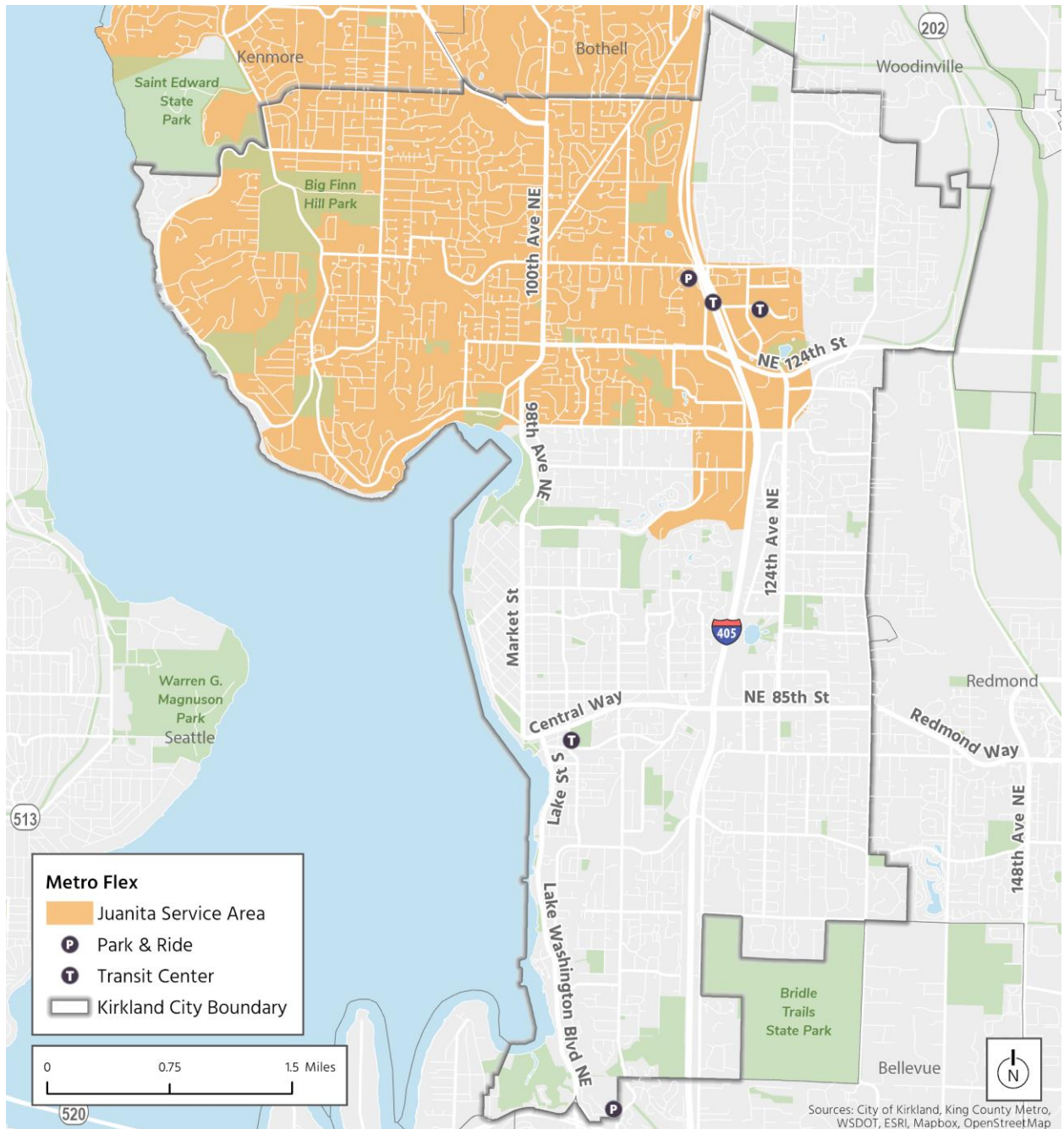


FIGURE 4. TRANSIT NETWORK





FIGURE 5. METRO FLEX SERVICE AREA





Transit Amenities

Transit amenities in Kirkland include shelters at bus stops and bicycle parking. Of the City's 30 bus stops with the highest ridership, 27 have shelters as of 2023, as shown in Figure 6. Bicycle parking near transit stops can improve access to transit. City-owned, short-term bicycle parking is available primarily downtown, near the Kirkland Transit Center. Both the South Kirkland Park & Ride and the Kingsgate Park & Ride also have bicycle lockers. Kirkland maintains a practice bus bicycle rack at the Kirkland Transit Center for passengers to build confidence loading and unloading their bicycles on bicycle racks on the front of buses.

Kirkland's transit centers and park and rides tend to have more amenities than standard bus stops because they are served by multiple routes and are transfer points for transit riders. The amenities at the city's transit centers and park and ride facilities are described in Table 5 below. The highest ridership stops in the city are located primarily at these facilities, with the highest numbers of boardings as of spring 2023 occurring at Kirkland Transit Center, Totem Lake Transit Center, and South Kirkland Park & Ride.

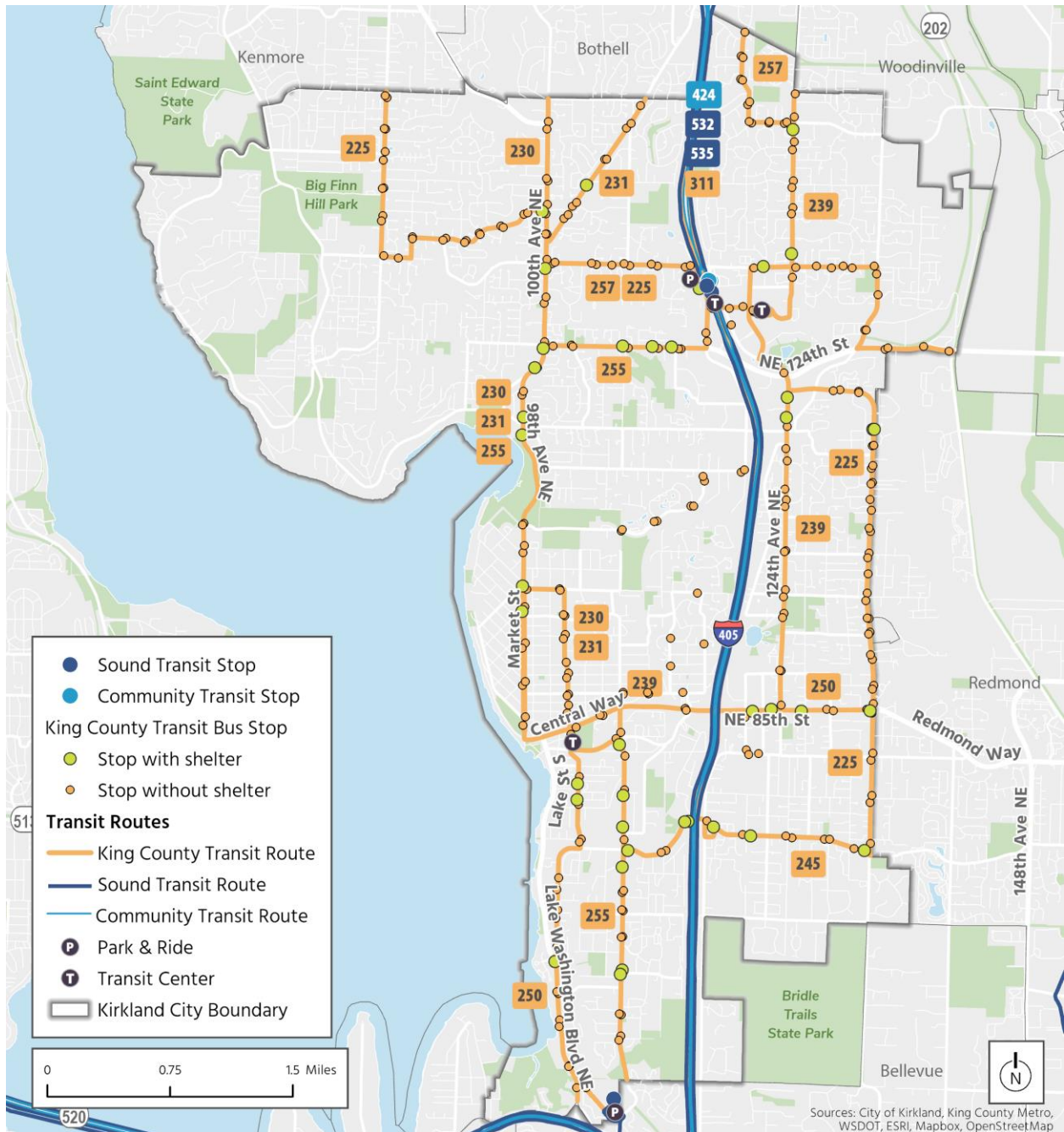
TABLE 5. KIRKLAND TRANSIT CENTERS AND PARK AND RIDES

Transit Facility	Amenities
Kirkland Transit Center	Shelters, seating, restrooms, bicycle parking, electric vehicle (EV) charging
Totem Lake Transit Center	Shelters, seating
Kirkland Way Park & Ride	Parking
Kirkland Freeway Station	Shelters, seating
Kingsgate Park & Ride	Parking, shelters, seating, bicycle parking
South Kirkland Park & Ride	Parking, shelters, EV charging, bicycle parking

Apart from these facilities, some individual bus stops see high numbers of boardings. These include stops along NE 85th Street and NE 70th Street in Rose Hill and along Central Way and Kirkland Way in downtown Kirkland.



FIGURE 6. TRANSIT AMENITIES





3.4. Motor Vehicles

Streets within the City of Kirkland are categorized by federal functional classifications to help define their intended use and desired character within the street network, as shown in Figure 7. Functional classification is set using a variety of factors, including roadway design, speed, capacity, and relationship to present and future land use and development. It also serves as a practical indicator of traffic volume and number of lanes.

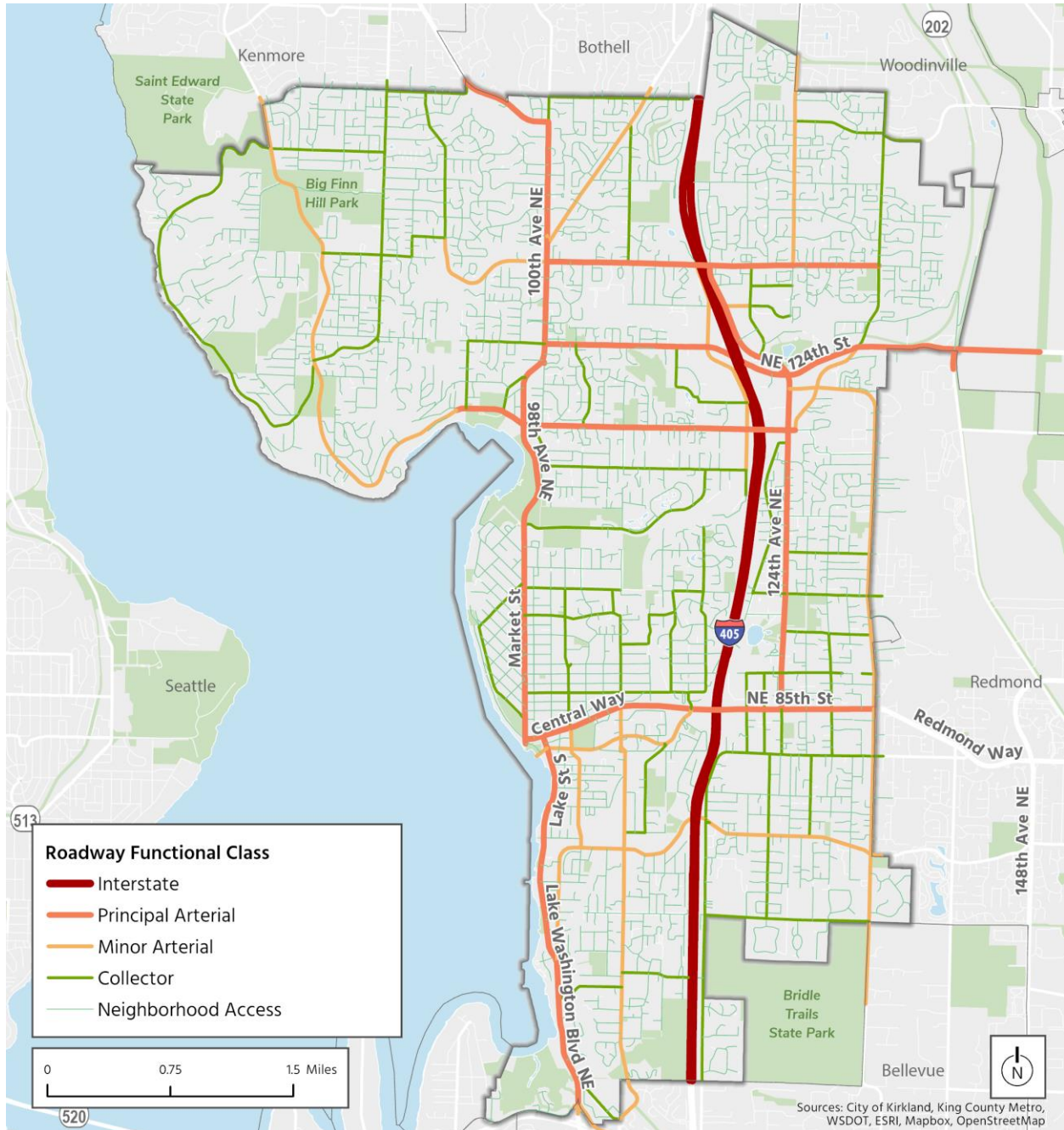
The classifications used within the city include:

- **Freeways** that provide high-speed connections between regional destinations.
- **Principal arterials** that connect to major commercial areas and other cities.
- **Minor arterials** that serve major traffic generators not served by principal arterials.
- **Collector streets** that provide connections between arterials and local streets.
- **Local streets**, or neighborhood access streets, that provide access to residential areas, businesses, and other local areas.

I-405 is the only freeway in Kirkland and runs north-south through the center of the City. Principal arterials in Kirkland include major north-south streets, such as 100th Avenue NE, 98th Avenue NE, Market Street, Lake Washington Boulevard NE, and 124th Avenue NE, and major east-west streets, such as NE 132nd Street, NE 124th Street, NE 116th Street, and NE 85th Street. Posted speed limits within the city generally correlate with roadway functional classification. Although not owned and maintained as a part of the City's road network, I-405 has the highest posted speed limit: 60 mph. Major and minor arterials generally have a posted speed limit of 30 or 35 mph. Collectors have posted speed limits of 30 or 25 mph, and neighborhood access roadways have posted speed limits of 25 mph. Neighborhood greenways and school zones have a posted speed limit of 20 mph.



FIGURE 7. ROADWAY NETWORK





Traffic

A primary purpose of the Transportation Element is to ensure that the 20-year plan and vision for transportation adequately supports the envisioned land use over the same period. To ascertain how well these two elements align, the BKR travel demand model was used to estimate 2022 traffic volumes for further analysis of traffic operations at key intersections. Traffic conditions were analyzed at 40 intersections throughout the city. The model included data from 2022 to assess congestion at each intersection during the morning (AM) and evening (PM) peak commute hour periods. Intersections were selected by the City of Kirkland to capture needs at major intersections.

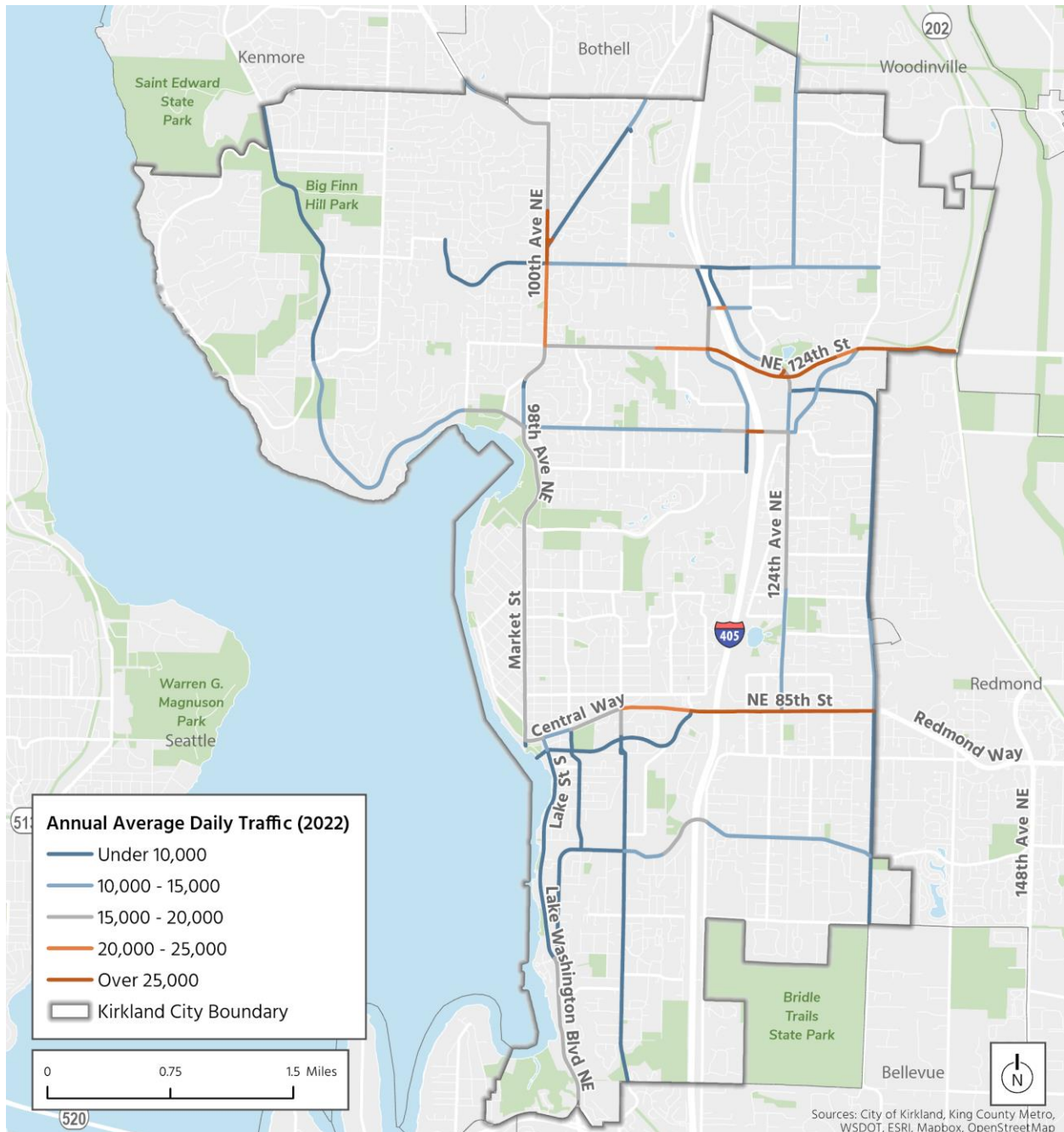
Intersections with the highest traffic volumes during all peak periods in 2022 were along NE 124th Street and NE 85th Street. The five intersections with the highest annual average daily traffic in the city in 2022 were:

- NE 124th Street and 116th Avenue NE
- NE 124th Street and 124th Avenue NE
- NE 85th Street and 124th Avenue NE
- NE 85th Street and 120th Avenue NE
- NE 85th Street and 114th Avenue NE

Kirkland Public Works Department tracks average daily traffic annually and adjusts for seasonal patterns in weekday traffic variation. Figure 8 shows the annual average daily traffic volumes on Kirkland's arterial roadways as of 2022. In 2022, the highest daily traffic volumes were along NE 85th Street, NE 124th Street, and 100th Avenue NE.



FIGURE 8. ANNUAL AVERAGE DAILY TRAFFIC VOLUMES





3.5. Freight

As Kirkland continues to grow and embrace a multimodal transportation system, ensuring that freight vehicles can move goods safely and efficiently is important. Manufacturers, large retailers, wholesalers, and warehousing and distribution companies rely on access to a well-performing network of freeways and major arterials. Small retailers, restaurants, and other businesses rely on delivery vehicles that must circulate on both regional freeways and arterials as well as local streets. Delivery vehicles must also be able to access spaces for loading and unloading near businesses. Freight vehicle sizes range from small vans to large tractor-trailer units.

WSDOT has developed the Washington Freight and Goods Transportation System (FGTS) to classify streets that are important to the movement of freight in the state. The FGTS defines corridors in tiers based on the annual freight tonnage moved. Within Kirkland, streets are classified as T-1 through T-4, shown in Figure 9.

I-405 is classified as a T-1 truck corridor, carrying the highest volume of freight; however, much of this freight volume passes through and does not travel along city streets. Two sections of principal arterials within city limits are classified as T-2 truck corridors. Several arterials are classified as T-3 truck corridors, and one collector street is classified as a T-4 truck corridor. Downtown Kirkland and Totem Lake have large retail areas that are important catalysts of freight in Kirkland, with businesses that rely on deliveries to meet consumer needs. There are some manufacturing and industrial land uses that may have specific freight needs primarily in an Industrial Mixed-Use zone along the CKC.

The widespread adoption of e-commerce, particularly during and following the COVID-19 pandemic, has led to a transformation in goods movement. One of the most tangible parts of this shift in consumption patterns is the increased frequency of home deliveries. With more freight deliveries per person and more freight traffic navigating urban areas, delivery vehicles have changed, with more cargo vans and personal vehicles delivering packages to consumers.

4 TIERS OF FREIGHT TRUCK CORRIDORS



Classification: Tonnage (per year)

T-1: More than 10 million tons

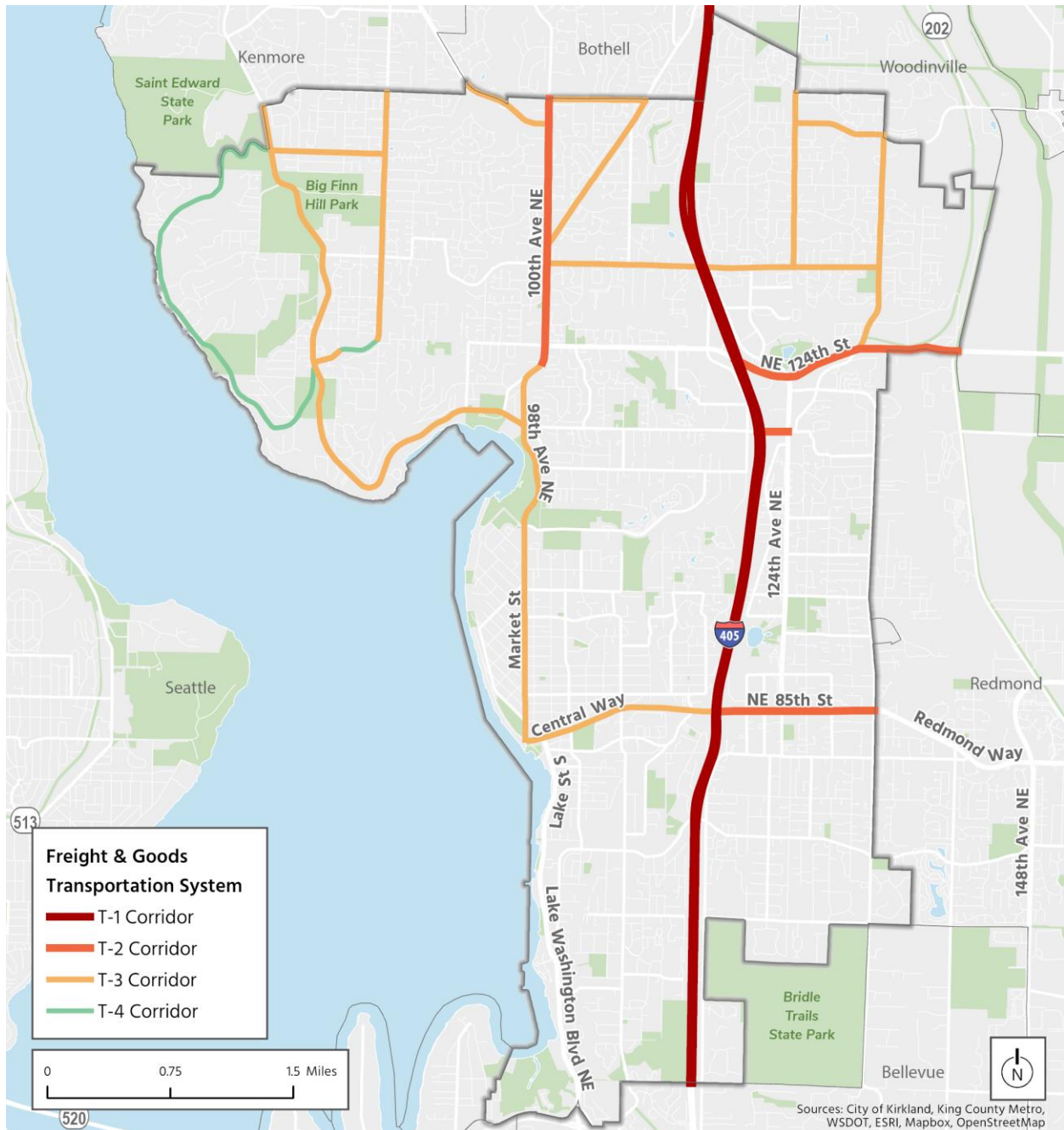
T-2: 4 -10 million tons

T-3: 300.000 - 4 million tons

T-4: 100.000 - 300.000 tons



FIGURE 9. FREIGHT NETWORK (2023)





3.6. Safety

Crash History

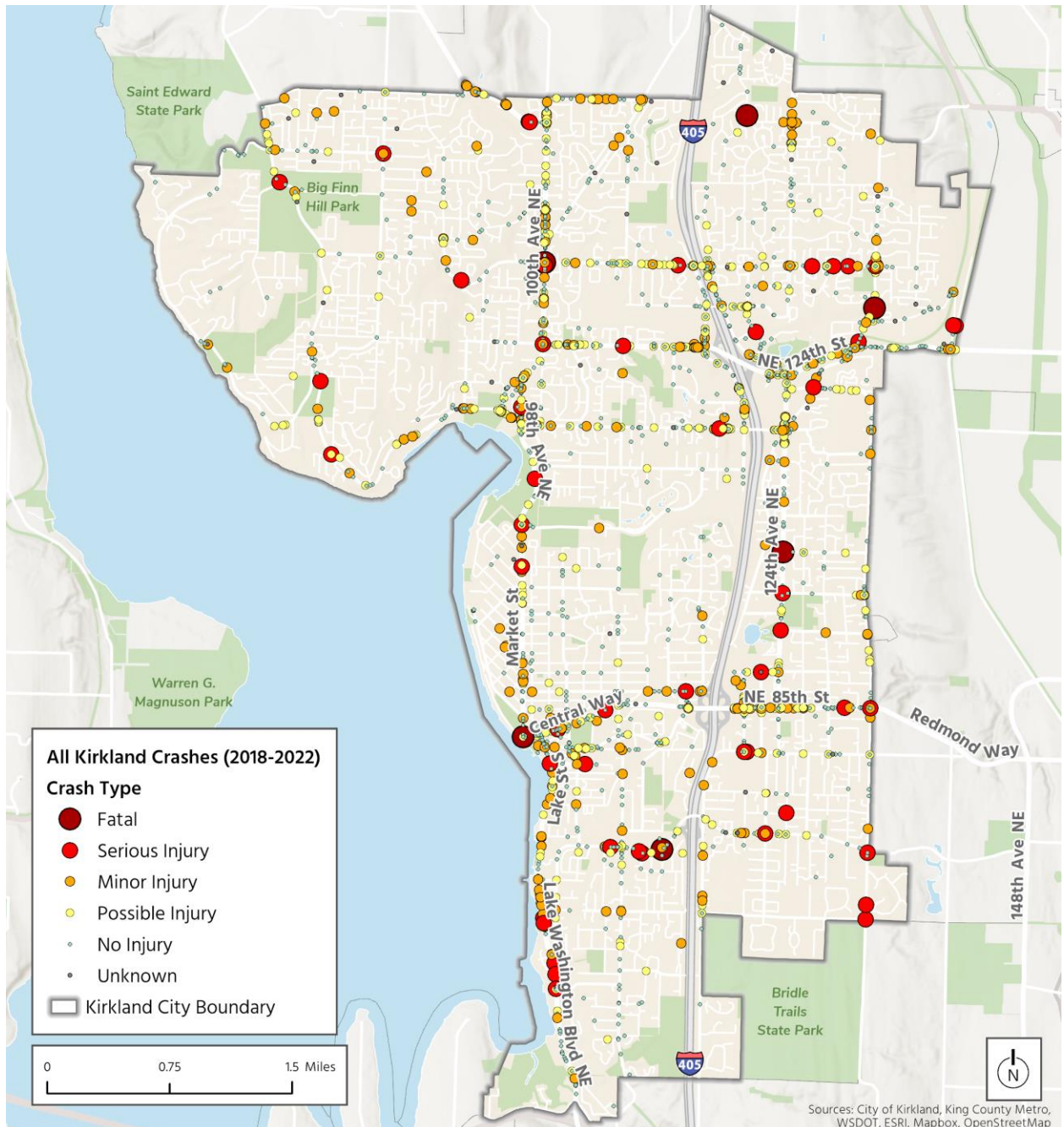
Between 2018 and 2022, there were 3,405 crashes on Kirkland streets (excluding the interstate system). Table 6 summarizes the total crashes by severity level and location type, and Figure 10 shows the location of all crashes during the same time frame. Over 59% of crashes occurred at intersections. During this period, eight fatal crashes and 52 serious-injury crashes occurred, with more occurring at intersections. In addition to these totals, several crashes have occurred outside of public roadways, including four fatal and five serious injury crashes in parking lots. Most crashes (70%) were no-injury crashes.

TABLE 6. CRASHES BY SEVERITY (2018–2022)

	Segments	Intersections	Total
Fatal	3	5	8
Serious injury	19	33	52
No injury	1,015	1,377	2,392
Total	1,410	1,995	3,405



FIGURE 10. ALL CRASHES (2018–2022)





Crash rates provide a metric for assessing the relative safety of a segment or intersection based on the level of exposure (i.e., traffic volumes and roadway mileage). These rates provide the City with a basis for prioritization and a comparison of locations within a network based on fatal and serious injury crashes. Segment crash rates are calculated by total crashes per million vehicle miles traveled along the segment, and intersection crash rates are calculated by total crashes per million entering vehicles at an intersection. Figure 11 shows the crash rates along key and arterial corridors, and Figure 12 shows the crash rates at major intersections within the city.

In general, the areas with the highest arterial crash rates are along Lake Street S/Lake Washington Boulevard NE, Central Way, and Kirkland Avenue in downtown Kirkland, as well as along NE 124th Street, 120th Avenue NE, and Totem Lake Boulevard in the Totem Lake area. These are also generally where volumes are higher. Crash rates at intersections are generally highest adjacent to I-405 and along Juanita-Woodinville Way NE. Those adjacent to I-405 are also generally where traffic volumes tend to be higher.

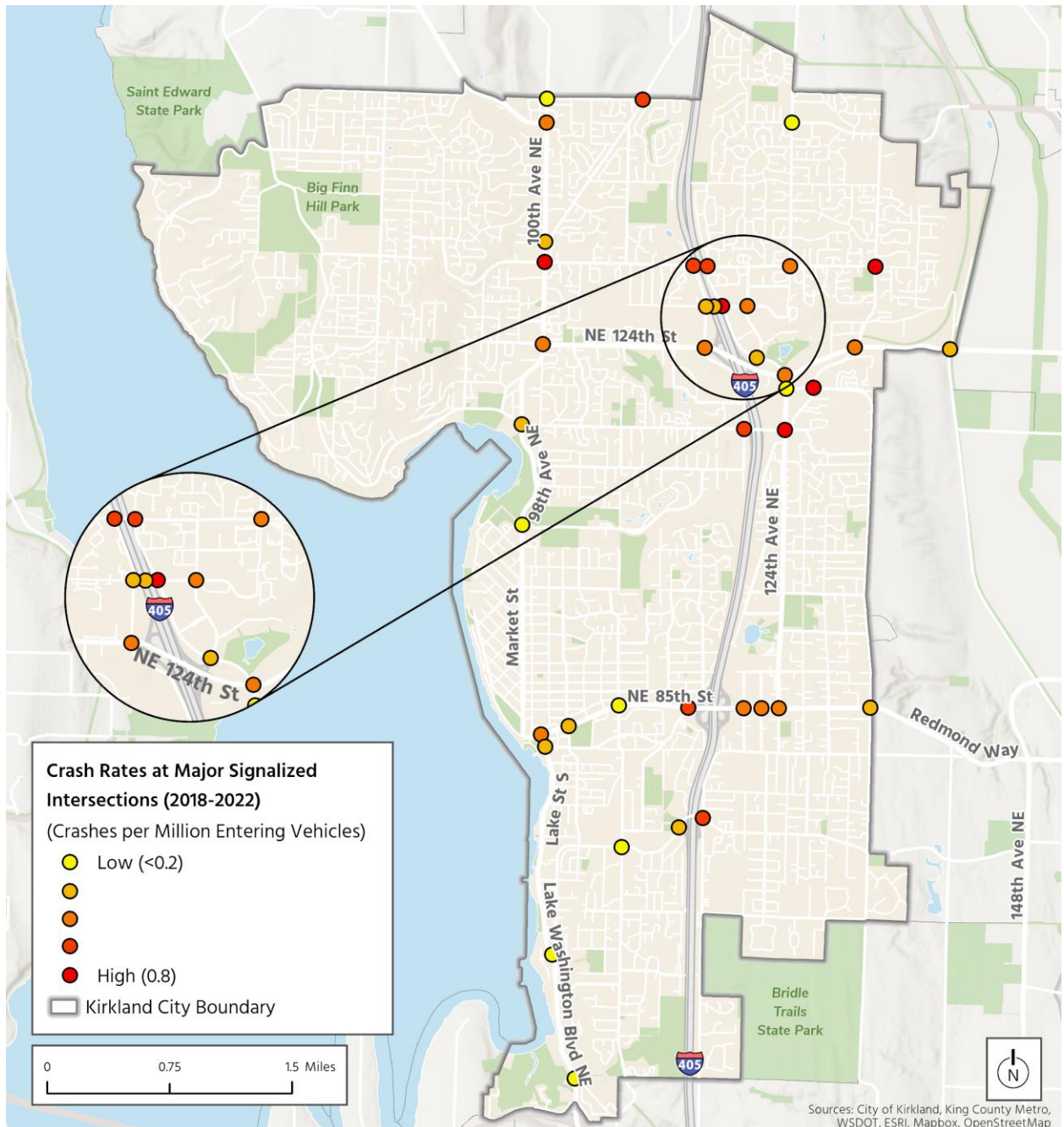


FIGURE 11. CRASH RATES ON MAJOR ARTERIALS (2018-2022)





FIGURE 12. CRASH RATES AT MAJOR SIGNALIZED INTERSECTIONS (2018-2022)





Active Transportation Crash History

Pedestrians and bicyclists are the most vulnerable roadway users because they are less protected than users within vehicles. For the purposes of this discussion, the term “pedestrians” is intended to include people walking and rolling, meaning using mobility devices such as walkers, wheelchairs, or other power-driven devices. The chance of a vulnerable user surviving a collision with a car decreases drastically as speed increases. When comparing crash rates with the share of roadway trips by other transportation modes, pedestrians and bicyclists make up a disproportionate rate of fatal and serious-injury collisions. Vulnerable-user crashes are only 6% of the total crashes but make up 55% of the fatal and serious injury crashes. Vulnerable users tend to only make up less than 15% of total trips (10% to 12% of trips total on average) in general.

Table 7 summarizes the pedestrian- and bicyclist-related crashes by severity, while Table 8 shows the distribution between segments and intersections. Most pedestrian- and bicyclist-related crashes were minor-injury crashes (46%) or possible-injury crashes (27%). There were three fatal pedestrian crashes, including four fatal and five serious injury crashes in parking lots that are not included in traffic safety data, and no fatal bicyclist-related crashes. Just under 15% of crashes were serious-injury crashes.

The majority of pedestrian- and bicyclist-related crashes occurred at intersections (64%). Over 60% of pedestrian- and bicyclist-related crashes involved a turning vehicle.

TABLE 7. PEDESTRIAN AND BICYCLIST CRASHES BY SEVERITY (2018–2022)

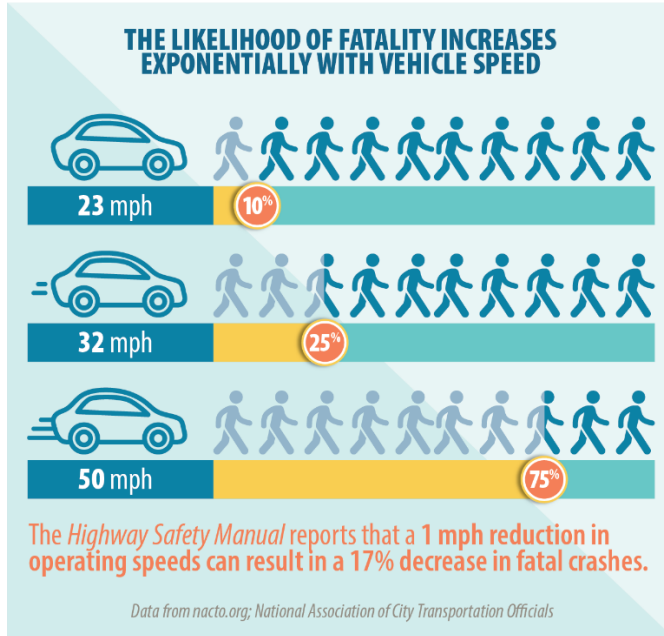
	Pedestrian Involved	Bicyclist Involved	Total
Fatal	3	0	3
Serious injury	19	11	30
Minor/non-disabling injury	38	55	93
Possible injury	35	20	55
No injury	8	12	20
Total	103	98	201

TABLE 8. PEDESTRIAN AND BICYCLIST CRASHES BY LOCATION (2018–2022)

	Pedestrian Involved	Bicyclist Involved	Total
Segments	38	31	69
Intersections	62	59	121
Total	100	90	190



Pedestrian crashes occurred throughout Kirkland, with most in urban areas with higher pedestrian volumes. There was some general clustering in downtown Kirkland and the Totem Lake area (including some higher-severity crashes), similar to total crashes and higher segment crash rates. There was also some clustering along NE 85th Street, east of I-405. Very few locations experienced more than one pedestrian crash during this period, but some of the key locations that did include along NE 124th Street, 120th Avenue NE, NE 85th Street, and 124th Avenue NE. Figure 13 and Figure 14 show all crashes from 2018-2022 involving pedestrians and bicyclists, respectively.



Bicyclist-related crashes also occurred throughout Kirkland, but there was more prominent clustering when compared to pedestrian crashes. The key areas with bicyclist-related crashes are in downtown

Kirkland along Lake Street S/Lake Washington Boulevard NE as well as in the Juanita area. The [Vision Zero Plan](#)² includes additional analysis on contributing factors for bicycle and pedestrian crashes.

² https://www.kirklandwa.gov/files/sharedassets/public/public-works/transportation/plans-and-studies/vision-zero-action-plan/final_vzap_2022-ver4.pdf



FIGURE 13. PEDESTRIAN CRASHES (2018–2022)

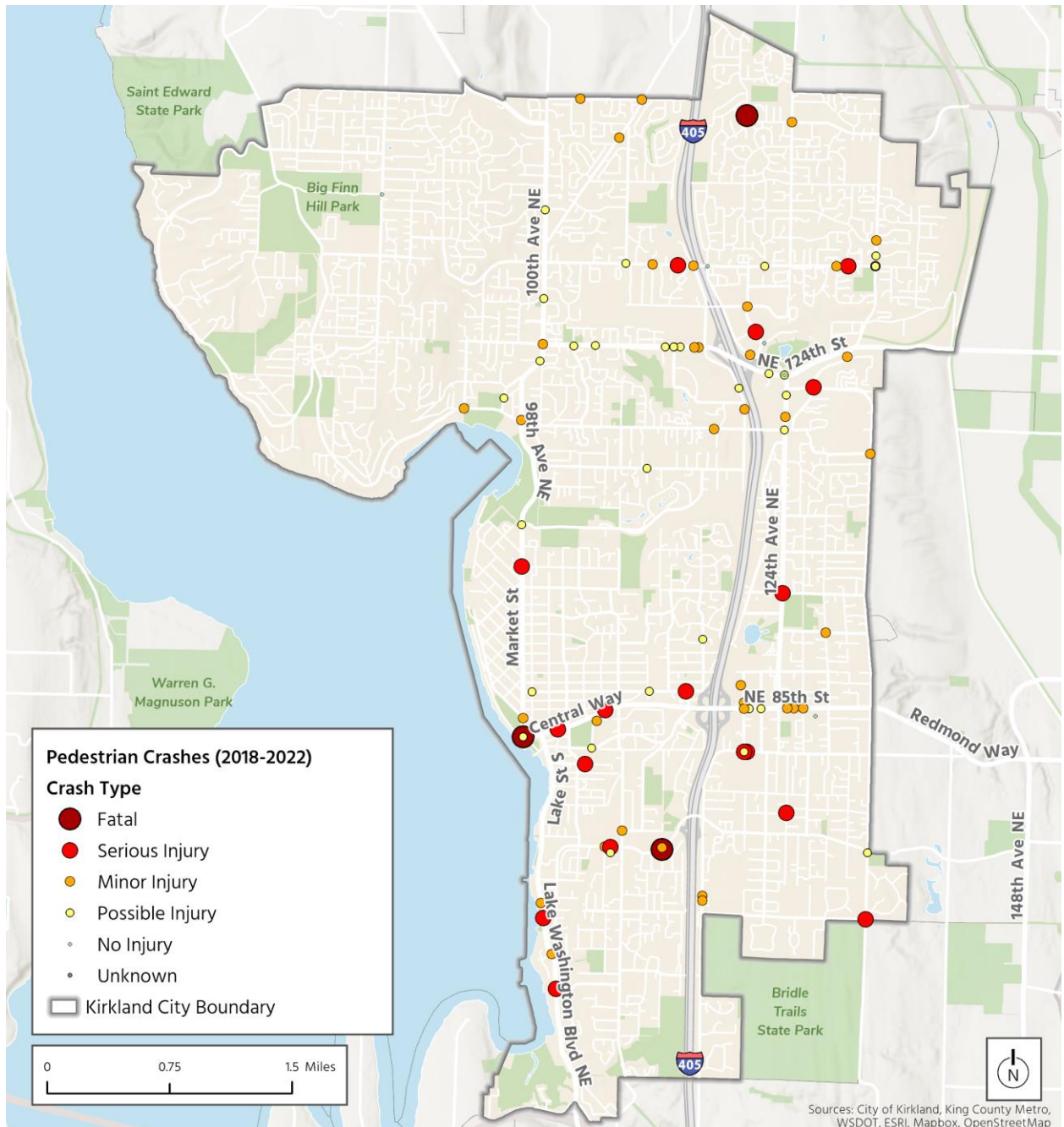
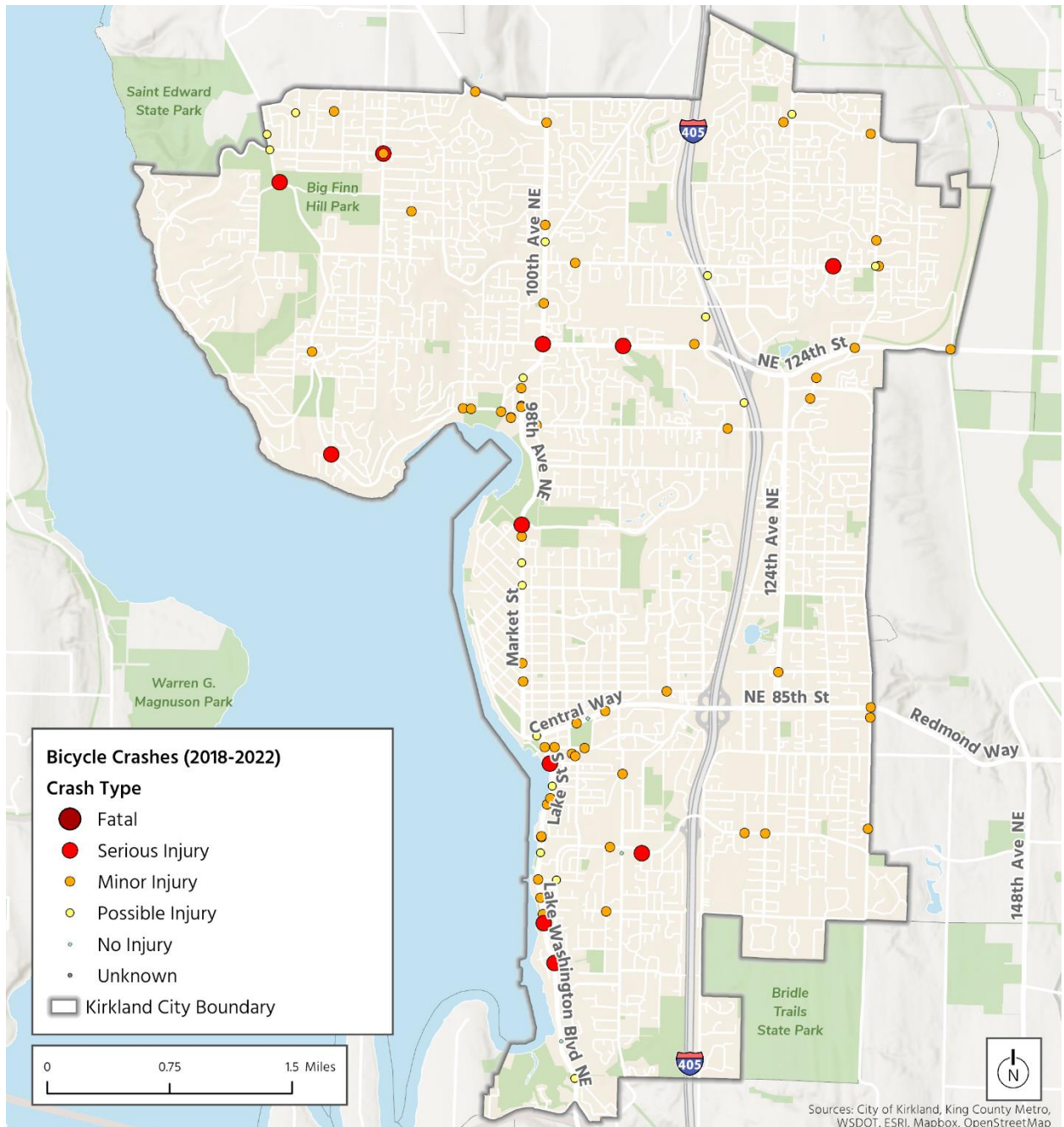




FIGURE 14. BICYCLE CRASHES (2018–2022)





3.7. Operations and Management

Intelligent Transportation Systems

The City of Kirkland's [Intelligent Transportation Systems \(ITS\) Plan](https://www.kirklandwa.gov/files/sharedassets/public/v/3/public-works/transportation/intelligent-transportation-systems-its-plan.pdf)³ establishes operational goals of resiliency, reliability, and responsiveness, and it provides increased transparency to continuously measure and report on performance. ITS is used in Kirkland to provide efficient, multimodal transportation mobility aligned with the City's goals and policies. ITS consists of four different core components working concurrently to achieve the operational goals.

The four core components are:

- **Field elements:** Consist of traffic signal controllers/and associated equipment, closed-circuit television (CCTV) cameras, and multimodal video detection.
- **Communications network:** Includes the media (fiber, cellular, or other), equipment, and software to manage communications from the transportation management center to the field and between traffic signals.
- **Systems and software:** Provide traffic signal control, system health monitoring, video management, CCTV camera control, and other functions.
- **Staff and skills:** Encompass the staff hours and skills needed to operate and maintain the ITS elements.

ITS operations can support modal balance through deployment of active transportation and transit technology.

Traffic Control Devices

The traffic control devices present in Kirkland's system include signalized intersections, rectangular rapid-flashing beacons (RRFBs), overhead yellow flashing beacons, in-pavement flashers (to be phased out), radar feedback speed signs, school speed zone flashing beacons, and four-way flashing beacons, shown in Figure 15.

The City currently owns and operates around 70 traffic signals at intersections throughout the City, primarily along arterial streets. Traffic signals are an important feature for safety and operations that assign right-of-way to require conflicting vehicular, pedestrian, and bicycle traffic to stop and proceed in an orderly manner. The City currently uses video detection for vehicles and bicycles at its traffic signals, along with pushbuttons for pedestrians in the style of Accessible Pedestrian Systems.

³ <https://www.kirklandwa.gov/files/sharedassets/public/v/3/public-works/transportation/intelligent-transportation-systems-its-plan.pdf>

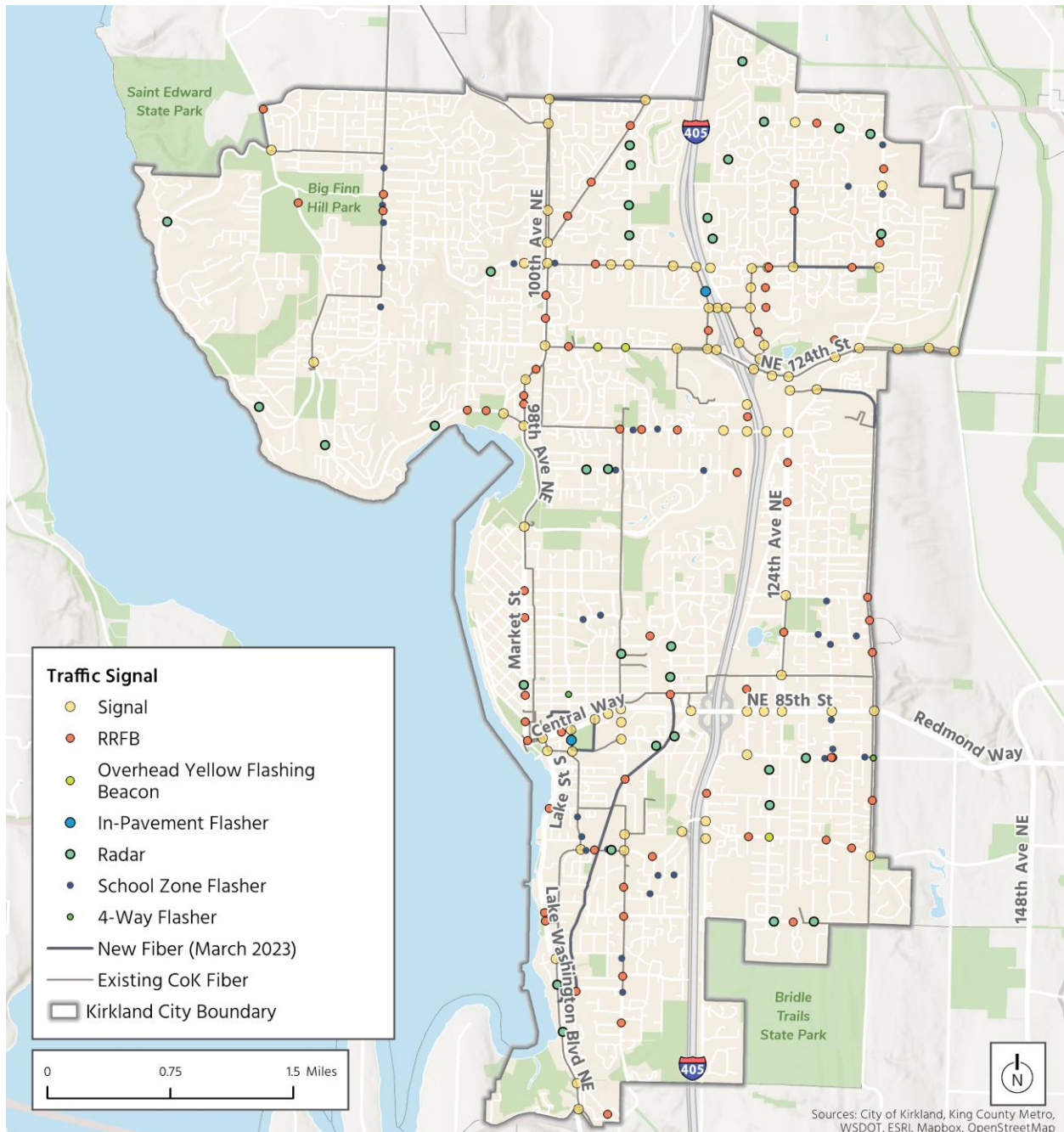


The City currently employs safety-focused phasing at its traffic signalized intersections. This includes leading pedestrian intervals, which provides people who are walking and rolling a three- to seven-second head start in the crosswalk prior to the beginning of the vehicle phase to increase awareness and visibility to drivers making permissive turns. Additionally, the City uses flashing yellow arrow phasing on all new intersections with dedicated turn lanes and protected-permissive phasing, which allows the removal of conflicts between pedestrians and left-turning vehicles. When feasible given operational constraints, the City employs pedestrian recall at specific intersections, which means people walking and rolling do not have to actuate the pedestrian pushbutton in order to get service at the traffic signal.

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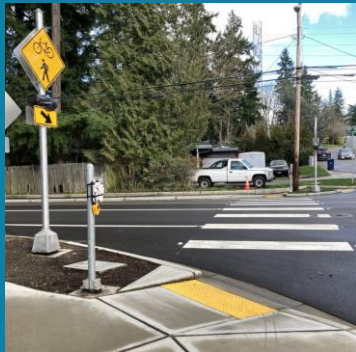


FIGURE 15. TRAFFIC SIGNAL INFRASTRUCTURE





Rectangular Rapid Flashing Beacons



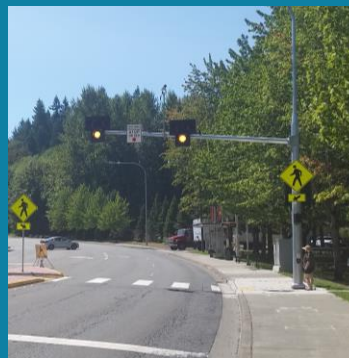
Pedestrian Signals



Speed Radar Signs



HAWK Signals



Bicycle Signal



Bicycle-Oriented Push Button



The City uses over 70 RRFBs, which are enhanced pedestrian safety features to provide additional indication to drivers that pedestrians are using a midblock or uncontrolled crosswalk. Additionally, over the next several years, the implementation of a high-intensity activated crosswalk (HAWK) system is planned at several locations. HAWK signals provide a regulatory method of control to stop vehicular traffic to provide people walking, rolling, and bicycling a safer crossing environment. The locations with planned HAWK signal systems include the following: the CKC crossing at Slater Avenue NE/NE 132nd Street; 100th Avenue NE mid-block near NE 140th Street; 124th Avenue NE between NE 116th Street and NE 124th Street; NE 124th Street between 100th Avenue NE and 113th Avenue NE; and Juanita Drive at NE 132nd Street.

Planned transportation improvement projects with operational improvements for bicyclists include the integration of bicycle signals as part of the 124th Avenue NE and 100th Avenue NE corridor projects. For bicycle detection, bicycle-oriented push buttons to activate signals or RRFBs have been and will continue to be integrated for Neighborhood



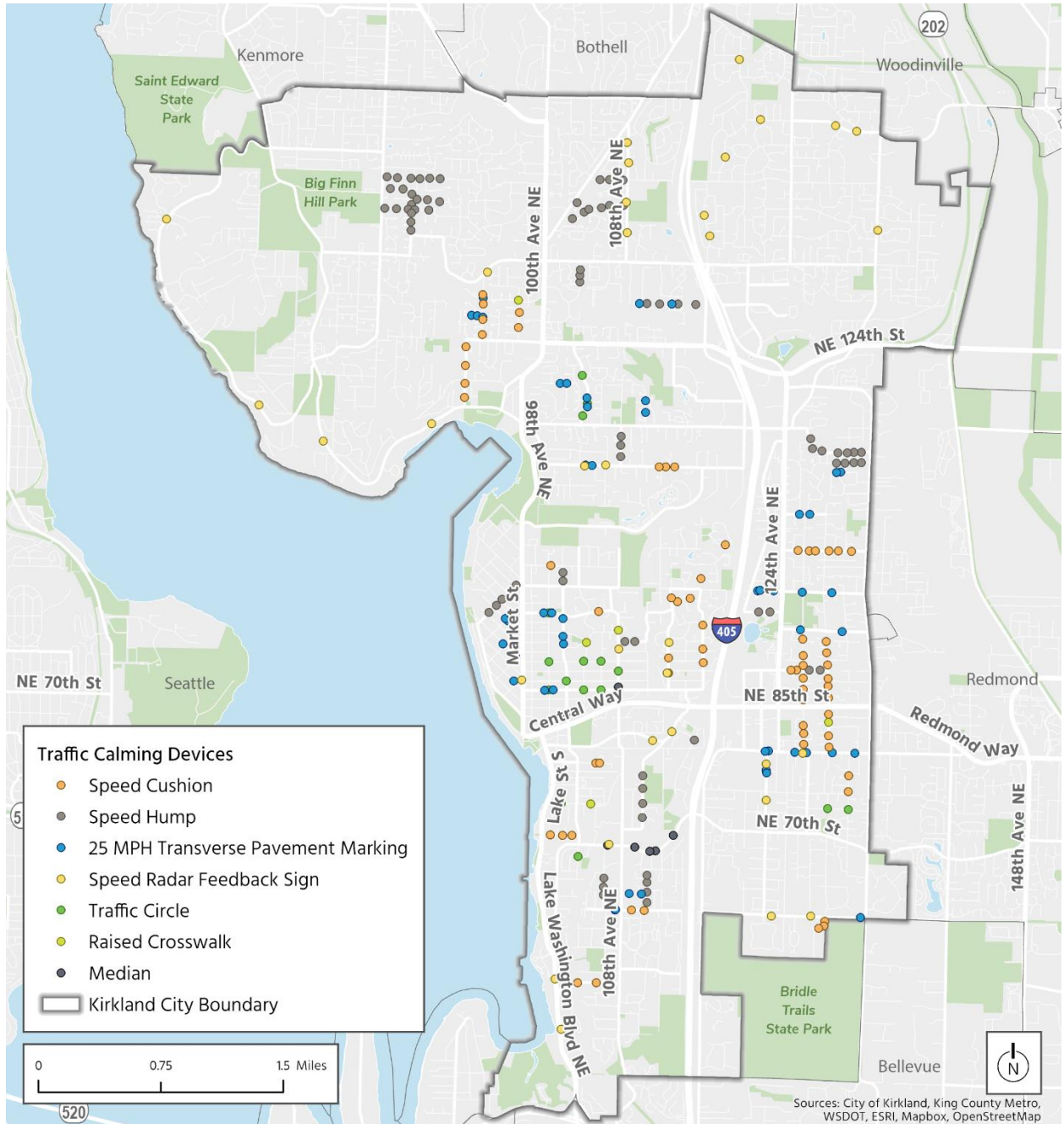
Greenways that cross major arterial streets. At signalized intersections, the City currently uses video detection technology and continues to explore new technologies that have accurate detection and counting of bicycle users.

Physical Traffic Calming Devices

Physical traffic calming devices in Kirkland include signs, striping, 25-mph pavement markings, neighborhood traffic circles, speed humps, speed cushions, raised crosswalks, curb extensions, and medians, shown in Figure 16.



FIGURE 16. NEIGHBORHOOD TRAFFIC CALMING





Curb Space Management

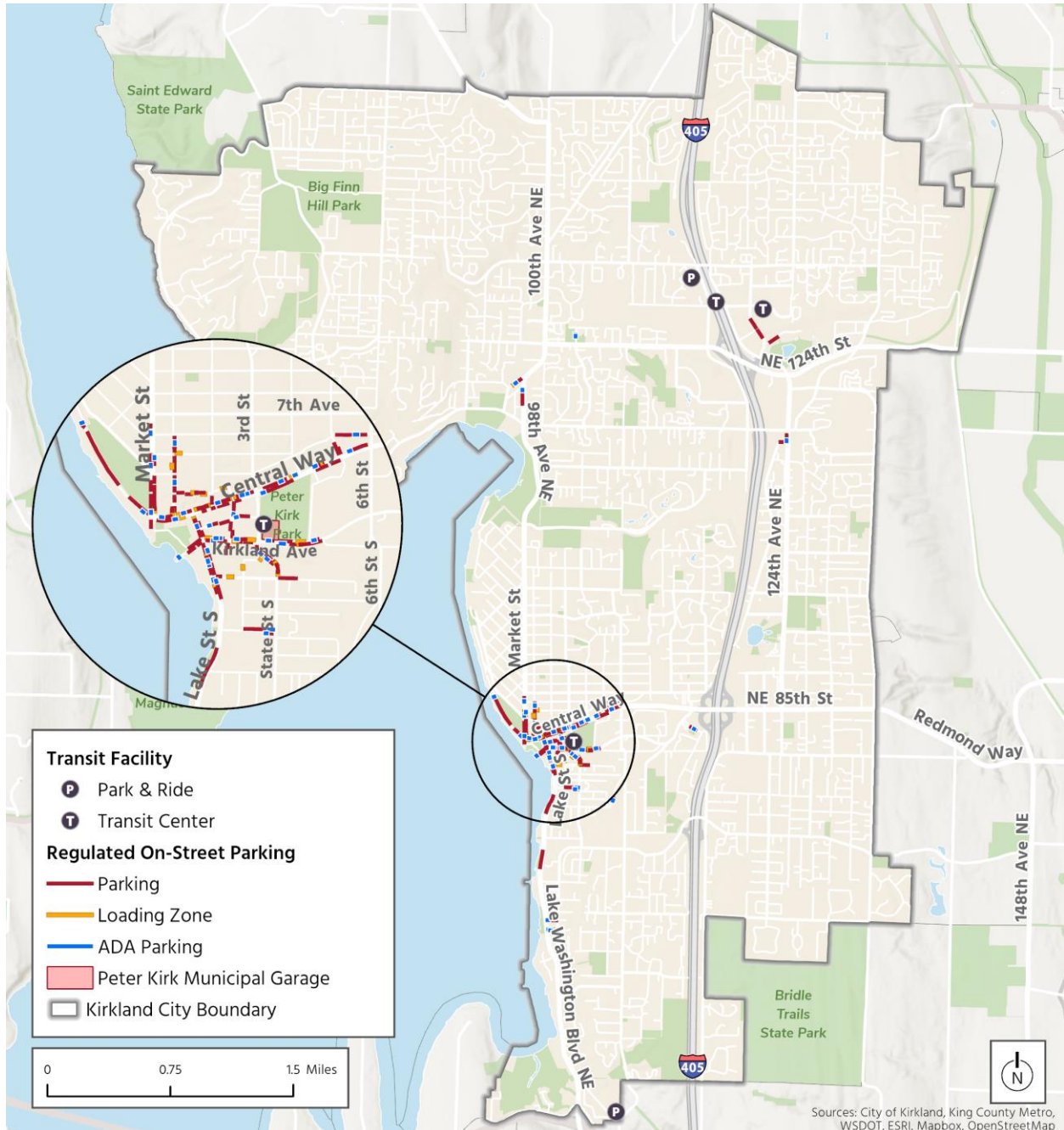
A majority of the City's regulated on-street parking and loading zones are located downtown and in small sections of the Juanita and Totem Lake neighborhoods. On-street parking elsewhere in Kirkland is generally unregulated. The City owns several off-street parking lots within the downtown area as well as the Peter Kirk Municipal Garage (Figure 17).

The City of Kirkland has a Downtown Employee Parking Program, which supports local businesses and allows participating employees to park in designated areas managed by the City at no cost or time limit. There are designated parking stalls for the program in the Peter Kirk Municipal Garage, the Wester Lot at 120 3rd Avenue, and along Lake Avenue W. The City is currently conducting a Downtown and Waterfront Parking Assessment that analyzes parking occupancy data to understand utilization and turnover rates on public streets and public parking lots in the downtown and waterfront areas.

As noted in Action T-4.3b, the City of Kirkland intends to complete a citywide Curb Space Management Plan in the near term to better understand the use of curb space in Kirkland. Efficient use of curb space is essential to support businesses and growing regional centers, particularly as technology evolves and new mobility services come to Kirkland. Many uses of the curb space in Kirkland include parking, business purposes, loading and unloading of goods, transit, active transportation, infrastructure, and business activities, among others. As Kirkland grows, the City needs to plan for the use of this important space for the community and ensure an effective plan is in place for its utilization.



FIGURE 17. CURB MANAGEMENT





Pavement

The Pavement Condition Index (PCI) describes level of pavement deterioration. The City of Kirkland repaves up to 10 lane-miles of high volume streets every year and applies a slurry seal to protect and extend the roadway surface between repavings. The Capital Improvement Program (CIP) includes resurfacing approximately half of those lane-miles, while the other half is funded by the Streets Levy, which voters approved in 2012. Applying a slurry seal can extend the good condition of local roadways for 5 to 10 years. Repaving a street can extend its useful life by 10 to 20 years. Kirkland's goal for its street-preservation program is to improve the PCI rating of its arterial network to 70 (Category I-Very good) on the PCI.

Additionally, maintenance programs such as the Pavement Preservation Program offer the opportunity for the City to implement minor safety improvements or interim measures that support walking and rolling, such as the "quick wins" identified in the Active Transportation Plan (ATP). An example of this type of interim measure is rechannelizing vehicle lanes to accommodate the addition of a striped bicycle lane. This type of opportunistic implementation and coordination is context-sensitive and will not always be appropriate; however, the City continually seeks opportunities to leverage all types of roadway investments to build out a safe, multimodal system.

3.8. Transportation Demand Management

Kirkland has a number of large employers that fall under the requirements of Washington's Commute Trip Reduction (CTR) law to establish a trip reduction goal and programs that encourage employees to not drive alone to work and that reduce employee vehicle miles of travel. City staff work with designated Employee Transportation Coordinators at the worksites to implement the law. The main components include:

- 1) Surveying employees on their modes of travel to work (once every 2 years).
- 2) Submitting a program report describing the employers' efforts to encourage non-drive-alone commuting (once every 2 years).

Kirkland has several TDM programs, which include education and encouragement programs. The City receives Congestion Mitigation and Air Quality grant funds for TDM work in collaboration with King County. The existing TDM programs consist of:

- Educational campaigns (e.g., promoting transit use).
- Preloaded ORCA card transit pass incentives.
- Improving administration of CTR program and Transportation Management Programs/TDM programs.
- Improving monitoring and enforcement of transportation management plans for eligible properties within city limits.
- Maintaining Kirkland Green Trip website and email marketing.



As a condition of approval that applies to certain developments, there is a requirement to implement a TDM program to reduce the number of vehicle trips generated by the development and encourage the use of non-drive-alone transportation options. If a development is approved to provide less parking than the code requirements, it is also obligated to implement a TDM program. These Transportation Management Plans are recorded and associated with the respective properties, ensuring compliance with the transportation-related conditions and facilitating sustainable transportation.

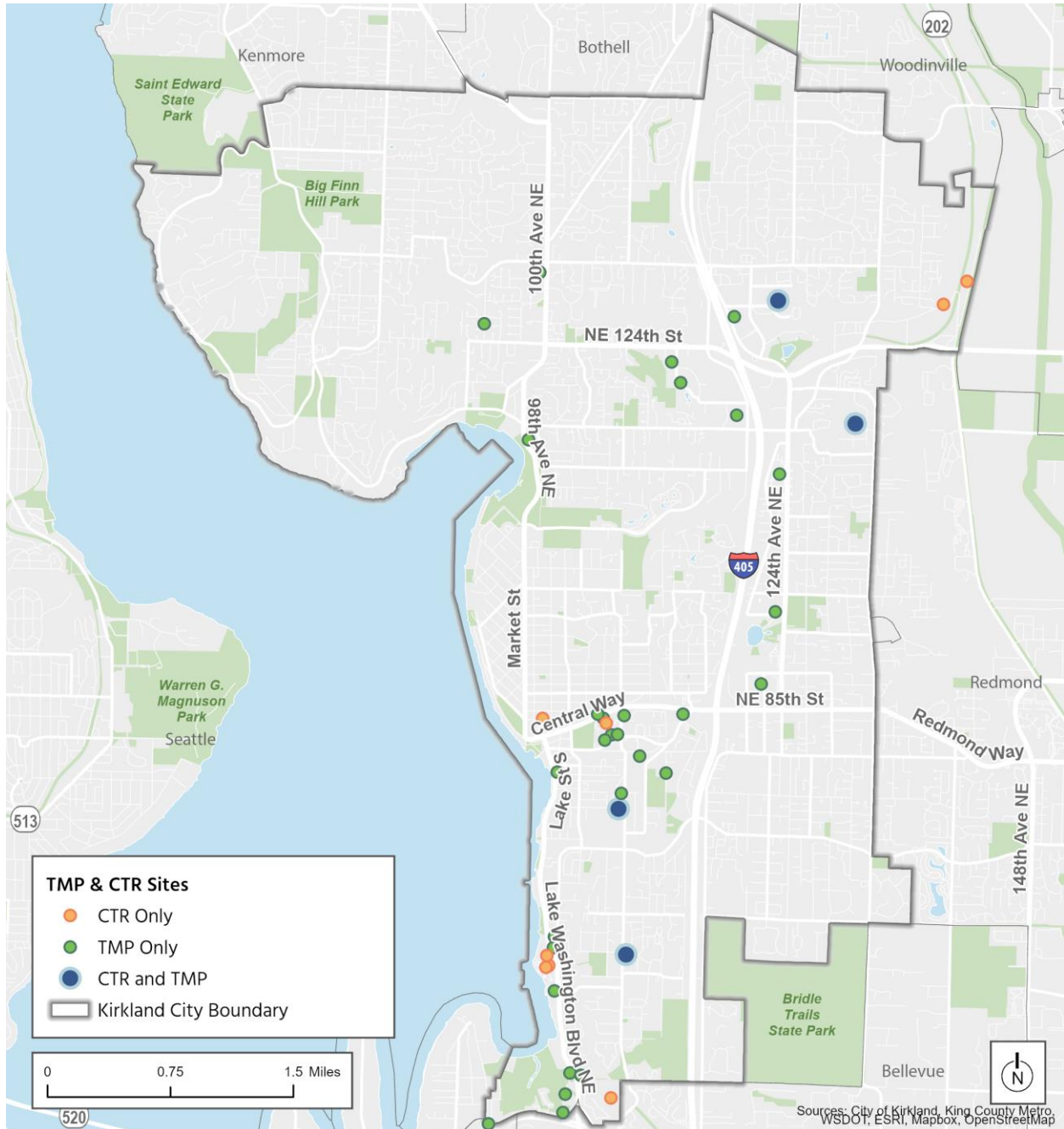
Since the 2015 Transportation Master Plan update, the number of participating employers in the CTR program has remained steady at around 12 worksites. There are currently 32 properties within the city that have Transportation Management Plans. Figure 18 shows the Transportation Management Plans and CTR sites as of 2023.

In addition to the TDM programs, the City supports Bike Everywhere Month and Walk and Roll to School Day events to encourage the use of transportation modes other than single-occupancy motor vehicles. The City owns quick-build event bicycle racks that are used at City events to provide bicycle parking for attendees and can be loaned out for other community events.

The City also supports King County Metro's Community Van program, which provides two wheelchair-ready minivans and one 12-passenger van that people can use for prescheduled trips. This program helps meet a need for trips that are not well served by existing bus routes. Eligible trips using Community Van vehicles require a volunteer driver plus at least two passengers and a trip destination that is within a 2-hour drive of Kirkland.



FIGURE 18. TRANSPORTATION MANAGEMENT PROGRAMS AND COMMUTE TRIP REDUCTION SITES



4. Goals and Policies



4.1. Safety

Goal T-1: By 2035, eliminate all transportation-related fatal and serious-injury crashes while reducing all crashes in Kirkland.

Safety for people traveling in Kirkland remains the first goal of the Transportation Strategic Plan. Kirkland's future transportation system should be safe and accessible for people of all ages and abilities, using any mode of travel. Investments in the future of Kirkland's transportation system will prioritize the safety of people walking, rolling, and bicycling.

To achieve this goal, the safety policies focus on implementing the Vision Zero Action Plan, a Safe System Approach, complete streets, data collection, and regular performance monitoring and creating a culture of safety within the City, community, and other partner agencies.

Policy T-1.1: Implement the Vision Zero Action Plan and track progress annually.

- a) Improve the City's webpage interface to provide more transparent data to the public (web-map, dashboard).
- b) Track progress annually and report to Council every 2 years.
- c) Update the City's Local Road Safety Plan every 2 years with updated crash data that identifies safety issues and contributing factors, proposes specific countermeasures, and identifies safety improvement projects.
- d) Regularly update the Vision Zero Action Plan and policies.

Policy T-1.2: Implement the principles of a Safe System Approach by prioritizing safe street designs and strategies.

- a) Revise the City's existing design standards with best practices and innovation using national sources on design. Be a leader in implementing safety as standard practice.
- b) Evaluate and update the policy for setting speed limits to lower speeds and encourage safer travel behavior.
- c) Equip all City fleet vehicles with safety-related devices and technology that identifies dangerous driving behaviors.
- d) Reduce emergency vehicle response times with technology (GPS-based) Intelligent Transportation Systems solutions.
- e) Conduct near-miss analysis at select intersections, improve methods to record reported safety issues, and explore additional data sources.
- f) Make roundabouts the default design for new intersections or major intersection improvements, unless shown to be infeasible.

Policy T-1.3: Advance the City's Complete Streets ordinance by accommodating all modes of travel in transportation system projects.

- a) Update the City's Complete Street ordinance as set forth in Kirkland Municipal Code (KMC) Section 19.08.055 to be consistent with current national best practices.
- b) Ensure that safety is the first lens through which all capital transportation projects are designed.

Policy T-1.4: Build a robust and transparent data framework.

- a) Seek opportunities to improve collision data collection and analysis, such as adding sources, addressing data anomalies, and reporting and database improvements.
- b) Seek innovations in technology to improve understanding of contributing factors and preventative measures.
- c) Collect before/after data for safety improvement projects.
- d) Conduct risk exposure analysis for vulnerable users as a preventative measure.
- e) Implement technology systems to support performance monitoring and studies of the transportation system, including data storage and analytics.

Policy T-1.5: Promote and institutionalize a culture of safety.

- a) Implement a comprehensive staff training program to encourage a culture of safety across relevant departments.
- b) Educate the public on Vision Zero and factors contributing to crashes (e.g. human behavior, season/weather, speed) as well as rules of the road. Coordinate with City departments on messaging and opportunities to educate the public.
- c) Coordinate with the Planning and Building Department and with private businesses to improve safety in private parking lots by implementing measures such as dedicated pedestrian pathways, speed control, and lighting.
- d) Work with developers and contractors to improve implementation of safe routes for pedestrians and bicyclists through construction zones.
- e) Work with schools and police resource officers to enhance traffic safety education in schools including bicycle and pedestrian education.
- f) Work with the Lake Washington School District and other schools to improve circulation in and around schools at pick-up and drop-off times.
- g) Identify opportunities to implement a culture of safety along the Cross Kirkland Corridor and to reduce speeds and potential conflicts.

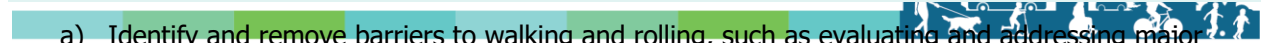
4.2. Active Transportation

Goal T-2: Create and maintain a high-quality network of complete and connected low-stress walking, rolling, and bicycling facilities, including sidewalks, trails, crosswalks, and bikeways, making active transportation a first choice for many trips.

Kirkland is committed to creating safe, complete, and connected pedestrian and bicycle networks throughout the city. The City will continue to prioritize investments that support walking, rolling, and bicycling and would help create a safer transportation system. This includes infilling critical sidewalk gaps that currently impede access and disrupt pedestrian travel and building out a bicycle network for people of all ages and abilities to have low-stress connections to destinations and between neighborhoods.

To achieve this goal, the active transportation policies focus on implementing the Vision Zero Action Plan, Safe System Approach, Active Transportation Plan (ATP), complete streets, data collection, and regular performance monitoring and creating a culture of safety within the City, community, and other partner agencies.

Policy T-2.1: Make walking, rolling, and bicycling safer, easier, accessible, and more convenient.

- 
- a) Identify and remove barriers to walking and rolling, such as evaluating and addressing major barriers, reducing sidewalk blockages, and assessing pedestrian gaps and maintenance needs.
 - b) Create a strategy to increase the supply of public bicycle parking in Kirkland through a dedicated bicycle parking program and incentives for businesses to increase bicycle parking supply.
 - c) Work with the Planning and Building Department to develop a comprehensive bicycle parking policy to ensure adequate end-of-trip facilities are available.
 - d) Develop policies that will create regulations and incentivize micromobility programs, such as bicycle or scooter share, electric-car sharing, and micromobility hubs.
 - e) Implement the objectives and strategies from the ATP.
 - f) Continue to support the Pedestrian Flag program; measure and improve its performance.
 - g) Develop prioritization methods for the selection and implementation of safety enhancements at crosswalks.
 - h) Adopt traffic signal operational procedures that include practices such as advance pedestrian phases, dedicated bicycle signals, generous walk intervals, and protected left turn phasing.
 - i) Implement protected intersection projects through major capital projects and develop a standard for the roadway preapproved plans.
 - j) Implement lighting improvements for safety at crosswalks through a crosswalk lighting program.
 - k) Update the City's Crosswalk Installation Policy.

Policy T-2.2: Prioritize, design, construct, operate, and maintain a connected network of pedestrian and bicycle facilities in a manner that maximizes safety and mobility to promote an active and healthy community for people of all ages and abilities.

- a) Develop a dedicated sidewalk program for infilling high-priority sidewalk gaps.
- b) Construct the projects in the Safer Routes to School Implementation Plan.
- c) Recognize national best practice resources such as the National Association of City Transportation Officials and the American Association of State Highway and Transportation Officials pedestrian and bicycle design guidelines by adopting them into preapproved plans.
- d) Use context-sensitive best practice design for walking and bicycling facilities, prioritizing the safety of these users.
- e) Prioritize first- and last-mile walking and bicycling connections to transit recognizing active transportation modes are critical for supporting transit ridership.
- f) Periodically update pedestrian and bicycle facilities design requirements citywide and for various areas/zones in the city, including sidewalks, crosswalks, bicycle facilities, and intersections.
- g) Grow a system of separated bicycle facilities, including protected intersections.
- h) Prioritize and construct a network of Neighborhood Greenways.
- i) Update the guidelines for Neighborhood Greenways from lessons learned from implementation and as best practice designs change.
- j) Establish a procedure to evaluate the operational and safety impacts of Greenways before and after project implementation.
- k) To the extent feasible, leverage annual maintenance programs, such as pavement preservation and striping, to opportunistically build out active transportation infrastructure identified in the ATP or implement other safety improvements.

Policy T-2.3: Make walking, rolling and bicycling more intuitive and easier to navigate.



- a) Improve wayfinding to and from the Cross Kirkland Corridor (CKC) with a comprehensive recreational trail wayfinding system coordinated with the branding and signage of the Eastrail.
- b) Ensure the network of greenways and the bicycle route system are well signed and easily navigable.
- c) Improve pedestrian orientation to parks, amenities, and local businesses with maps and signage.
- d) Develop a pedestrian wayfinding system for downtown, within urban centers, and along Lake Washington.
- e) Regularly update public pedestrian and bicycling maps.
- f) Coordinate with other departments on pedestrian and bicycle maps for economic development purposes.
- g) Develop a tier of destinations to inform a wayfinding system based on distance and mode.
- h) Consider various forms of wayfinding, including virtual/electronic navigation, such as using apps and QR codes, maps (both printed and online), and physical signs. Ensure wayfinding materials are available in multiple languages and other accessible formats.

Policy T2.4: Develop signature walking, rolling, and bicycling facilities along the CKC and Lake Washington with ample connections to the rest of Kirkland and the region.

- a) Develop an action plan that outlines priorities and actions to implement the Cross Kirkland Corridor Master Plan vision as well as the Connect, Construct, Complete vision for the Eastrail Corridor.
- b) Work with the community to identify the best design for the Lake Washington Boulevard Promenade using options provided by the Lake Washington Boulevard Promenade Study.

Policy T-2.5: Make walking, rolling, and bicycling to and from school safer and easier.

- a) Implement automated enforcement of school zones citywide.
- b) Implement the Safer Routes to School Action Plans that include actions under the categories of engagement, equity, education, encouragement, enforcement, engineering, evaluation.
- c) Help youth to be able to walk, roll, or bike to activities by connecting places such as schools to parks and practice fields and through encouragement programs.

Policy T-2.6: Grow the citywide multimodal count program.

- a) Expand capabilities in gathering bicycle and pedestrian count data to better inform mode-split goals, effectiveness of projects and project identification, trip generators, and multimodal level-of-service evaluations.

4.3. Public Transit

Goal T-3: Support and promote a transit system as a high-value option for many trips.

Kirkland will support a reliable, accessible, and frequent transit network throughout the city that is a convenient option not only for travel to and from work, but also for recreation and other daily needs. While the City does not control transit service and facilities that serve Kirkland, it influences how well-utilized transit will be through its land use decisions and local transportation improvements. The City will help create a built environment that supports transit not only through a coordinated land use

concept, but also by building access to transit improvements and providing amenities, such as pedestrian-scale lighting, that contribute to a more comfortable experience at transit stops. Active partnerships with transit providers, including King County Metro and Sound Transit, will be critical to the success of the City's efforts to improve the transit network.

Over the 20-year planning horizon, Kirkland strives to retain existing service, restore suspended service, implement the King County Metro RapidRide K Line service, support other transit-supportive capital projects to enhance service speed and reliability, make transit a more attractive mode choice, and retain flexible transit services such as Metro Flex. As Kirkland has grown and diversified, transit service has become an increasingly important feature of the transportation system and an integral part of Kirkland's efforts to be inclusive and sustainable.

To achieve this public transit goal, Kirkland's transit policies focus on improving active transportation infrastructure connecting to transit, amenities that create a better experience for transit riders, support for travel demand management (TDM) and promoting transit services, and analysis of options for new facilities and local transit needs.

Policy T-3.1: Plan and construct an environment supportive of frequent and reliable transit service in Kirkland.

- a) Implement Kirkland's Transit Implementation Plan.
- b) Identify and implement access and safety projects that connect to existing transit service.
- c) Plan for capital improvements that support access to planned future transit service, such as King County Metro's K Line RapidRide Project and Sound Transit's Stride Bus Rapid Transit Program along I-405.
- d) Plan for capital and access improvements as part of analysis of future conditions and transit needs.

Policy T-3.2: Support safe and comfortable passenger facilities.

- a) Add transit stops to the evaluation of crosswalk lighting.
- b) Evaluate access improvements at bus stops, such as ramp modifications and missing sidewalks.
- c) Work with transit agencies on stop improvements, such as stop placement, coverage, access, and amenities.
- d) Work with transit agencies to improve bicycle parking at transit centers, such as the addition of bicycle lockers.
- e) Incorporate transit stop access improvements into project prioritization.

Policy T-3.3: Prioritize active transportation networks that connect to transit service, providing the critical first and last connections making transit feasible for more people.

- a) Prioritize the construction of pedestrian and bicycle facilities that improve access to transit stops and hubs.
- b) Coordinate prioritization and construction of pedestrian and bicycle facilities with transit agencies.
- c) Pursue mobility share options that provide the first/last mile access to transit.

Policy T-3.4: Support transit-oriented development (TOD) and initiatives, including internal and external coordination and development of specific TOD guidelines for transportation facilities.

- a) Implement strategies identified in the NE 85th Station Area Plan, including prioritizing access improvements and ensuring roadway design standards are met.

- b) Identify other areas and initiatives to support transit-oriented development.



Policy T-3.5: Support and expand TDM and commute trip reduction (CTR) programs to meet adopted goals for non-drive-alone trips.

- a) Create targeted programs that monitor and encourage increases in non-drive-alone travel rates.
- b) Develop codes and policies to support micromobility and ridesharing.
- c) Maintain the City's CTR and Growth and Transportation Efficiency Center plans to comply with state and regional requirements and guidelines, particularly at the work sites of large employers and other locations as appropriate.
- d) Incentivize all trip reduction efforts in addition to CTR efforts.
- e) Require new developments to establish transportation demand management plans.
- f) Update requirements for the types of developments that are subject to transportation management plans and the elements that make up such plans.

Policy T-3.6: Pursue transit on the Cross Kirkland Corridor (CKC).

- a) Implement transit or innovative flexible transit service on the CKC in keeping with the Cross Kirkland Corridor Master Plan.
- b) Study and identify the options for transit and/or micromobility connections by using the CKC as a corridor option.

Policy T-3.7: Promote the use of transit as a viable option for both commute and non-commute trips to increase ridership and expand service.

- a) Increase educational and awareness-raising efforts to communicate existing transit options.
- b) Increase opportunities for people to access ORCA card transit passes.

Policy T-3.8: Improve transit service in Kirkland.

- a) Conduct a transit needs study that evaluates future transit needs, helps the City advocate for better service regionally, and identifies potential alternative transit services, such as circulator services and private shuttles.
- b) Develop a cohesive and impactful transit strategy to persuade decision-makers of the benefits of investing in greater future transit service in Kirkland.
- c) Consider public funding support to enhance existing transit service to be more reliable, frequent, and connected or expanded to reach underserved areas in Kirkland.

4.4. Vehicle Network Management



Goal T-4: Provide for efficient and safe vehicular circulation, recognizing congestion is present during parts of most days.

Kirkland has long recognized that attempts to build the City's roadway network out of congestion does not align with the City's overall vision for the built environment. Congestion is expected to be present on the busy roadways in Kirkland for the foreseeable future. Rather than solely focusing on expanding capacity, Kirkland will seek to maximize operational efficiency and safety on the City's roadway network through strategic investments in management of the overall roadway system. Kirkland's systemwide approach to management of the vehicular network and parking system will support Kirkland's overall land use vision. Strategic investments in the safety and efficiency of the network will benefit people using other transportation modes and advance the City's goals for safety of more vulnerable roadway users and a transit network that is a convenient option for a wide variety of trips.

To achieve this goal, the following vehicle network policies focus on implementation of Intelligent Transportation Systems (ITS) and curb space management to effectively manage the vehicular system. Policies to prioritize and target capital investments in the vehicular network would integrate land use, traffic calming, and safety considerations to benefit all roadway users.

Policy T-4.1: Make strategic investments in intersections and street capacity to support existing and planned future land uses.

- a) Using the priorities in this plan, prioritize and construct intersection and roadway projects.
- b) As needed, review and update street networks and street design concepts for urban centers and areas with existing and potential future growth.

Policy T-4.2: Implement the ITS Plan.

- a) Establish procedures to evaluate the operational and safety performance of ITS.
- b) Reduce potential for major signal malfunctions. Increase robustness of network to limit the potential for a loss of access to intersection resources.
- c) Increase potential to respond quickly to equipment and system malfunctions and increase recovery options.
- d) Implement systems and detection to operate signals to respond to transient fluctuations in demand, including freeway incidents, surface-street incidents and closures, and school operations.
- e) Improve emergency services response times, including increasing route selection capabilities, options to speed signal recovery, and provide data and analysis tools to evaluate usage and effectiveness.
- f) Better serve a balance of multimodal operations.
- g) Pursue grant funds to implement the ITS Plan.

Policy T-4.3: Take an active approach to managing on-street and off-street parking, with updated curb management policies.

- a) Regularly monitor parking occupancy, turnover, and other factors by investing in continuous parking tracking technology or periodically undertaking parking studies.
- b) Develop a curb management strategy to effectively, efficiently, and safely use curb space. This strategy should support transportation and placemaking initiatives by considering mobility, access, and placemaking, as well as storage and turnover of vehicles along the curb space.

- c) Consider City-owned on-street and off-street parking policies related to regulations of time-limited parking and pricing.
- d) Coordinate with the Planning and Building Department on parking policies within the zoning code to update requirements for parking minimums, electric-vehicle charging stations, and bicycle parking.
- e) Periodically update the Public Works policies related to innovations for parking policy and curb management practices.
- f) Continue to improve wayfinding and customer information to direct drivers to available parking and communicate parking policies in parking regulated areas.
- g) Implement a paid parking program in areas that have high parking demand, such as Downtown Kirkland and parking lots associated with public parks.



Policy T-4.4: Mitigate negative impacts of motor vehicle traffic on neighborhood streets.

- a) Implement traffic calming measures, interventions to reduce cut-through traffic, speed reduction, and similar approaches through additional investment in the Neighborhood Traffic Control Program.

Policy T-4.5: Identify roadway improvements that address safety patterns, crash history or injury preventative measures supporting Kirkland's Vision Zero goal.

- a) Use crash data, near-miss analysis, and other traffic-related data to identify countermeasures to promote safety and prevent collisions.

Policy T-4.6: Clarify truck and freight networks within the city beyond the established freight routes.

- a) Define the difference between freight and truck priority corridors as related to Kirkland's transportation network.
- b) Designate freight and/or truck corridors and create maps and a platform for communicating these networks to freight and delivery service providers.
- c) Identify freight and truck routes that minimize conflicts with people walking, rolling, and bicycling and with transit operations.

4.5. Technology and Emerging Practices

Goal T-5: The transportation system should be flexible and equipped to adapt to new technologies and innovative solutions that expand mobility choices for people in Kirkland.

Innovations in technology and emerging practices can be a valuable tool in achieving the City's transportation goals. Electric vehicles can help the City achieve its climate and sustainability goals alongside programs to reduce vehicle miles traveled and encourage use of other modes. New micromobility options with sustainable power sources, such as electric bicycles and scooters, are expanding the ways people travel. These technologies and other innovative practices in data collection and analysis can help inform design and decision-making around transportation projects.

To achieve this goal, the following policies focus on supporting new technologies, mobility choices, and integrating new practices and methods into transportation planning.

Policy T-5.1: Support technology innovations that reduce greenhouse gas emissions and transportation modes that reduce single occupancy vehicle use.

- a) Increase and incentivize both public and private electric charging stations for vehicles and other electric devices (e.g. bicycles, scooters).
- b) Improve communication networks such as public Wi-Fi or fiber to improve City operations and to facilitate public services and information.
- c) Develop definitions, policies, and regulations related to the use of e-bicycles and other electric micromobility devices that address locations of use, safety, education, and enforcement.

Policy T-5.2: Position Kirkland to support future technologies that may be developing or yet to be realized such as autonomous vehicles.

- a) Upgrade infrastructure to support and align with emerging technologies.
- b) Explore opportunities for future technologies that advance City goals.

Policy T-5.3: Support Kirkland's Smart City Plan goals and initiatives.

- a) Actively seek funding, partnerships, and opportunities for technology expansion.
- b) Improve Kirkland's data collection, management, and sharing for crash data, traffic operations, and other transportation data.

4.6. Maintenance and Preservation

Goal T-6: Ensure adequate resources to preserve and maintain the existing and future transportation system.

As Kirkland continues to expand and improve connections on its transportation network, the City will also prioritize maintenance of existing infrastructure. Keeping the City's transportation infrastructure in a state of good repair with regular maintenance will extend the lifetime of City-owned facilities and preserve budgets by reducing the number of necessary capital projects to replace aging infrastructure. Kirkland currently has funded programs dedicated to maintaining the City's transportation assets, including paving and striping, traffic signals, and sidewalks and pedestrian facilities. The effectiveness of these City maintenance programs depends on available funding and asset management systems. Kirkland will plan for maintenance needs through regular inventories of existing facilities and assessment of their condition and will integrate maintenance considerations into decision-making for capital projects. Additionally, as roadways are repaved or restriped, the City will continue to opportunistically implement safety improvements for all modal users through minor geometric or striping changes as these maintenance budgets allow.

To keep the infrastructure that people traveling in Kirkland rely on in good condition, the following policies focus on funding and asset management systems as well as planning for the life cycle costs of investments in the transportation system.

Policy T-6.1: Prioritize maintenance, operation, and preservation of existing infrastructure and ensure this is adequately resourced.

- a) Identify and sustain reasonable maintenance funding levels for the complete set of transportation assets.
- b) Develop and maintain inventories of assets that require maintenance, such as pavement markings, traffic signals, and sidewalks.

c) Identify and implement improvements to asset management systems.

d) Ensure regular sweeping of existing bicycle facilities and invest in a more efficient bicycle lane sweeper that requires fewer staff resources and covers a larger area.



Policy T-6.2: Plan for and incrementally increase maintenance resources in line with additional assets as new facilities are built and as the city grows.

a) Ensure growing inventory of system assets are matched with adequate maintenance levels.

b) Develop lifecycle costs for capital and maintenance projects.

c) Adequately fund maintenance so that maintenance does not become the driver of decision-making for future projects.

d) Ensure the preservation program is adequately funded to meet pavement condition targets.

Policy T-6.3: Maximize the useful lifetime of the transportation network at optimum lifecycle cost.

a) Identify opportunities to minimize lifecycle costs through technology and innovations (e.g., roundabouts instead of signals).

4.7. Equity

Goal T-7: The transportation system should address the mobility needs of all people, regardless of age, ability, socioeconomic status, or background while prioritizing the needs of the most vulnerable users to advance the City's commitment to diversity, equity, inclusion, and belonging.

The way Kirkland communicates with and invests in the community reflects the City's commitment to diversity, equity, inclusion and belonging (DEIB). The City is integrating equitable engagement practices into community outreach and incorporating equity analysis into the project planning process. The investments that Kirkland makes in the future transportation system should meet the needs of everyone traveling in Kirkland. Regardless of age, ability, socio-economic status, or background, everyone should be able to get around safely and comfortably.

The following policies are intended to achieve this goal and focus on prioritizing underserved or underrepresented groups.

Policy T-7.1: Create an equitable transportation system that provides mobility for all users and addresses historical inequities in the transportation system.

a) Update the ADA Transition Plan for transportation facilities. Fund improvements to address deficiencies identified in the plan that allows for completion of an accessible network in a timely manner.

b) Implement a 20-year transportation capital improvements list that invests in multimodal transportation in equity priority areas.

Policy T-7.2: Implement transportation programs and projects in ways that improve mobility for marginalized communities.

- a) Prioritize transportation projects and programs that support people who experience mobility challenges and those who are most vulnerable when traveling (people walking, rolling, and bicycling).
- b) Engage with people who experience challenges navigating the transportation system to identify accessibility needs. Implement improvements or accommodations identified through this engagement (e.g., passive detection at signals), recognizing that the transportation system is often designed for able-bodied people.
- c) Align priorities with the DEIB Roadmap and improve engagement with populations identified in the DEIB roadmap on near and long-term projects and programs.
- d) Ensure inclusion of vulnerable populations in community engagement efforts for transportation planning and transportation capital projects.
- e) Use tools such as the Capital Improvement Program Equity Mapping Tool or other coordinated equity tools to assist with project prioritization.
- f) Provide services to support the attendance and participation of historically underrepresented populations.

4.8. Sustainability

Goal T-8: Minimize transportation environmental impacts through mode shift, stormwater mitigation, and other greenhouse gas (GHG) reduction efforts.

Kirkland's transportation system is a key part of meeting the City's climate goals. GHGs from transportation sources represent 37% of Kirkland's GHG emissions as of 2022. Kirkland will accelerate its climate response and efforts to reduce GHG emissions through new strategies to promote more sustainable modes of travel and encourage shifts to transit or active transportation. Kirkland will also strive to minimize potential impacts to water and air quality from the transportation system through support for sustainable transportation modes and reductions in vehicle miles traveled.

Mode-share goals are a required policy element for Regional Growth Centers designated by the Puget Sound Regional Council. Kirkland has two Regional Growth Centers, also referred to as Urban Centers: Greater Downtown, which includes the NE 85th Street Station Area, and Totem Lake. The City established mode-share targets for Greater Downtown as part of the Moss Bay Neighborhood Plan and NE 85th Street Station Area Plan and for Totem Lake in the Totem Lake Business District Plan. New citywide mode-share targets are shown in Table 9.

TABLE 9. CITYWIDE MODE-SHARE GOALS FOR PEAK HOUR TRIPS

Transportation Mode	Mode-Share Goal
Walk	12%
Bicycle	2%
Transit	25%
Carpool (2+)	12%
Drive alone	49%

Policy T-8.1: Support transportation modes that are energy efficient and that improve system performance.

- a) Include electric bicycle parking recharge stations in the development of vehicular electric charging projects and programs.
- b) Identify locations and collaborate with transit providers to provide secure bicycle parking at transit hubs.
- c) Develop requirements for new development to provide outlets for electric vehicle charging with bicycle storage.

Policy T-8.2: Update policies and standards for all modes to achieve mode-share goals.

- a) Meet the established mode-share goals for Kirkland's PSRC-designated regional centers and citywide goals based on evolving land use patterns.

Policy T-8.3: Minimize the environmental impacts of transportation facilities, especially transportation's contribution to air and water pollution.

- a) Design and implement new and retrofitted transportation facilities with stormwater system improvements to reduce roadway runoff pollution into natural drainage systems and the waters of the Puget Sound.
- b) Coordinate transportation improvements and programs with goals from the Sustainability Master Plan and the Sustainability, Climate and Environment Chapter of the Comprehensive Plan to meet the City's GHG targets.
- c) Report on reductions in vehicle miles traveled.
- d) Support alternative fuels/electric fleet technologies.
- e) Support policies and initiatives that incentivize shorter trip distances and shifts to non-drive-alone modes.

Policy T-8.4: Implement transportation-related actions identified in Kirkland's Sustainability Strategic Plan.

- a) Include smart growth principles in all City planning practices, such as creating walkable neighborhoods.
- b) Continue supporting the 10-Minute Neighborhoods concept in Kirkland.
- c) Achieve the King County Cities Climate Collaboration goal of reducing driving per capita by 20% by 2030 and 50% by 2050, compared to 2017 levels.
- d) Continue to build walking and bicycling transportation networks so that people of all ages and abilities can comfortably get to where they need to go.
- e) Grow annual average weekday transit ridership.
- f) Promote current shared mobility programs and services.
- g) Establish new shared mobility options.

Policy T-8.5: Safeguard the transportation system against disaster.

- a) Develop and keep current strategies for preventing and recovering from disasters that impact the transportation system.
- b) Coordinate the Transportation Strategic Plan with the Smart Cities initiative, considering greater resiliency of the transportation system.

4.9. Link to Land Use



Goal T-9: Coordinate transportation and land use planning and policies to ensure future growth is supported and sustained by a livable, walkable, connected, and transit-oriented city.

Transportation and land use are closely tied together. The Land Use element of this comprehensive plan informs strategic investments in Kirkland's transportation system, and the transportation system shapes land use decisions. Both transportation infrastructure and the form of development influence how people perceive their neighborhoods and how they get around. Transportation investments should help Kirkland grow in a way that is consistent with the community's vision for the future. The Land Use Element of this comprehensive plan focuses future development around frequent transit in Kirkland, both in Urban Centers and along key transit corridors. This Transportation Element will support the land use vision by addressing the transportation needs of new residents and workers in Kirkland over the 20-year planning horizon.

Kirkland will support the vision for future growth in the Land Use element of the Comprehensive Plan with the following policies that align capital projects and design with land use and coordinate transportation priorities with development.

Policy T-9.1: Support land use by identifying a fiscally constrained 20-year transportation capital projects list that supports anticipated growth through 2044 and aligns with growth targets.

- a) Coordinate with the Planning and Building Department to ensure transportation projects support growth and development.
- b) Ensure projects identified for the 6-year Transportation Improvement Program are aligned with and support growth.
- c) Revise the Impact Fee Program to support the vision of the Transportation Strategic Plan and reflect planned capital investments.

Policy T-9.2: Focus on transportation system developments that expand and improve walkable and bikeable neighborhoods.

- a) Prioritize transportation system improvements in areas with greater residential and employment densities to expand and improve walkable and bikeable neighborhoods.
- b) Coordinate with the Planning and Building Department on bicycle parking requirements and other policies related to development.

Policy T-9.3: Design streets in a manner that supports and is coordinated with future land use plans.

- a) Ensure that transportation plans and projects based on land uses (such as subarea plans, transit-oriented development plans, and neighborhood plans) are incorporated into the transportation plan project lists and work programs.
- b) Coordinate with the Planning and Building Department to ensure all land use planning documents that include transportation elements incorporate the Safe System Approach and best practice design.
- c) Coordinate various transportation-related design guidelines for consistency citywide.

Policy T-9.4: Create a transportation network that supports economic development goals.

- a) Identify opportunities to work with the Cultural Arts Commission, Shop Local Kirkland, and the economic development team to identify opportunities within transportation projects that support arts, local businesses, and economic development.

Policy T-9.5: Require new development to mitigate site-specific and systemwide transportation impacts, ensuring mobility and accessibility for all.

- a) Improve how Kirkland coordinates with developers when achieving level of service that supports multiple modes and walkable neighborhoods, such as an update to the existing transportation analysis policies (e.g., Policy R-38), to require multimodal mitigation for new development.
- b) Participate in the maintenance and improvements of the Bellevue-Kirkland-Redmond travel demand model.

Policy T-9.6: Create a seamless system of streets and trails that form an interconnected network to help people efficiently reach destinations, regardless of mode of travel.

- a) Incorporate the plan for adding and/or improving street-end connections into the transportation grid, including the pedestrian and bicycle network. Include those connections into the prioritization process for completion of the multimodal networks.

Policy T-9.7: Use a multimodal concurrency methodology to monitor the rate at which land use development and the transportation system are constructed.

- a) Continue to implement Kirkland's citywide multimodal concurrency system to better reflect multimodal needs and priorities over time.

4.10. Be an Active Partner

Goal T-10: Coordinate with a broad range of groups—public and private—to help meet Kirkland's transportation goals.

Kirkland will work proactively with local and regional partners to achieve the City's transportation goals. Building relationships with members of the community and reaching underrepresented groups in Kirkland will help the City better serve the community's transportation needs. Interagency coordination with King County Metro and Sound Transit will advance the City's goals for public transit. Playing a strong role in partnerships with transit providers and with the Washington State Department of Transportation (WSDOT) will help the City ensure that the priorities of the local community are reflected in regional transit and transportation investments. Neighboring jurisdictions and other partners, like the Lake Washington School District (LWSD), are critical to Kirkland's implementation of safe routes to school and regional projects.

The City will work to strengthen its relationships and collaboration with local groups and other agencies with the following policies that focus on the City's transportation, equity, and climate goals.

Policy T-10.1: Implement Kirkland's Diversity, Equity, Inclusion, and Belonging (DEIB) Roadmap through community coordination and outreach.

- a) Establish relationships with organizations that represent priority populations in order to better understand the needs from under-represented groups.
- b) Conduct outreach with both Kirkland residents and those outside of Kirkland, particularly those who work in Kirkland but do not live in the city limits.

- c) Ensure community engagement is conducted early and often when projects are planned, designed, and constructed.

- d) Explore opportunities to improve how the City communicates with and receives information from the community.



Policy T-10.2: Coordinate with local agencies and associations, neighboring cities, and regional entities to advance the goals and strategies outlined in the Transportation Element.

- a) Ensure regular and advanced communication and coordination is conducted with local businesses and community members related to local neighborhood projects and plans.
- b) Participate in and provide leadership for regional transportation decision-making with state, countywide, and regional groups to stay informed and contribute to conversations, initiatives, programs, and opportunities related to transportation.
- c) Participate in the King County Climate Change Collaborative to identify trends in vehicle innovation and seek opportunities to implement them in Kirkland.

Policy T-10.3: Partner with LWSD, other educational institutions, police, parents, and transit providers to encourage walking, bicycling, and taking transit to school.

- a) Work with the Kirkland Police Department's school resource offices to implement bicycle, pedestrian, and traffic safety interactive education programs.
- b) Conduct additional circulation analysis to improve walk, bicycle, and pick-up and drop-off circulation at all schools in Kirkland, in coordination with LWSD.
- c) Coordinate with King County Metro on improving transit services to schools and ensuring all students receive free youth transit passes.

Policy T-10.4: Partner with transit agencies to ensure Kirkland receives high-quality transit service that is coordinated with planned growth and land use.

- a) Continue working with King County Metro to support the Rapid Ride K Line project, including capital project development, permitting, grant support, and the like.
- b) Coordinate with transit agencies on access to transit projects and supportive infrastructure, such as shelters and bus stop improvements, bicycle parking, and first/last mile(s) connections.
- c) Continue working with King County Metro to promote Metro-Flex and other flexible transit systems operating in the city.
- d) Continue partnering with Sound Transit on major investments in Kirkland along the I-405 Corridor and through other initiatives.
- e) Participate in regional conversations regarding transit-related policy, service changes, restoring reduced service, and ensuring future transit is aligned with Kirkland's growth and land use changes.
- f) Advocate for meaningful increases in Sound Transit and King County Metro services in Kirkland, with connections between transit hubs and urban centers as a first priority.
- g) Actively pursue agreements with transit providers to deliver a network of high-quality transit service that supports Kirkland's land use and transportation plans.

Policy T-10.5: Work with the WSDOT and the State Legislature to fund Kirkland's high-priority projects and improve safety in and around state corridors.

- a) Collaborate with WSDOT for better operations at WSDOT signals.
- b) Foster a strong working relationship with WSDOT leadership.

- c) Advance Kirkland's transportation interests with actions on legislative agendas.
- d) Fund initial studies in order to make it easier to secure funding for construction projects.
- e) Periodically review federal functional classifications.
- f) Engage WSDOT in discussions to advance improvement of I-405 interchanges with the intention of securing funding to design and rebuild new interchanges at NE 124th Street, NE 70th Street, and improvements around NE 128th Street.



Policy T-10.6: Coordinate multimodal transportation systems with neighboring jurisdictions.

- a) Coordinate with the City of Bellevue on improved walking and bicycling access between the South Kirkland Park and Ride and the Cross Kirkland Corridor (CKC), as well as between the SR 520 Trail and the Lake Washington Boulevard Promenade.
- b) Prioritize connections to the future light rail stations in Bellevue and to Bellevue's Spring District mixed-use commercial area.
- c) Work with the City of Redmond to improve access to Redmond including stair and trail connections from the North and South Rose Hill neighborhoods and access to the Redmond Central Connector.
- d) Coordinate with the City of Bellevue, City of Redmond, City of Kenmore, City of Bothell, and City of Woodinville to ensure bicycle and pedestrian connections at jurisdictional boundaries are seamless.

Policy T-10.7: Actively pursue grant funding and innovative funding sources.

- a) Pursue innovative opportunities and partnerships to better leverage available City funding
- b) Seek funding through various grant funding sources including federal, regional, and state sources as well as through non-traditional sources.
- c) Pursue the opportunity for the City to become eligible for funding related to federal transit.

Policy T-10.8: Partner with nonprofit, private sector, and other "new" partners on innovative solutions to improving transportation connections or the transportation environment.

- a) Coordinate with local businesses, the Kirkland Downtown Association, and commerce-related groups to better understand transportation needs and to better communicate transportation-related information.
- b) Identify all businesses that require transportation management plans and coordinate to ensure those businesses are complying and offering the resources to their employees to reduce single-occupancy vehicle trips.
- c) Seek opportunities to partner with nonprofit and private sector groups and businesses to leverage resources.

Policy T-10.9: Coordinate with the Eastrail Regional Advisory Committee members and Eastrail Partners to implement the Connect, Construct, Complete vision for the entire CKC and connections to the larger Eastrail network.

- a) Be an active partner with Eastrail Partners and the Eastrail Regional Advisory Council.
- b) Coordinate wayfinding, signs, counts, art, and other initiatives that support the Connect, Construct, Complete vision.

5. Concurrency and Measurement



6.1 Concurrency

Concurrency System

Concurrency is one of the goals of the GMA and refers to the timely provision of public services or facilities to support new developments. The GMA requires that transportation projects, programs, and strategies to accommodate developments be in place when a development is constructed or within 6 years. While the GMA requires that LOS standards be adopted for concurrency on arterials, it does not mandate how those standards are defined, and local jurisdictions may adopt standards appropriate for the local context. The main function of concurrency for transportation is to ensure that the transportation system has the necessary capacity and to identify transportation projects and programs that generate the capacity to accommodate the effects of housing and employment growth on the transportation system.

The City of Kirkland manages concurrency and monitors the relationship between new housing and employment growth and the implementation of transportation projects and programs. Concurrency tests for individual development projects are used by the Kirkland Public Works Department to determine whether future transportation facilities will be sufficient to meet the needs of new development or if mitigation is required.

The Kirkland 2035 Comprehensive Plan proposed a new multimodal concurrency system that includes all modes of transportation and measures future person-trip capacity from planned transportation projects and programs rather than traffic operations alone. Kirkland established its current multimodal concurrency system in KMC Title 25 in 2015 with the adoption of Ordinance 4509. This system balances person-trip capacity across all modes with the estimated number of multimodal person-trips generated by new developments. Forecasted growth in person trips is derived from the future housing and employment growth adopted in the Comprehensive Plan.

The additional multimodal network capacity to accommodate future growth is derived from the projects and programs in the transportation capital project list, which is adopted as part of Kirkland's Capital Facilities Plan (CFP). Together these projects and programs provide the added multimodal capacity to accommodate growth over the next 20 years. Kirkland's concurrency system uses dollars spent on transportation capital projects as a measure of additional person-trip capacity created by the City's transportation capital projects. The balance of available person-trip capacity for development is generated by the funded projects in the 6-year CIP. As more projects are funded in the CIP, more person trips become available for new development, but as development occurs, person trips are deducted from the available capacity.

When a new development is proposed, the number of person trips the project will generate is estimated based on the size and land uses included in the proposed development. The estimated number of person trips generated are calculated using a standard methodology the City uses for transportation impact fees. Proposed new development passes the concurrency test if there are more trips in the current balance of person trips than would be generated by the proposed development. If there are not enough available person trips based on the CIP to accommodate a specific development proposal, the developer has the option to scale back the size of the proposed development to reduce the total number of person trips it generates, wait for additional projects from the CFP, or fund projects from the CFP to create more person-trip capacity.

Transportation Impact Fees



Transportation impacts fees (TIF) are assessed on new developments in Kirkland based on different land use categories and are proportional to their impact on the system. TIF revenues are used to fund transportation capital projects and are only used to fund future capacity improvements, not to fix existing deficiencies in the system. The City's TIF schedule was last updated in 2021 with the Transportation Impact Fee Update Report and will be updated as part of a citywide impact fee update, with an anticipated effective date in 2025. Kirkland's TIF rate reflects the cost to the City per person trip in the PM Peak hour that can be attributed to growth in Kirkland. TIF for individual developments are proportional to the size of each land use in the development.

Level of Service Standards

The City of Kirkland has a multimodal LOS, adopted with the Kirkland 2035 Comprehensive Plan, that is based on plan completeness and was referred to as level of completion in the 2015 TMP. Level of completion for each of the different modal project types in Kirkland's CFP tracks progress toward the multimodal goals of the TMP. In the concept adopted in the Kirkland 2035 Comprehensive Plan, progress was tracked against expected level of completion and was rated ahead of schedule, on schedule, or behind schedule. Starting in 2018, the City began to report progress on the level of completion for each modal LOS area in annual reports. The City has regularly reported on all areas of completion from the original concept, other than auto projects, and has annually reported citywide safety data to measure completeness of the full TSP. However, it has not reported progress relative to annual targets.

Multimodal LOS measures based both on completeness and performance of the transportation system are shown in Table 10. While Kirkland does not have a minimum standard for each mode of the transportation system, objective measures, such as level of traffic stress, are used to develop and prioritize projects that are incorporated into the 20-year list of transportation capital projects.

TABLE 10. MULTIMODAL LEVEL OF SERVICE STANDARDS

Transportation Strategic Plan Priorities	Measurement	2044 Level of Completion Standard
Walk: School walk routes	% of streets on school walk routes with sidewalks on at least one side.	100%
Walk: Sidewalks on arterial streets and transit routes	% of transit routes and arterial streets with sidewalks on at least one side of transit.	100%
Walk: Crosswalks	% of crosswalks that comply with Roadway Policy Standards identified in R-33 Crosswalk Location Evaluation Policy	50%
Bicycle: On-street network	% of planned bicycle network complete as identified in the TSP	80%
Bicycle: Greenway network	% of planned greenway network complete as identified in the TSP	25%
Transit: Passenger environment	% of transit stops with lighting and shelters on frequent service routes as identified in Table 3.	50%
Auto: ITS	% of investment allocated to Intelligent Transportation Systems (ITS) Capital Projects as identified in Table 4-1 in the Kirkland ITS Plan.	100%
Auto: Pavement Condition Index (PCI)	Citywide PCI.	PCI of 70

In general, the level of completion is an outcome of choices made based on available funding and on the goals and policies of the Transportation Element. This is in contrast to being chosen as an objective performance measure. For example, a set of auto projects could have been developed around a relatively low level of delay. This would be a very expensive set of projects that would have resulted in the types of road widening that is not in keeping with the adopted vision for transportation. Rather than using performance as an input, it is an outcome. Considering LOS as an outcome rather than an input is consistent with the manner in which it has been treated by the City of Kirkland since the early 1990s.

The City of Kirkland also has a minimum standard for traffic operations at intersections codified in the Public Works Department Pre-Approved Plans Policy R-38 (Table 11). This requires individual developments to mitigate intersections at LOS E and F in the PM peak period based on the proportional share percentage of impacts they are expected to generate. For long-range planning, this standard has been interpreted as a minimum standard of LOS E in the PM peak period based on planned future land use in the Comprehensive Plan, with capital projects identified to address traffic operations at intersections performing at LOS F in the PM peak period. This policy, together with the concurrency standard above, allows the City to choose to address traffic operations issues with multimodal improvements or travel demand strategies where roadway projects, such as corridor widening, do not align with the multimodal transportation vision presented in the Comprehensive Plan.

TABLE 11. LEVEL OF SERVICE DELAY STANDARDS

Level of Service	Average Delay per Vehicle (seconds)
	Signalized Intersections
A	≤ 10
B	> 10–20
C	> 20–35
D	> 35–55
E	> 55–80
F	> 80

Source: Highway Capacity Manual 6 (2016)

Traffic operations at key intersections in 2044 were evaluated using travel demand modeling in conjunction with Synchro analysis as described in the following section. Intersections that are expected to operate at LOS F in 2044 are addressed through concurrency projects that would add additional roadway capacity or capacity for trips by other modes at constrained intersections. These projects are included in the Capital Facilities Element of the Comprehensive Plan. Any potential effects to traffic operations on state facilities in Kirkland, including I-405 and connecting access ramps would be addressed in coordination with WSDOT.

20-Year Transportation Capital Projects

A long-range transportation capital project list is a required component of the Transportation Element and of the Capital Facilities Element of the Comprehensive Plan. The project list is the culmination of all the policy and technical work contained in the Transportation Element and is a set of projects that are estimated at a high level to be funded within reasonably expected revenues. The list of transportation improvement projects for the 2044 planning horizon is based upon the analysis of future traffic operations and LOS standards described earlier. This will become the fiscally constrained project list for the next 20 years and will be prioritized for local and external funding. The projects ensure that the City's multimodal transportation system will meet the land use capacity and growth envisioned in the Land Use Element. The City's concurrency management system and LOS influence the necessary investments the

City will make in the transportation system over the planning horizon. The project list is included in the Capital Facilities Element but referenced in this element.



Over 430 projects were identified as candidates for future transportation capital projects. Candidate projects were identified through adopted plans and studies, community input, and safety analyses. A public engagement map of these projects was launched between February 5 and February 29, 2024, to solicit community feedback. The map allowed the community to review and provide feedback (including the option to show support or opposition) on projects, and suggest new projects that were not already captured.

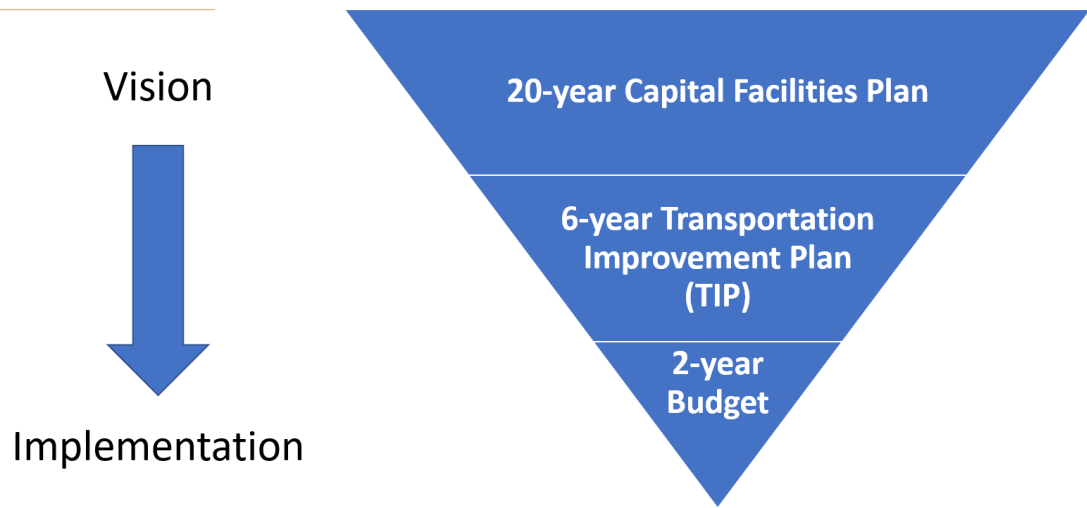
Candidate projects were also evaluated through the TSP project prioritization process. Prioritization plays a crucial role in discerning which projects best align with the goals and policies of the TSP. The process enables the City to optimize use of limited funding resources, determine the sequencing of projects (which projects should come first), and aids decision-makers in budget allocation, planning, and grant applications. Prioritization further demonstrates to the community and decision-makers the highest priorities for investment in the Kirkland transportation system, given constrained funding for transportation projects and costs that exceed available revenues.

The list of improvement projects is located in the Capital Facilities Element, and the full universe of projects is included in the TSP. Planning-level cost estimates were prepared for each of the projects under consideration, but are high level, subject to change, and exclude important features such as right-of-way acquisition costs. The estimates include basic project elements with inflation factors for soft costs, general inflation, and additional costs to address new stormwater regulations. Right-of-way costs are not included due to the conceptual nature of many of the project scopes at this time. Federal funds (grants) are not being included in the anticipated 20-year revenue projections, so additional costs related to implementing a federal project are also not included. Project costs are shown in a range from low-to-high to reflect the conceptual nature of expected project costs.

One of the primary purposes of the 20-year capital project list is to ensure transportation supports the potential future growth envisioned in the land use element. The City used outputs from the BKR travel demand model to analyze traffic operations at intersections using Synchro software. The BKR travel demand model was developed to analyze travel demand and traffic patterns on a localized scale among the cities of Bellevue, Kirkland, and Redmond. The City used the BKR model to estimate vehicle trips and traffic volumes based on expected growth through 2044, and adjusted trip distribution to reflect the planned future land uses for analysis in Synchro. Synchro is a leading traffic capacity software program used to analyze signalized and stop-controlled intersections, and supports the methodologies recommended by the Highway Capacity Manual. Future traffic conditions were analyzed at 40 intersections throughout the city in the morning (AM) and evening (PM) peak periods. Intersections were selected to capture needs at major intersections.

The TSP project list will inform the 6-year Transportation Improvement Plan (TIP) and the 2-year capital budget.

Project List Development



Transportation Projects Projected Funding and Financing Plan



The 20-year financial projections for revenue to fund transportation projects is estimated at approximately \$315 million over the next 20 years, or about \$15.75 million annually. Funding sources include impact fees, real estate excise tax (REET), gas tax, business license (revenue-generating regulatory license) and surface water contributions, solid waste contribution, the 2012 street levy, school zone safety cameras, and Kirkland's transportation benefit district \$20 vehicle license fee. These are high -level planning estimates and are intended for planning purposes only. They remain subject to change as the City works toward completion of the impact fee update and as other medium-term economic trends stabilize (i.e., real estate market and REET).

The projected available funding for programs and projects through 2044 is broken down as follows:

Estimated funds available for programs	\$	187,000,000
Estimated funds available for individual projects	\$	128,000,000
<hr/>		
Projected 20-year revenue	\$	315,000,000

Some of the revenue forecasts are for revenues that are very secure and highly reliable. However, other revenue forecasts are for sources that are volatile and, therefore, difficult to predict with high degrees of confidence, such as impact fees that fluctuate with the amount of new development. In the event that revenues from one or more of these sources do not materialize, the City has several options: add new sources of revenue or increase the amount of revenue from existing sources; reduce the number of proposed projects; change the Land Use Element to reduce the travel demand generated by development; or change and/or lower the LOS standard. If this situation arises, the City will approach it with sensitivity and in the context of the scope of the funding gap.