Kirkland 2044
Comprehensive Plan Update
Draft Supplemental Environmental Impact Statement

June 2024

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Kirkland 2044

City of Kirkland
Planning and Building Department
123 Fifth Avenue, Kirkland, WA 98033
www.kirklandwa.gov ~ 425-587-3600

June 3, 2024

Subject: Draft Supplemental Environmental Impact Statement (SEIS) for the City of Kirkland 2044 Comprehensive Plan Update

Dear Reader:

The City of Kirkland is considering adoption of the2044 Comprehensive Plan Update, which would alter the distribution of Kirkland's population and employment growth and help shape all aspects of the community over the next 20 years (to 2044). The update will include new Vision Statement, Guiding Principles, policies in the Land Use, Housing, Transportation, Economic Development, Utilities, Capital Facilities, Human Services, Environment, Public Services, and Parks, Recreation, and Open Space, Neighborhood Plan updates, and incorporate elements of the Transportation Strategic Plan. See details at www.kirklandwa.gov/K2044/Basics webpage.

The Draft SEIS includes the following topics:

- Land Use
- Housing
- Transportation
- Public Services and Utilities
- Sustainability, Climate, and Environment

The Draft SEIS evaluates alternatives for each topic area. Alternatives include the SEPA-required Existing Plan Alternative (No Action Alternative) and a Growth Alternative (Action Alternative). The Growth Alternative reflects the policies and anticipated growth patterns in the Draft 2044 Comprehensive Plan Update.

The 2044 Comprehensive Plan Draft SEIS supplements the City of Kirkland 2035 Comprehensive Plan Update and Totem Lake Planned Action Final Environmental Impact Statement (November 2015), and NE 85th St Station Area Planned Action SEIS (December 2021) which were adopted per WAC 197-11-630. The Draft SEIS builds on these documents and together meets the City's environmental review needs for the current proposal.

Agencies, affected tribes, and members of the public are invited to comment on the Draft SEIS. A **30-day comment period** is established for the Draft SEIS, beginning **June 10, 2024** and concluding at **5:00 pm on July 12, 2024.** Written comments may be submitted to:

Janice Swenson, Senior Planner

City of Kirkland Planning Department

123 5th Ave, Kirkland, WA 98033

jswenson@kirklandwa.gov I (425) 587-3257

Submittal of comments by email is preferred. Please include in the subject line "K2044 Draft SEIS Comments."

Written comments submitted by email must be received by 5:00 pm on the deadline date. Comments submitted by postal mail must be postmarked before the end of the comment period.

An in-person open house and public hearing for the 2044 Comprehensive Plan Update Draft SEIS is scheduled for:

Kirkland City Hall, 123 Fifth Avenue, Kirkland, Council Chambers

June 27, 2024

Open House: 4:00 p.m. to 5:30 p.m.

Public Hearing: 6:00 p.m.

More information is available at the project webpage at: www.kirklandwa.gov/K2044

The Draft SEIS is available at the City's website at: www.kirklandwa.gov/K2044/Basics page or

Is available for review, by appointment, at Kirkland City Hall: 123 5th Avenue, Kirkland, WA 98033. Contact the Project Planner for more information.

Please contact Janice Swenson, Senior Planner, for questions at jswenson@kirklandwa.gov. Thank you for your interest in the 2044 Comprehensive Plan update.

Sincerely,

Adam Weinstein, AICP

Planning & Building Director, SEPA Responsible Official

Kirkland 2044
Comprehensive Plan Update
Draft Supplemental Environmental Impact Statement

Prepared for

City of Kirkland

Prepared by

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June 2024

Citation

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Project Title

Kirkland 2044 Comprehensive Plan Update

Proposed Action and Alternatives

The City of Kirkland (City) is considering text and map amendments to the Kirkland 2035 Comprehensive Plan as part of the 2044 Comprehensive Plan Update that would alter the distribution of Kirkland's population and employment growth and help shape all aspects of the community over the next 20 years (to 2044). The update will include changes to policies in the Land Use, Housing, Transportation, Utilities, Capital Facilities, Human Services, Environment, Public Services, and Parks, Recreation, and Open Space sections of the Kirkland 2035 Comprehensive Plan and incorporate elements of the Transportation Strategic Plan.

This Draft Supplemental Environmental Impact Statement (SEIS) includes two alternatives: the Existing Plan Alternative (continuation of the current Kirkland 2035 Comprehensive Plan) and a Growth Alternative. Both alternatives will accommodate Kirkland's assigned growth targets for 2044.

- Existing Plan Alternative (No Action Alternative): This alternative would maintain the City's current zoning and adopted plans, including the Kirkland 2035 Comprehensive Plan, NE 85th Street Station Area Plan and Planned Action, and adopted neighborhood plans. This would accommodate the current anticipated growth through 2044, which includes 13,200 additional housing units and 26,500 additional jobs by 2044. The Existing Plan Alternative would not include implementation of state mandates adopted in HB 1110 to illustrate the impact of these requirements as integrated with the Growth Alternative.
- Growth Alternative (Action Alternative): This alternative would establish additional residential capacity above and beyond what is needed to accommodate the City's growth targets to provide additional flexibility for the development of housing choices for the community. It would allow greater residential and commercial density, particularly near transit corridors and in select commercial or business centers and would implement regulations to encourage the production of affordable and market-rate housing citywide. The Growth Alternative would include future multimodal improvements identified in the Transportation Strategic Plan and incorporated into the Comprehensive Plan. This alternative would also include updates required to comply with Washington state legislation for "middle" housing (housing at densities between single-unit detached homes and mid-rise apartment buildings) in all residential zones citywide, and would allow additional middle housing typologies in residential zones. The alternative would implement affordable housing requirements for new development and allow for more commercial and mixed-use development in focused areas. These changes would accommodate the current anticipated growth through 2044, which includes 13,200 additional housing units and 26,500 additional jobs by 2044. Forecasted growth based on PSRC's regional growth forecasts and King County's allocation of anticipated growth would be the same as under the Existing Plan Alternative. However, the Growth Alternative will add more potential capacity for residential and nonresidential development citywide.

Lead Agency

City of Kirkland Planning and Building Department.

Location

The study area includes the entire City of Kirkland. The city encompasses approximately 23 square miles and is bounded on the west by Lake Washington and the City of Yarrow Point; on the north by the cities of Kenmore, Bothell, Woodinville; on the east by the City of Redmond and unincorporated King County; and on the south by the cities of Bellevue and Clyde Hill.

Tentative Timeframe of Implementation

Late 2024 for 2044 Comprehensive Plan adoption.

Responsible Official

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Licenses or Permits Required

The 2044 Comprehensive Plan Update Draft SEIS requires a 60-day review by the State of Washington Department of Commerce and other state and regional agencies (including King County, Puget Sound Regional Council, Department of Transportation, and Tribes). Their recommendations will be forwarded to City Council, who will deliberate and determine adoption and approval.

Authors and Principal Contributors

This Draft SEIS was prepared under the direction of the Kirkland Planning and Building Department. Parametrix prepared the SEIS and related analysis and documentation.

Draft SEIS Comments

Comment Period

The City of Kirkland is requesting comments from members of the public, agencies, tribes, and all interested parties on the Draft SEIS from June 10, 2024, to July 12, 2024. **Comments are due by 5:00 p.m. on July 12, 2024.**

All written comments should be directed to:

Janice Swenson
Senior Planner
City of Kirkland
123 5th Avenue
Kirkland, WA 98033
jswenson@kirklandwa.gov

Submittal of comments by email is preferred. Please include the subject line "K2044 Draft SEIS Comments."

Public Meeting

An in-person open house and public hearing for the 2044 Comprehensive Plan Update Draft SEIS is scheduled for:

Kirkland City Hall

123 Fifth Avenue, Kirkland, Council Chambers

June 27, 2024

Open House: 4:00 p.m. to 5:30 p.m.

Public Hearing: 6:00 p.m.

Documents Supplemented and Adopted

The Kirkland 2044 Comprehensive Plan Update Draft SEIS supplements the NE 85th Street Station Area Planned Action Final SEIS (December 2021) and City of Kirkland 2015 Comprehensive Plan Update and Totem Lake Planned Action Final Environmental Impact Statement (EIS) (November 2015), which were adopted per Washington Administrative Code 197-11-630. The City has identified this SEIS as being appropriate for this proposal after independent review. The Draft SEIS supplements the Kirkland 2015 Comprehensive Plan Update and Totem Lake Planned Action Final Environmental Impact Statement and the Kirkland NE 85th Street Station Area Plan and Planned Action from Final Supplemental Environmental Impact Statement and meets the City's environmental review needs for the current proposal.

Location of Background Information

You may review the City of Kirkland's website for more information on the Comprehensive Plan Update page.[1] If you have questions, please contact Janice Swenson at (425) 587-3257 or jswenson@kirklandwa.gov.

Draft SEIS Availability and Purchase

The Draft SEIS is also posted on the City of Kirkland's website on the Comprehensive Plan Update page.

This Draft SEIS is available for review by appointment at Kirkland City Hall, 123 5th Avenue, Kirkland, Washington, 98033; see the Contact Person listed above.

[1]https://www.kirklandwa.gov/Government/Departments/Planning-and-Building/Planning-Projects/Kirkland-2044-Comprehensive-Plan-Update

Acronyms and Abbreviations

ABE	average building elevation
AMI	area median income
ARCH	A Regional Coalition for Housing
BIPOC	Black, Indigenous, and People of Color
BKR	Bellevue-Kirkland-Redmond
BRT	bus rapid transit
CBD	central business district
CEIP	Clean Energy Implementation Plan
CETA	Clean Energy Transformation Act
City	City of Kirkland
County	King County
Ecology	Washington State Department of Ecology
EMS	emergency medical services
EPA	Environmental Protection Agency
EV	electric vehicle
GHG	greenhouse gas
GMA	Growth Management Act
HB	House Bill
I-405	Interstate 405
ITS	Intelligent Transportation System
K4C	King County Cities Climate Collaboration
KFD	Kirkland Fire Department
KMC	Kirkland Municipal Code
KPD	Kirkland Police Department
KTIP	Kirkland Transit Implementation Plan
KZC	Kirkland Zoning Code
LGBTQ+	lesbian, gay, bisexual, transgender, queer, intersex, asexual, plus
LOS	level of service

Acronyms and Abbreviations (continued)

Metro	King County Metro
MPP	multicounty planning policies
$MTCO_2e$	metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NPDES	National Pollutant Discharge Elimination System
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
PM_{10}	particulate matter less than or equal to 10 microns in diameter
PROS	Parks Recreation and Open Space
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
PSRC	Puget Sound Regional Council
RCW	Revised Code of Washington
SEIS	Supplemental Environmental Impact Statement
SEPA	State Environmental Policy Act
SSP	Sustainability Strategic Plan
TMP	Transportation Master Plan
TSP	Transportation Strategic Plan
VMT	vehicle miles traveled
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

1. Executive Summary

1.1 Purpose

The City of Kirkland (City) is considering text and map amendments as part of the Kirkland 2044 Comprehensive Plan Update that would alter the distribution of Kirkland's population and employment growth and help shape all aspects of the community over the next 20 years (to 2044). The update, required by the Growth Management Act (GMA) (Chapter 36.70A.130(5) Revised Code of Washington [RCW]) will include changes to policies in the Land Use, Housing, Transportation, Utilities, Capital Facilities, Human Services, Environment, Public Services, and Parks, Recreation, and Open Space sections of the Kirkland Comprehensive Plan for consistency with the Puget Sound Regional Council (PSRC) VISION 2050, Countywide Planning Policies for King County, and recent state legislation.

This Draft Supplemental Environmental Impact Statement (SEIS) addresses changes to the comprehensive plan and Kirkland Zoning Code (KZC) proposed in the Kirkland 2044 Comprehensive Plan Update. The purpose of this SEIS is to provide information about potential environmental impacts, reasonable alternatives, and measures to avoid, minimize, or mitigate potential impacts. The SEIS supplements the Kirkland 2015 Comprehensive Plan Update and Totem Lake Planned Action Final Environmental Impact Statement (November 2015) and the Kirkland NE 85th Street Station Area Plan and Planned Action Final Supplemental Environmental Impact Statement (December 2021), which were adopted per Washington Administrative Code (WAC) 197-11-630.

1.2 State Legislation

In 2023, the Washington State Legislature passed House Bill (HB) 1110, requiring larger cities like Kirkland to allow up to four units per residential lot, or up to six units per lot if located within one-quarter mile of a major transit stop or if two of the six units are affordable. Amendments to the Kirkland Comprehensive Plan as part of the 2044 Kirkland Comprehensive Plan Update include policies supportive of zoning changes for consistency with HB 1110 to permit the number of units required by the legislation. The changes in the Comprehensive Plan will also include reductions in parking requirements within one-quarter mile of a major transit stop, as required by HB 1110.

1.3 State Environmental Policy Act Process

The City of Kirkland believes that the Kirkland 2044 Comprehensive Plan Update will be beneficial to the environment in that it seeks to shape future growth in a way that promotes housing choice, transit access, transportation mode shift, open space protection, and sustainability. However, in order to thoroughly evaluate the potential environmental effects of the Kirkland 2044 Comprehensive Plan Update and to provide an opportunity for additional public comment, the City has elected to prepare an SEIS pursuant to RCW 43.21C.030 (2)(c).

On October 18, 2023, the City published a combined Determination of Significance and Scoping Notice inviting tribes, agencies, and members of the public to submit comments on what should be evaluated in the SEIS for the 2044 Comprehensive Plan update. The City of Kirkland received seven comments and communications between October 18 and November 17, 2023, including correspondence with numerous comments for various stakeholders and members of the public.

After the scoping process was complete, a Draft SEIS was prepared. After the Draft SEIS comment period has elapsed, the City of Kirkland will prepare and issue the Final SEIS. This Final SEIS will address comments received during the Draft SEIS comment period and may include additional information and input received from agencies, tribes, community organizations, and the public regarding the proposal. The Final SEIS may include modified alternatives or identify a preferred alternative and will inform the legislative process for adoption of the Kirkland 2044 Comprehensive Plan.

1.4 Community Engagement

As part of the 2044 Comprehensive Plan Update, a consultant prepared a Community Engagement Plan[2] to guide the public outreach and engagement process. One of the key objectives of the engagement plan was to increase participation in the update process from all community stakeholders and from priority populations, including community members historically underrepresented and/or underrecognized in civic life, including Black, Indigenous, and People of Color (BIPOC); youth; people who identify as lesbian, gay, bisexual, transgender, queer, intersex, asexual, plus (LGBTQIA+); older adults; low-income households; people experiencing homelessness; people with disabilities or accessibility challenges; renters; and immigrant communities, including people facing language barriers. Additional goals and objectives of the engagement process are described in the Community Engagement Plan.

Below is a summary of community engagement activities accomplished to date, or in progress:

- Project Kirkland 2044 Comprehensive Plan Update webpage.
- Project email address 2044Comprehensiveplan@kirklandwa.gov to receive public inquiries.
- Citywide email announcements and publicity.
- Community-wide events and meetings.
- Surveys on the Kirkland 2044 Comprehensive Plan Update chapters and elements.
- Focus group recruitment and meetings focused on priority populations with compensation for participation.
- Informational materials translated into six languages.
- Presentations to community groups, City Council, boards and commissions.
- Tabling at community events and other locations.
- Class projects and school engagement.

Multiple public hearings are scheduled for May through September 2024 to receive public testimony on draft goals and policies for each element of the Comprehensive Plan. The public will also have an opportunity to comment on this Draft SEIS on the K2044 Comprehensive Plan Update webpage and attend an open house and public hearing on June 27, 2024, to submit comments on the Draft SEIS during the public comment timeframe.

[2] community-engagement-plan-k2044-kirkland-comprehensive-plan-finalwappendixabc12152022.pdf

1.5 Description of Alternatives

The SEIS includes two alternatives: the Existing Plan Alternative (No Action Alternative), a continuation of the current Comprehensive Plan, and the Growth Alternative (Action Alternative). The Existing Plan Alternative would maintain the City's current zoning and plans, including the Kirkland 2035 Comprehensive Plan, NE 85th Street Station Area Plan and Planned Action, adopted neighborhood plans, and 2015 Transportation Master Plan (TMP). The Existing Plan Alternative would not include implementation of state mandates adopted in HB 1110 to illustrate the impact of these requirements as integrated with the Comprehensive Plan Adoption Alternative. The Growth Alternative would allow greater residential and commercial density near transit corridors and in commercial centers to shift growth into focused areas around transit implement regulations that encourage market-rate and affordable housing and would comply with state mandates adopted in HB 1110. Both alternatives would accommodate the current anticipated growth through 2044 based on State and regional population and employment projections, with 13,200 additional housing units and 26,500 additional jobs by 2044.

1.6 Community Amendment Requests and Other Site-Specific Amendments

As part of the multiyear planning process to update the Comprehensive Plan, including intensive updates to the Juanita and Kingsgate Neighborhood Plans that are part of the Comprehensive Plan, several community-initiated amendments to increase residential and commercial capacity have been accepted by the City for study. These potential increases to capacity are included in the Growth Alternative and will study the following:

- Higher-density residential zoning along key transit corridors in Kirkland, including Central Way/NE 85th Street, Market Street/98th Avenue NE, Lakeview Drive, 108th Avenue NE, NE 70th Street, and 132nd Avenue NE.
- Par Mac Business Park (Totem Lake): greater density and height allowed to accommodate up to 1,200 units of housing and up to 30,000 square feet of commercial space.
- Totem Lake Southern Industrial Commercial Subarea (Totem Lake, TL 10C, TL 10D, TL 10E): changes to enable increases in capacity for housing units and office space. This subarea is being studied as an expansion of, and in context with, the Par Mac Business Park topic.
- Goodwill Site (Juanita): greater density and height allowed to accommodate up to 600 units of housing and up to 15,000 square feet of commercial space.
- Michael's Site and JBD 4 Zoned Properties (Juanita): greater density and height (from 26 feet to 70 feet) allowed to accommodate up to 350 units of housing and commercial space across two parcels in the JBD 4 zone.

1.7 Summary of Impacts and Mitigation Measures

1.7.1 Land Use

Likely housing and employment growth would be the same for both the Existing Plan Alternative and the Growth Alternative, but the distribution of jobs and housing growth would differ between the two alternatives. Under the Existing Plan Alternative, housing and jobs growth would be focused in Urban Centers, where the majority of existing development in Kirkland is currently located. Policy and regulatory changes in the Growth Alternative increase development capacity citywide and shift residential growth primarily to Kirkland's key transit corridors, while employment growth would

remain focused in Kirkland's Urban Centers. In both alternatives, residential and employment densities would increase in almost all Kirkland neighborhoods.

In the Existing Plan Alternative, the greatest increase in housing and employment density would be in Kirkland's Urban Centers in Totem Lake and Greater Downtown. In the Growth Alternative, growth would remain focused on the Urban Centers, but additional opportunities for higher-density development on transit corridors would increase density—housing density in particular—across more Kirkland neighborhoods. Overall, the Growth Alternative is more concentrated in both Urban Centers and key transit corridors compared to the Existing Plan Alternative. The pattern of housing and jobs growth expected in both the Existing Plan Alternative and the Growth Alternative is consistent with PSRC guidance in the Vision 2050 multicounty planning policies (MPPs) and state guidance in the planning goals of the GMA. More growth outside key transit corridors or Urban Centers and away from frequent transit would be less consistent with guidance from PSRC and Washington State and could potentially constitute a land use impact. Increases to housing and jobs density identified for both alternatives are consistent with goals and policies from PSRC, Washington State, King County, and the City of Kirkland. No significant adverse impacts to land use were identified in this environmental analysis, as discussed in Section 4.1.2.

1.7.2 Transportation

Expected housing and jobs growth based on PSRC regional forecasts and growth targets from King County are the same for both the Existing Plan Alternative and the Growth Alternative. Potential for additional vehicular travel demand associated with growth and vehicle miles traveled (VMT) was estimated for the Existing Plan (No Action) Alternative using the Bellevue-Kirkland-Redmond (BKR) Travel Demand Model. VMT is expected to be similar between both alternatives because overall housing and employment growth would be the same in the Existing Plan and Growth Alternatives, but the distribution growth and trips on Kirkland's roadway network would be different.

The Existing Plan Alternative includes a more limited set of 99 transportation projects that are funded or expected to be complete by 2044. These projects are focused on active transportation investments but also include some transit speed and reliability projects that would improve transit operations in Kirkland. The Growth Alternative includes a larger set of 430 transportation projects that would be prioritized for funding and potential implementation of high-priority projects that fit within financial constraints and 1,640 sidewalk projects that would be incorporated into a larger program. Housing and jobs growth would be focused in areas with access to frequent transit in both alternatives, with the majority of growth in Kirkland's Urban Centers or on key transit corridors.

There would be greater traffic volumes on Kirkland's roadway network in both the Existing Plan and Growth Alternative, with potential for more congestion on local roads and at highway access points. Traffic volumes in the Existing Plan Alternative and the Growth Alternatives are expected to increase on the same five corridors, including Central Way/NE 85th Street, 100th Avenue NE, 116th Avenue NE, NE 124th Street and 124th Avenue NE. The distribution of traffic volumes on these corridors is expected to differ based on forecast growth in Kirkland's Urban Centers and on connecting streets.

The Existing Plan Alternative includes 23 projects that would provide a safety benefit for high crash corridors. The Growth Alternative includes 43 projects that would provide safety benefits. These projects are prioritized for implementation, which is dependent on funding through 2044. Both alternatives include intersection and crossing improvements and new or upgraded bicycle and pedestrian facilities among these safety projects and would improve the safety of Kirkland's transportation system for all users. All roadway projects in both alternatives would also include multimodal or Complete Streets elements to ensure the safety of roadway users.

Potential disruptions to pedestrian, bike, transit, and vehicular access would be greatest in Greater Downtown in the Existing Plan Alternative, as transportation projects and new development would both be intensely focused on this Urban Center. Potential for construction-related access disruptions would be more diffuse in the Growth Alternative but would be greatest along key transit corridors where development is focused, and potential transportation projects are currently being prioritized. Construction impacts in both alternatives would be gradual as improvements to the transportation network are implemented and development and redevelopment take place through 2044.

Impacts of new housing and employment growth on the transportation network were identified for both alternatives. No significant adverse impacts to Kirkland's transportation system were identified; however, some moderate impacts to traffic operations at certain intersections were identified for both alternatives as discussed in Section 4.2.2.

1.7.3 Housing

Housing and employment growth would be the same for both the Existing Plan Alternative and the Growth Alternative, but potential displacement differs between the alternatives, based on the composition and density of new development. Housing growth in the Existing Plan Alternative would consist of mostly multi-unit development but would include a larger share of single-unit residential development (19.4%) compared to the Growth Alternative (9.6%). Because single-unit residential development requires more land to produce housing, the Existing Plan Alternative would result in greater potential for residential displacements to accommodate housing growth in the Existing Plan Alternative, although number of housing units displaced by redevelopment would be very low relative to the over 10,000 net new housing units in both alternatives. Displacements in low-income areas of Kirkland would also be higher in the Existing Plan Alternative compared to the Growth Alternative but would represent a small share of overall displacements. However, under both alternatives, more new affordable housing units would be created in low-income areas than existing residential units that would potentially be displaced from those areas.

The Existing Plan Alternative would expand housing options citywide in Kirkland, but those options would be limited primarily to Kirkland's Urban Centers. The Growth Alternative would expand housing options, including middle housing, dramatically, with capacity for smaller multi-unit developments and across a wider area of Kirkland. Combined with changes to zoning in low-density residential districts to comply with HB 1110, the Growth Alternative would help make more housing options available not only in Kirkland's Urban Centers, but also along key transit corridors and in lower-density residential areas.

Both alternatives would also have housing benefit for the community, including the creation of new affordable housing through development regulations that require and incentivize affordable housing. In the Growth Alternative, new affordable housing incentives and programs, the extension of existing affordable housing requirements, and other changes to development regulations and policies would support development of more affordable housing with growth compared to the Existing Plan Alternative.

While displacement impacts, benefits of diverse housing options, and affordable housing were identified for both alternatives, no significant adverse impacts to housing were identified in environmental analysis as discussed in Section 4.3.2.

1.7.4 Public Services and Utilities

Expected housing and employment growth under both the Existing Plan Alternative and the Growth Alternative are addressed in long-term and regular planning by utilities and public works providers. No impacts to utilities and public services as a result of growth were identified because planning by utilities and public services providers have accounted for forecasted growth in plans to expand services to meet future demand, as discussed in Section 4.4.4.

1.7.5 Sustainability, Climate, and Environment

Both the Existing Plan Alternative and the Growth Alternative would have potential impacts to air quality from construction. VMT per capita is expected to decline by 2044 in both alternatives and additional vehicle trips associated with new development would not result in additional GHG emissions because electric vehicle (EV) penetration in King County, based on the Puget Sound Regional Emissions Analysis Project, is expected to be 100%, meaning that VMT will not result in direct exhaust or tailpipe emissions locally. However, brake dust emissions would continue to increase with VMT.

While per unit utility emissions are expected to decrease with the implementation of the Clean Energy Transformation Act (CETA) through 2045, housing growth in Kirkland and EV adoption through 2044 will result in additional utility emissions. New residential development in either alternative is expected to result in an estimated 1.57 metric tons of carbon dioxide equivalent ($MTCO_2e$) per household from electricity use (kilowatt-hours) to power EVs, or 81,414 $MTCO_2e$ annually citywide by 2044. The Growth Alternative would include more multi-unit development and fewer single-unit development throughout Kirkland, resulting in lower utility emissions compared to the Existing Plan Alternative. Construction-related greenhouse gas (GHG) emissions and embodied carbon would also be lower for the Growth Alternative because it includes less than half the single-unit residential development expected under the Existing Plan Alternative. Based on cumulative energy usage and the embodied carbon of potential development under both alternatives, the Growth Alternative could result in a total GHG savings of 50,189 $MTCO_2e$.

Impacts of new housing and employment growth on air quality and GHG emissions were identified for both alternatives. However, no significant adverse impacts to air quality and climate were identified in environmental analysis, as discussed in Section 4.5.3.

2. Introduction

The City of Kirkland is updating its Comprehensive Plan as required by the GMA (Chapter 36.70A.130(5) RCW) and consistent with PSRC's VISION 2050 and Countywide Planning Policies for King County. The update will include plans to accommodate housing and employment growth targets through 2044. The key objective of the update is to plan for change in Kirkland over the next 20 years to ensure the City is sustainable, connected, and welcoming. This update will include revisions to the following elements and chapters of the Kirkland 2035 Comprehensive Plan:

- III. General
- IV. Community Character
- V. Land Use (including future Land Use Map)
- VI. Housing
- VII. Economic Development
- VIII. Environment
- IX. Transportation
- X. Capital Facilities
- XI. Utilities
- XII. (A) Public Services and (B) Human Services
- XIII. Parks, Recreation, and Open Space
- XIV. Implementation Strategies
- XV. Neighborhood Plan Chapters (A through P)

The update will also make revisions to the plan Introduction, Vision and Guiding Principles, Definitions, and Appendices. The Kirkland 2044 Comprehensive Plan Update will incorporate changes to the City's Transportation Strategic Plan (TSP, previously the TMP) in the Transportation Element.

2.1 Background

The City of Kirkland adopted the Kirkland 2035 Comprehensive Plan in 2015. The City is considering text and map changes as part of the Kirkland 2044 Comprehensive Plan Update, required by the GMA (Chapter 36.70A.130(5) RCW). The updated plan includes changes to policies in the Land Use, Housing, Transportation, Utilities, Capital Facilities, Human Services, Environment, Public Services, and Parks, Recreation, and Open Space sections for consistency with the City's recent planning efforts, PSRC's VISION 2050, Countywide Planning Policies for King County, and recent state legislation.

In 2021, King County published a countywide Urban Growth Capacity Report in which the County evaluated the capacity for growth based on measurement of development activity. That year, King County updated its Countywide Planning Policies that established growth targets for its cities and communities. As a designated Core City in King County, Kirkland has a major role in accommodating housing and employment growth. Growth targets for King County communities are established in the 2021 Countywide Planning Policies, with an expected 13,200 additional housing units and an additional 26,500 jobs in Kirkland by 2044 based on 2019 estimates. Since 2019, Kirkland has

seen residential growth of nearly 3,130 units and employment growth of over 1,500 jobs and has a remaining target to accommodate approximately 10,070 housing units and 24,980 jobs.

In 2023, the Washington State Legislature passed HB 1110, intended to accelerate production of middle housing and affordable housing and address the statewide housing shortage. This legislation requires Washington communities to implement changes to development regulations that would allow greater density in areas dedicated to detached single-unit housing. While the City of Kirkland's current zoning is consistent with many of the provisions in HB 1110, the City is required to amend the KZC to allow up to six units per lot if located within one-quarter mile of a major transit stop or if two of the six units are affordable and reduce parking minimums within one-quarter mile of transit stations before July 2025.

Although the Kirkland Comprehensive Plan and KZC, together with changes to development regulations implemented as part of the Kirkland NE 85th Street Station Area Plan, provide sufficient development capacity to accommodate Kirkland's 2044 Growth Targets, the City is revisiting its current policies and potential to encourage more growth near frequent transit to address community goals. Kirkland is required to complete its periodic update to the Kirkland Comprehensive Plan by December 31, 2024.

2.2 Study Area

The study area for this Draft SEIS is the Kirkland city limits.

Figure 2.2-1 shows the city limits and Kirkland's Urban Centers, which correspond with the PSRC-designated regional growth centers within Kirkland.

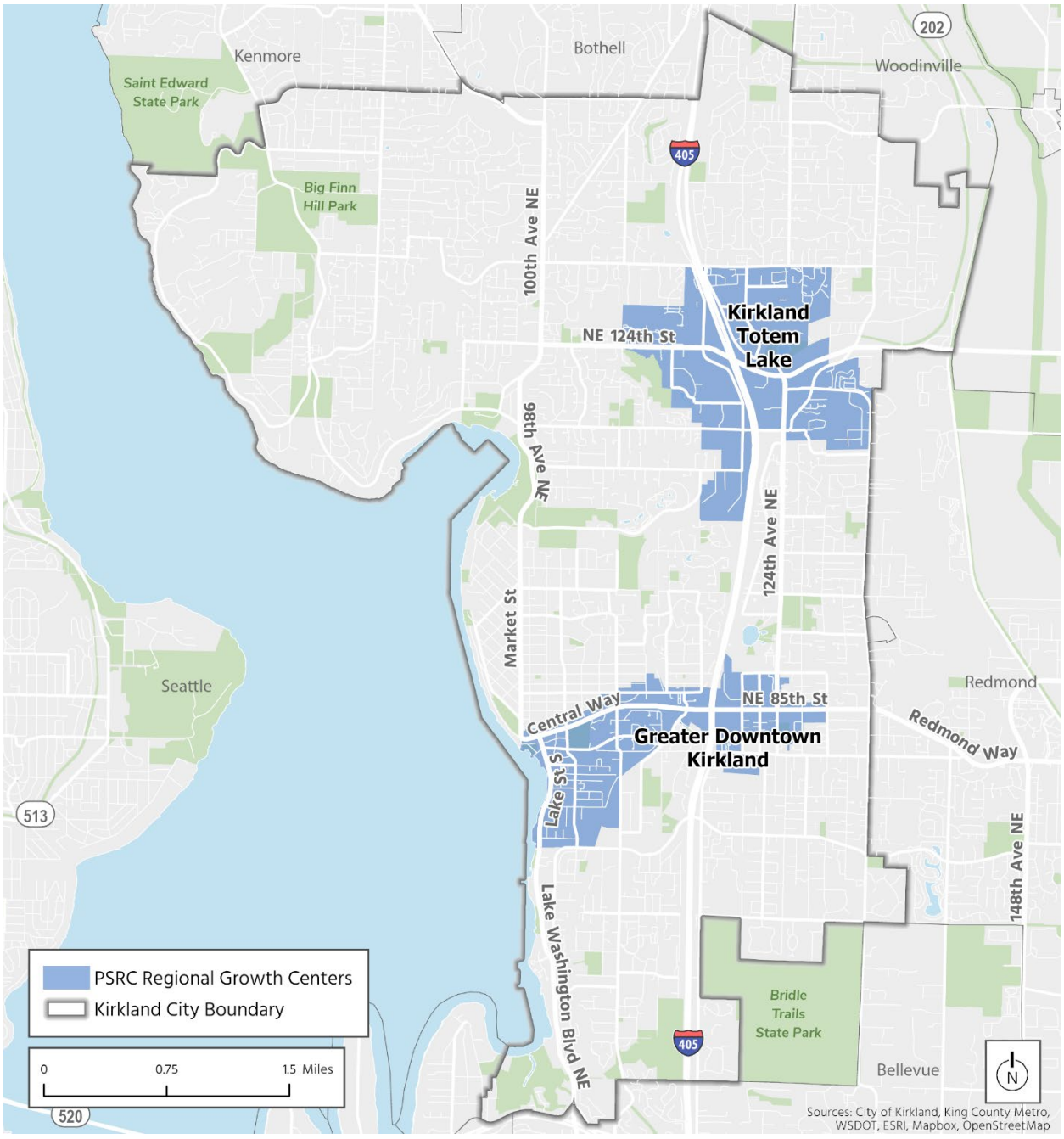


Figure 2.2-1. Study Area

2.3 State Environmental Policy Act Process

The City of Kirkland believes that the Kirkland 2044 Comprehensive Plan Update will be beneficial to the environment in that it seeks to shape future growth in a way that promotes housing choice, transit access, transportation mode shift, open space protection, and sustainability. However, in order to thoroughly evaluate the potential environmental effects of the Kirkland 2044 Comprehensive Plan Update and to provide an opportunity for additional public comment, the City has elected to prepare a Supplemental Environmental Impact Statement (SEIS) pursuant to RCW 43.21C.030 (2)(c).

2.3.1 Scoping Process

The first step in the development of the Draft SEIS was scoping under the State Environmental Policy Act (SEPA). During the scoping period, agencies, tribes, local community organizations, and the public were invited to comment on alternatives, areas of discussion, and potential impacts the Draft SEIS should analyze and consider. Specifically, the process is intended to collect input on the following topics:

- The range that the proposal alternatives considered.
- Resources potentially affected and probable impacts.
- Measures to avoid, minimize, or mitigate potential impacts of the proposal.

The scoping period was scheduled for 30 days, from October 18, 2023, to November 17, 2023, and was announced via the Kirkland 2044 Comprehensive Plan Update project website, City and project email distribution lists, and City social media channels. The City of Kirkland received seven communications with a range of comments on alternatives, evaluation of impacts, and potential Comprehensive Plan amendments.

Communications from members of the public, community organizations, and agencies were generally supportive of areas of discussion for the SEIS. Comments were largely supportive of enabling and increasing housing production, affordable housing, and accommodating growth near transit facilities. Local community organizations offered input on SEIS alternatives and analysis of those alternatives as part of the SEPA process.

2.3.2 Draft SEIS Preparation, Publication, and Review

After the scoping process was complete, a Draft SEIS was prepared. The purpose of this SEIS is to provide an impartial discussion of potential environmental impacts, reasonable alternatives, and measures to avoid, minimize, or mitigate potential impacts and to compare those across the two studied alternatives. This SEIS supplements the NE 85th Street Station Area Planned Action Final SEIS (December 2021) and City of Kirkland 2015 Comprehensive Plan Update and Totem Lake Planned Action Final Environmental Impact Statement (November 2015), which were adopted per WAC 197-11-630. The information in this Draft SEIS is provided for review and comment by interested parties and will contribute to the evaluation of proposal alternatives. During the 30-day comment period from June 10, 2024, to July 12, 2024, the City of Kirkland will seek comments from agencies, tribes, community organizations and the public. There will be multiple public hearings for the Kirkland 2044 Comprehensive Plan Update, each covering a subset of Plan elements. The hearing on June 27, 2024, at Kirkland City Hall (123 5th Avenue) will specifically include an opportunity to collect testimony on the Draft SEIS. All comments made by email during the comment period or in person at the public meeting will be accepted. Comments received during the comment period will be addressed, as applicable, in the Final SEIS.

2.3.3 Final EIS Publication

After the Draft SEIS comment period has elapsed, the City of Kirkland will issue the Final SEIS. This Final SEIS will address comments received during the comment period and may include additional information and input received from agencies, tribes, community organizations, and the public regarding the proposal. The Final SEIS may include modified alternatives or identify a preferred alternative and will inform the legislative process for the Kirkland 2044 Comprehensive Plan Update. The Final SEIS will be issued prior to City Council adoption of the 2044 Comprehensive Plan.

2.4 Community Engagement

The City of Kirkland led community engagement for the Kirkland 2044 Comprehensive Plan, and their engagement efforts were informed by the Community Engagement Plan prepared by Broadview Planning (2022) and Equity Review Report by EcoNorthwest. One of the objectives of the Community Engagement Plan was to increase participation and engage with priority populations, defined as BIPOC, people who identify as LGBTQIA+, older adults, low-income households, people experiencing homelessness, youth, renters, people with disabilities or accessibility challenges, immigrant communities, and people facing language barriers.

In late 2022 through 2023, City staff implemented the community engagement plan with these objectives in mind and sought new ways of reaching out to those who have historically not been involved in previous long-range planning processes. Where feasible, Planning and Building Department and Public Works Department Transportation Division staff combined community outreach for the TSP update.

These themes from engagement were incorporated into key themes that helped shape the Kirkland 2044 Comprehensive Plan Update. Engagement and outreach for the TSP was combined with the Comprehensive Plan process.

Through the community engagement process, the City developed and managed the following:

- Project K2044 Comprehensive Plan Update webpage.
- Project email address 2044Comprehensiveplan@kirklandwa.gov to receive public inquiries.
- Citywide email announcements about This Week in Kirkland podcast.
- Community-wide visioning event (January 2023).
- Surveys (Land Use, Transportation, Housing, Human Services, Sustainability, Climate and Environment, Economic Development, and Parks, Recreation, and Open Space).
- Focus group recruitment focused on priority populations.
- Focus group meetings (Land Use, Transportation, Housing, Human Services, Sustainability, Climate and Environment, Economic Development and Parks, Recreation, and Open Space Elements).
- Publication of informational handouts and frequently asked questions for each element (materials translated into Arabic, Farsi, Portuguese, Russian, simplified Chinese, and Spanish).
- Presentations to community groups, City Council, boards and commissions (Planning Commission, Transportation Commission, Youth Council, Senior Council, Human Services Commission), neighborhood associations, and Kirkland Alliance of Neighborhoods.
- Promotional items with the K2044 logo and tagline “You Belong Here…Sustainable-Connected-Welcoming” was imprinted on stickers, reusable cloth bags, banners and handout outs at public events.

- Tabling at community events (Kirkland City Hall for All, Evergreen Health Fair, Town Hall on Bikes, Eastside for All events, Grand Opening of Totem Lake Connector Bridge, Reopening of 132nd Square Park, King County Promotores Network Health Fair).
- Tabling at other locations and events (Peter Kirk Community Center, seasonal events, farmers markets).
- Class projects with Lake Washington and Juanita High Schools and student surveys.
- Debit cards as stipends to encourage participation in focus groups.
- Community Engagement Web Map for transportation capital projects being considered for inclusion in the prioritized projects list.

Public hearings are scheduled for May to September 2024 to receive public comment on draft goals and policies for each element of the Comprehensive Plan. The public will also have an opportunity to comment on this Draft SEIS on the K2044 Comprehensive Plan Update webpage and attend an open house within the public hearing timeframe.

2.5 Objectives

The City of Kirkland is updating the Kirkland 2035 Comprehensive Plan to comply with the requirements of the GMA and to help shape the community over the next 20 years. This periodic update addresses projected population, housing, and employment growth to the new planning horizon year of 2044. The following objectives have been established for the Kirkland 2044 Comprehensive Plan Update:

- Ensure compliance with the provisions of GMA, King County Countywide Planning Policies, VISION 2050, and state law.
- Update and refine the policies of the Kirkland 2035 Comprehensive Plan to implement the Plan's 2044 vision and accommodate the future needs of the community.
- Update and refine the policies of the City's future Land Use Map and land use concepts included in Neighborhood Plans.
- Integrate updates from the TSP into the Kirkland 2044 Comprehensive Plan's Transportation Element goals and policies and multimodal transportation project list to support the City's vision.
- Advance Diversity, Equity, Inclusivity, and Belonging initiatives through policy and regulatory changes.
- Promote sustainability to address human health, economic opportunity, climate change, GHG emissions, and environmental protection.
- Design housing options to meet existing and projected needs of all economic segments of the community.
- Develop and improve connections to the regional transit system.
- Improve resiliency for future emergencies and fiscal planning for a thriving local economy.
- Incorporate Smart City Initiatives guiding innovation, technology, and resilience in six areas: Transportation and Mobility, City Infrastructure, Digital Transformation, Built Environment, and Community Engagement

The criteria and measures by which the Kirkland 2044 Comprehensive Plan Update alternatives are evaluated are based on these objectives.

3. Alternatives

The City of Kirkland is considering text and map amendments to the Kirkland 2035 Comprehensive Plan as part of the 2044 Comprehensive Plan Update that would alter the distribution of Kirkland's population and employment growth and help shape all aspects of the community over the next 20 years (to 2044). The update will include changes to the Land Use, Housing, Transportation, Utilities, Capital Facilities, Human Services, Environment, Public Services, Economic Development, and Parks, Recreation, and Open Space sections of the Kirkland 2035 Comprehensive Plan and incorporate elements of the TSP.

This Draft SEIS includes two growth allocation alternatives: the Existing Plan Alternative (continuation of the current Kirkland 2035 Comprehensive Plan) and a Growth Alternative. Both alternatives will accommodate Kirkland's assigned growth targets for 2044, and the final preferred alternative for adoption could be a combination of elements from both alternatives.

- Existing Plan Alternative (No Action Alternative): This alternative would maintain the City's current zoning and plans, including the Kirkland 2035 Comprehensive Plan, NE 85th Street Station Area Plan and Planned Action, and adopted neighborhood plans. This would accommodate the current anticipated growth through 2044, which includes 13,200 additional housing units and 26,500 additional jobs by 2044. The Existing Plan Alternative would not include implementation of state mandates adopted in HB 1110 to illustrate the impact of these requirements as integrated with the Growth Alternative.
- Growth Alternative (Action Alternative): This alternative would establish additional residential capacity above and beyond what is needed to accommodate the City's growth targets to provide additional flexibility for the development of housing choices for the community. It would allow greater residential and commercial density near transit corridors and in select commercial or business centers and would implement regulations to encourage the production of affordable housing citywide. The Growth Alternative would include future multimodal improvements identified in the TSP and incorporated into the Comprehensive Plan. This alternative would also include updates required to comply with Washington state legislation for "middle" housing (housing at densities between single-unit detached homes and mid-rise apartment buildings) in all residential zones citywide and would allow additional middle housing typologies in residential zones. The alternative would implement affordable housing requirements for new development and allow for more commercial and mixed-use development in focused areas. These changes would accommodate the current anticipated growth through 2044, which includes 13,200 additional housing units and 26,500 additional jobs by 2044. Forecasted growth based on PSRC's regional growth forecasts and King County's allocation of anticipated growth would be the same as the Existing Plan Alternative. However, the Growth Alternative will add more potential capacity for residential and nonresidential development citywide.

In 2023, the Washington State Legislature passed HB 1110, which requires certain Washington cities to allow greater residential density near transit or where new development includes affordable housing. Amendments to the KZC to comply with HB 1110 without other changes to the Kirkland Comprehensive Plan and KZC would allow additional residential density in Kirkland's lower-density residential zones and incentivize the production of affordable housing units. This would not include the range of middle housing typologies near frequent transit corridors, commercial and mixed-use development in select business and commercial centers, or policies and projects in the TSP that are components of the Growth Alternative.

3.1 Existing Plan Alternative

Kirkland has a range of Functional and Management Plans that are adopted by reference in the existing Comprehensive Plan, which, along with the City's other plans for transportation, housing, public services, and environmental sustainability and the policies they set forth, would remain in place under the Existing Plan Alternative. Forecasted growth based on PSRC's regional growth forecasts and King County's allocation of anticipated growth would be the same as the Growth Alternative. The overall potential capacity for housing units and commercial space citywide can accommodate this estimated housing and employment growth and would not change in this alternative.

3.1.1 Land Use

The Existing Plan Alternative would retain the existing Kirkland 2035 Comprehensive Plan policies, land use designations and zoning districts, and current development regulations. Kirkland's existing zoning has the capacity to meet the required population and employment growth targets through 2044. With existing zoning, much of Kirkland's housing and employment growth would be accommodated through redevelopment in areas that currently have development capacity that exceeds existing development. Capacity for development to accommodate additional housing units and employment is based on the City of Kirkland's development regulations that plan for growth in specific areas, including the Greater Downtown and Totem Lake Regional Growth Centers. Current zoning, consistent with the Kirkland 2035 Comprehensive Plan, is shown in Figure 3.1-1.

The Existing Plan Alternative includes housing and job growth that match the City's required growth targets, with 13,200 additional housing units and 26,490 additional jobs by 2044, based on the City's existing housing and employment totals in 2019. Most of this growth would be expected in areas that are already planned for higher-density development near transit investments and existing mixed-use commercial centers and through middle housing production. Likely growth in the Existing Plan Alternative is expected primarily in Kirkland's Urban Centers, with higher forecasted housing and jobs growth in Totem Lake, North Rose Hill, and South Rose Hill, as shown in Table 3.1-1.

Since 2019, Kirkland has seen residential growth of nearly 3,130 units and employment growth of over 1,500 jobs and has a remaining target of approximately 10,070 housing units and 24,980 jobs. Development capacity based on existing zoning exceeds the City's target growth as shown in Table 3.1-1. This development capacity reflects potential for growth in housing units and employment in the Existing Plan Alternative.

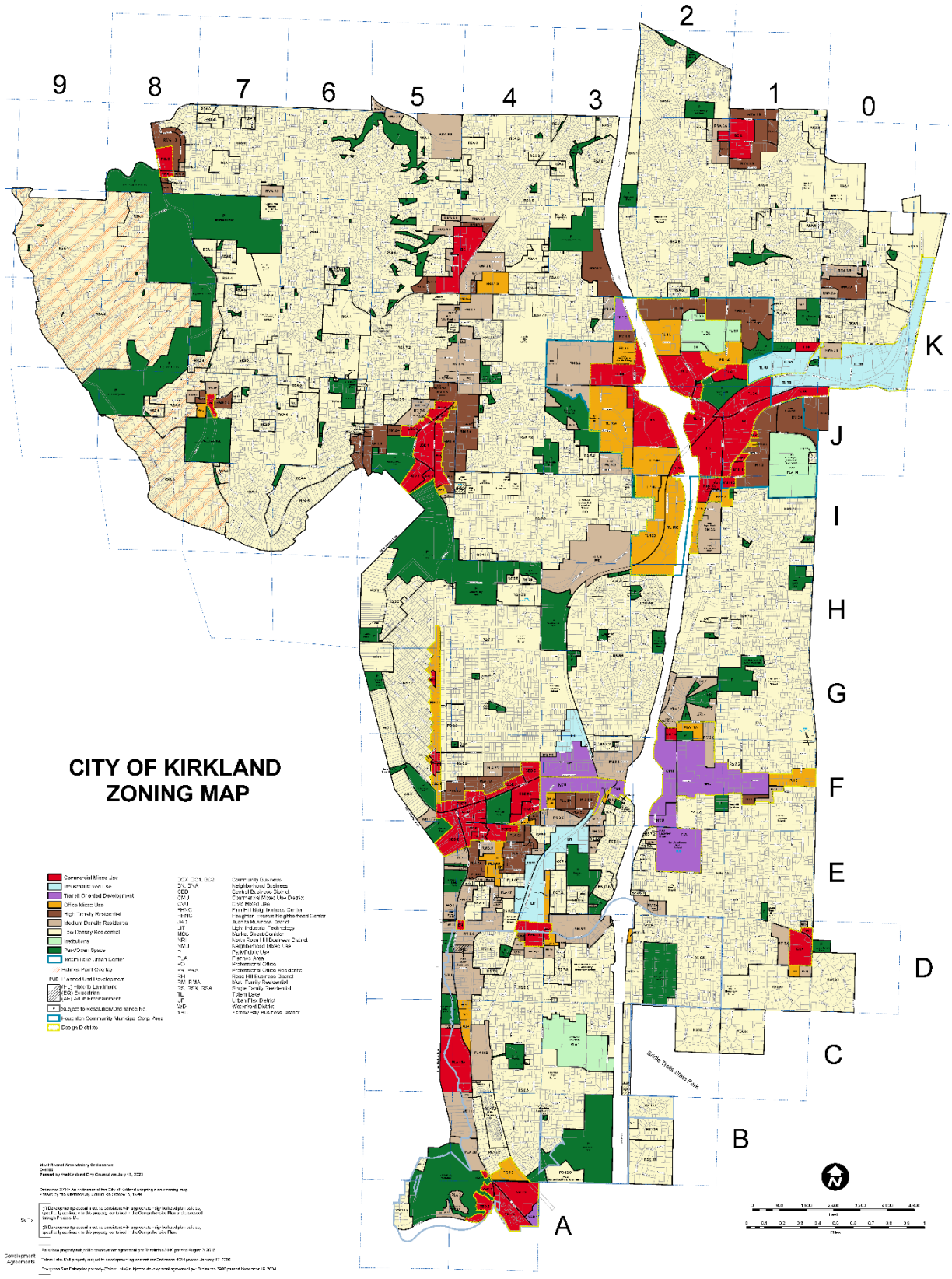


Figure 3.1-1. City of Kirkland Zoning Map

Table 3.1-1. Housing and Employment Growth by Neighborhood for the Existing Plan Alternative

Neighborhood	Current (2022) Housing Units	Forecasted Existing Plan Alternative Additional Housing Units by 2044	Existing Plan Alternative Additional Housing Capacity	Current (2022) Employment	Forecasted Existing Plan Alternative Additional Employment by 2044	Existing Plan Alternative Additional Employment Capacity
Bridle Trails	1,028	298	482	826	-24	-25
Central Houghton	1,510	602	975	1,247	560	580
Everest	668	25	40	3,348	539	558
Finn Hill	6,345	906	1,467	1,174	414	428
Highlands	1,075	59	95	99	8	9
Juanita	8,367	1,080	1,749	2,913	573	593
Kingsgate	5,174	664	1,075	1,214	141	146
Lakeview	1,827	350	567	6,726	1,529	1,581
Market	766	118	191	445	126	131
Moss Bay	4,375	714	1,156	9,104	1,563	1,616
Norkirk	1,736	72	117	1,785	246	255
North Rose Hill	3,828	1,314	2,127	3,064	1,714	1,773
South Rose Hill	1,488	788	1,276	1,472	7,562	7,822
Totem Lake	3,598	3,081	4,988	17,369	10,032	10,377
Citywide Total	**41,785**	**10,071**	**16,305**	**50,786**	**24,984**	**25,842**
Growth from 2019 Base Year	**3,129**	**13,200**	**–**	**1,506**	**26,490**	**–**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

3.1.2 Housing

The Existing Plan Alternative would maintain the City's housing policies in the Housing Element and development standards in the KZC. Development regulations in some of Kirkland's residential zoning districts, as currently described in the KZC, are not fully consistent with recent state legislation. HB 1110, which was enacted in 2023 and is required to be implemented locally in 2025, requires larger cities, including Kirkland, to allow up to four units per residential lot and up to six per lot if located within one-quarter mile of a transit stop or if two of the units are affordable. This alternative includes no changes to the City's current zoning, land use regulations, or Kirkland 2035 Comprehensive Plan, and regulations would not be entirely consistent with HB 1110.

KZC Chapter 112 currently provides affordable housing requirements for new multi-unit development in specific zoning districts and subareas. For example, in the majority of zones the KZC's minimum standards require that all new multi-unit development with four or more housing units set aside 10% of those units as affordable. Middle Housing regulations are also described in Chapter 113 for Cottage, Carriage, and Two/Three-Unit Homes and Chapter 115 for Accessory Dwelling Units. In other areas of the city—for example, in the NE 85th Street Station Area, Kingsgate Park & Ride (PR 1.8 zone), and South Kirkland Park & Ride (YBD 1 zone)—the KZC includes affordable housing requirements for different income levels based on area median income, with a mix of owner- and renter-occupied affordable units. Affordable housing requirements apply in high- and medium-density

residential, office zones, the NE 85th Street Station Area, and in some mixed-use and commercial zones, where between 10% and 15% of units are required to be set aside as affordable. These affordable housing regulations do not apply to low-density residential, central business district (CBD) and a number of other specific business district and commercial zones.

3.1.3 Transportation

The Existing Plan Alternative would include existing roadways, sidewalks, bicycle lanes, trails, transit facilities, and other transportation infrastructure within the City of Kirkland and investments in the transportation system that are funded or anticipated to be complete by 2044. This includes bicycle, pedestrian, and roadway projects with committed funding through the City of Kirkland's Transportation Element, Capital Facilities Plan, and 2023–2028 Capital Improvement Program, and 2023–2028 Transportation Improvement Program. The Existing Plan Alternative would not include updated transportation capital projects and programs planned through 2044 and would not include updated transportation goals, policies and actions that would be incorporated into the transportation element of the Kirkland 2044 Comprehensive Plan Update.

Kirkland's future transit network includes major regional investments that are planned to be in place by 2045, including the Sound Transit Stride bus rapid transit (BRT) system along Interstate 405 (I-405), and the King County Metro (Metro) RapidRide K Line from Kirkland to Bellevue. Some related projects are also incorporated into the Existing Plan Alternative, including the I-405/NE 85th Street Interchange and Inline BRT Station project associated with I-405 BRT.

3.1.4 Utilities and Public Services

The Existing Plan Alternative would continue utilities and public services policies in the Kirkland 2035 Comprehensive Plan. The City's utility policies included in the plan support coordination with local and regional utility services to accommodate future growth and emphasize renewable energy, efficiency, and conservation. Other policies in the Utilities Chapter of the Kirkland 2035 Comprehensive Plan include addressing community needs and sustainability practices for water, sewer, electricity, telecommunications, and surface water and stormwater management. The Environment section of the 2035 Comprehensive Plan also contains policies to encourage renewable energy, waste reduction, surface and stormwater management, and water conservation. Kirkland's 2020 Sustainability Strategic Plan (SSP) detailed specific actions to encourage renewable energy and green building.

The City's current public service policies include planning for adequate library, school, fire, and emergency services, correcting service deficiencies and ensuring public services and facilities are accessible by people with disabilities. The human services policies in the Kirkland 2035 Comprehensive Plan are focused on creating a diverse and inclusive community that meets the needs of all community members. The policies are intended to foster a diverse City government and to engage and support community organizations and programming targeted to different ages, abilities, and racial, ethnic, and faith groups. The current policies in the Kirkland 2035 Comprehensive Plan and efforts in the Diversity, Equity, Inclusion, and Belonging 5-Year Roadmap would continue in the Existing Plan Alternative.

3.1.5 Climate and Sustainability

In the Existing Plan Alternative, the City would continue to advance climate and sustainability initiatives under the policy guidance of the Environment Element of the Kirkland 2035 Comprehensive Plan and the 2020 SSP, formerly known as the Sustainability Master Plan. The Kirkland 2035 Comprehensive Plan provides a policy framework for the protection and restoration of the natural environment, reduction of waste and pollution, resource conservation, climate action, and local food sources. The SSP coordinates among all the City's plans, policies, programs, and actions to define specific actions to create a more sustainable future that would continue as part of the Existing Plan Alternative. The Existing Plan Alternative would not include updated goals, policies, and actions related to sustainability, climate, and the environment that would be included in the Kirkland 2044 Comprehensive Plan Update.

Sustainability

Sustainability is about meeting the needs of the present without compromising the ability of future generations to meet their needs. The major needs of the community are cleaner air and water, healthier food to eat, expanding housing options that allow people of all economic means to live in Kirkland, and furthering a more equitable and socially just City that is welcoming and inclusive of all people.

3.2 Growth Alternative

The Growth Alternative includes changes to the Kirkland 2035 Comprehensive Plan as part of the Kirkland 2044 Comprehensive Plan Update, long-term capital projects and programs, and amendments to the KZC. Updated policy guidance in the comprehensive plan will include revisions for consistency with the City's recent planning efforts. Kirkland's other plans for transportation, housing, public services, and environmental sustainability and the policies they set forth for the City would remain in place under the Growth Alternative. Forecasted growth based on PSRC's regional growth forecasts and King County's allocation of anticipated growth would be the same as the Existing Plan Alternative. However, the Growth Alternative will add more potential capacity for housing and employment growth citywide.

3.2.1 Land Use

The Growth Alternative would shift future growth to areas along transit corridors and in selected commercial or business centers. This alternative would include higher-density residential zoning along key transit corridors in Kirkland, including Central Way/NE 85th Street, Market Street/98th Avenue NE, Lakeview Drive, 108th Avenue NE, NE 70th Street, and 132nd Avenue NE. The Growth Alternative would also accommodate higher-density development in and around the commercial and mixed-use areas in Totem Lake and Juanita described below:

- Par Mac Business Park (Totem Lake): Greater density and height allowed to accommodate up to 1,200 units of housing and up to 30,000 square feet of commercial space.
- Totem Lake Southern Industrial Commercial Subarea (Totem Lake, TL 10C, TL 10D, TL 10E): Changes to enable increases in capacity for housing units and office space. This subarea is being studied as an expansion of, and in context with, the Par Mac Business Park topic.
- Goodwill Site (Juanita): Greater density and height allowed to accommodate up to 600 units of housing and up to 15,000 square feet of commercial space.
- Michael's Site and JBD 4 Zoned Properties (Juanita): Greater density and height (from 26 feet to 70 feet) allowed to accommodate up to 350 units of housing and commercial space across two parcels in the JBD 4 zone.

The Growth Alternative includes forecasted housing and job growth that match the City's growth targets, with 13,200 additional housing units and 26,490 additional jobs by 2044, the same projected growth

as the Existing Plan Alternative. Since 2019, Kirkland has seen residential growth of nearly 3,130 units and employment growth of over 1,500 jobs and has a remaining target of approximately 10,070 housing units and 24,980 jobs. Likely housing and jobs growth is expected to be focused on key transit corridors and Urban Centers. More growth—and residential growth in particular—would be expected in neighborhoods along key transit corridors, as shown in Table 3.2-1. A density of 50 units per acre was used to estimate likely growth in the Growth Alternative, but density allowances along transit corridors could be up to 100 units per acre and would shift more future housing growth to transit corridors, which could result in additional beneficial land use effects.

The Growth Alternative would include additional development capacity to encourage growth in targeted areas and help address community goals for multimodal transportation and housing affordability. Proposed areas with zoning changes proposed in the Growth Alternative are shown in Figure 3.2-1. Development capacity based on zoning amendments in the Growth Alternative exceeds the City's 2044 growth targets. Expanded residential and employment capacity with zoning changes in the Growth Alternative is summarized by neighborhood in Table 3.2-1. Higher-density allowances for multi-unit and mixed-use development along transit corridors would further expand capacity for future housing development in Kirkland.

This alternative also includes policy updates to meet state requirements and regional guidance for the Kirkland 2044 Comprehensive Plan Update as well as various strategies to reduce regulatory barriers to development citywide. To encourage development of multi-unit housing and middle housing, the Growth Alternative includes regulatory changes or changes to expand housing options.

Table 3.2-1. Housing and Employment Growth by Neighborhood for the Growth Alternative

Neighborhood	Current (2022) Housing Units	Forecasted Growth Alternative Additional Housing Units by 2044	Growth Alternative Additional Housing Capacity	Current (2022) Employment	Forecasted Growth Alternative Additional Employment by 2044	Growth Alternative Additional Employment Capacity
Bridle Trails	1,028	464	1,380	826	343	468
Central Houghton	1,510	1,322	3,930	1,247	1,619	2,208
Everest	668	135	450	3,348	566	776
Finn Hill	6,345	493	1,467	1,174	314	428
Highlands	1,075	43	127	99	38	52
Juanita	8,367	763	2,930	2,913	673	850
Kingsgate	5,174	362	1,075	1,214	107	146
Lakeview	1,827	439	1,689	6,726	1,555	2,538
Market	766	720	2,265	445	867	1,230
Moss Bay	4,375	513	1,631	9,104	1,460	2,114
Norkirk	1,736	543	1,722	1,785	828	1,139
North Rose Hill	3,828	1,742	5,178	3,064	2,563	3,496
South Rose Hill	1,488	854	2,538	1,472	6,272	8,553
Totem Lake	3,598	1,678	8,551	17,369	7,779	15,989
Citywide Total	**41,785**	**10,071**	**34,933**	**50,786**	**24,984**	**39,989**
Growth from 2019 Base Year	**3,129**	**13,200**	–	**1,506**	**26,490**	–

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

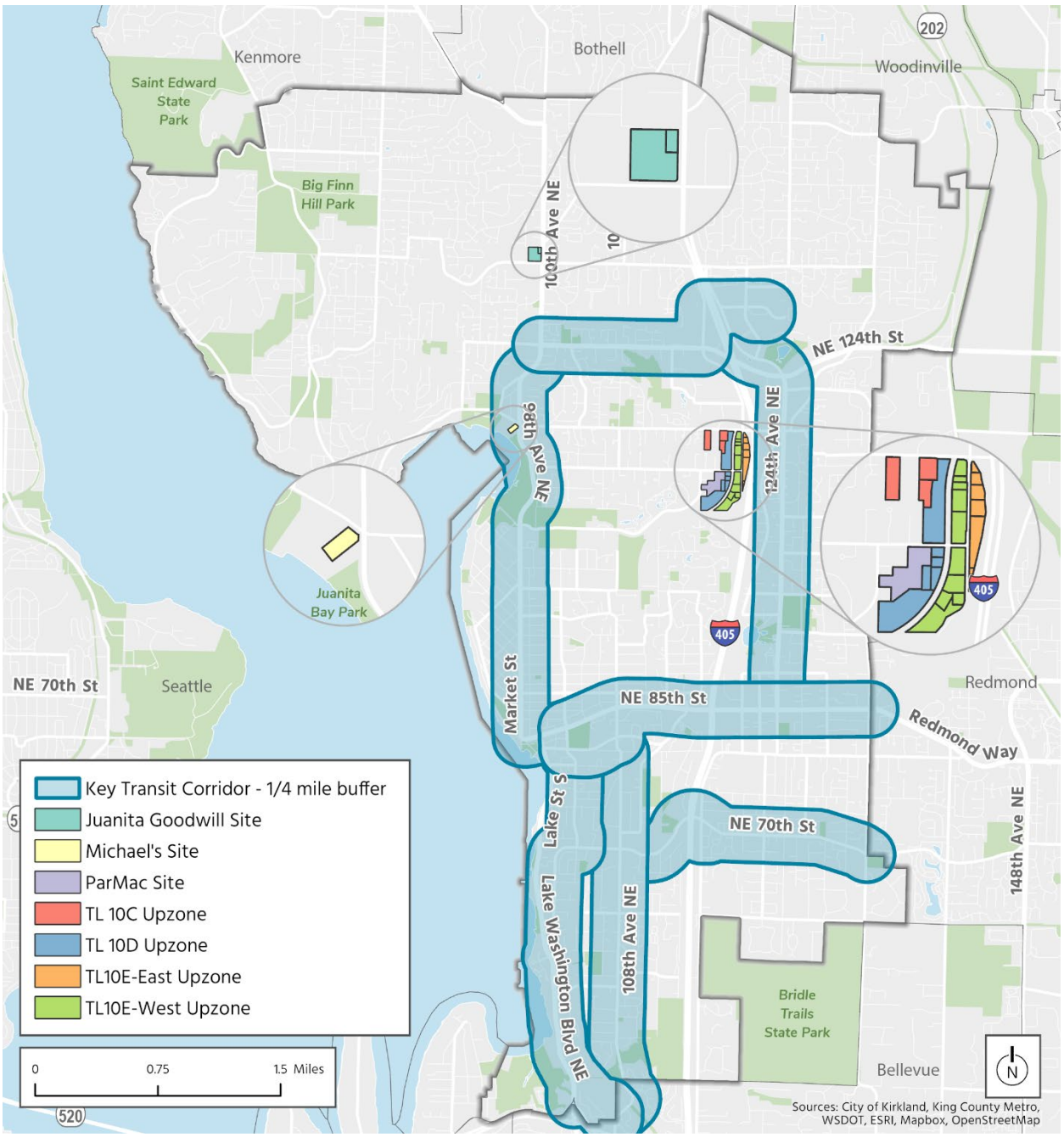


Figure 3.2-1. Map of Proposed Land Use Changes in the Growth Alternative

3.2.2 Housing

The Growth Alternative would create additional capacity (i.e., beyond that required to meet the City's housing targets) for new residential units in areas along transit corridors and accommodate mixed-use development on specific sites in Totem Lake and Juanita, as described above. Other changes to development regulations as part of this alternative would address consistency with recent state legislation in HB 1110, including the following:

- **Residential density:** Development regulations in the Growth Alternative would increase the number of units allowed in low-density residential zoning districts to six units per lot, where at least two units are set aside as affordable and within one-quarter mile of major transit stops expected with construction of I-405 BRT and RapidRide K Line.
- **Parking requirements:** Parking requirements for residential development in the Growth Alternative would be reduced to no more than one space per unit on lots under 6,000 square feet or two spaces per unit on lots over 6,000 square feet in area.

These amendments for consistency with HB 1110 would increase the density allowed in residential zones and would also add additional capacity for residential units and opportunities for affordable housing production. It should be noted that the City is required to implement these changes regardless of the ultimate composition of the Final SEIS preferred alternative in order to comply with State legislation. They are included in this alternative to provide an analysis of any effects of these changes in context with other potential changes being considered.

Kirkland has affordable housing requirements for new multi-unit development in specific zoning districts and subareas in KZC Chapter 112. The Growth Alternative would expand the City's affordable housing requirements in a few ways.

- **Affordable set aside:** The City's existing 10% affordable housing set aside in current development regulations may increase for all applicable development projects.
- **Applicable zoning districts:** Affordable housing requirements would be expanded to all commercial, mixed-use, and residential zoning districts.
- **Streamlined permitting:** Permitting processes for housing would be more predictable, with a streamlined process and transparent review timelines.
- **Specialized standards:** Specialized development standards and programs would be developed for production of housing for extremely low-income households and permanent supportive housing, including density allowances, reductions or waivers for taxes and fees, and other programs.
- **Programs for faith and community organizations:** A program would be developed for greater density allowances for faith- and community-based organizations to provide income-restricted units or on-site services.

3.2.3 Transportation

The transportation network under the Growth Alternative would include proposed capital projects and programs from the TSP that are incorporated into the Transportation Element and Capital Facilities Element of the Comprehensive Plan as well as funded roadway, bicycle, pedestrian, trails, and other transportation infrastructure investments within the City of Kirkland as part of 2023–2028 Capital Improvement Program and 2023–2028 Transportation Improvement Program. Other major regional transit investments that are externally funded and expected to be complete by 2045 include the Stride BRT system along I-405, the associated I-405/NE 85th Street Interchange and Inline BRT Station project, and the RapidRide K Line from Kirkland to Bellevue.

Transportation projects included in the TSP are prioritized and consolidated from an exhaustive list of roadway, transit, safety, and active transportation improvements. The TSP policies that would be incorporated into the Growth Alternative include the following:

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

T-2: Active Transportation – 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.

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

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

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

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

T-7: Equity – 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.

T-8: Sustainability – Minimize transportation environmental impacts through mode shift, stormwater mitigation, and other GHG reduction efforts.

T-9: Link to Land Use – 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.

T-10: Be an Active Partner – Coordinate with a broad range of groups, public and private, to help meet Kirkland's transportation goals.

3.2.4 Utilities and Public Services

In the Growth Alternative, the City would adopt or modify utilities and public services policies to promote electrification of the vehicle and transit network, strengthen conservation and sustainable building, and retrofit existing buildings for energy and water efficiency. These modifications would support the 2020 SSP, which was prompted by policies in the Kirkland 2035 Comprehensive Plan. Other policies related to public services would reduce barriers to expanding school facilities and support the integration of educational facilities into mixed-use development and coordination with regional agencies to address mental health, addiction, and homelessness services.

3.2.5 Climate and Sustainability

The Growth Alternative would include policies to support the City's climate and sustainability goals. The range of policies that promote more sustainable transportation and utilities systems, a more resilient community, and the reduction of carbon emissions in this alternative are described below:

- **Energy:** Study policies to support electrification and eliminate fossil fuels in homes, businesses, and vehicles.
- **Water:** Support more intensive water conservation measures and use of black, gray, and reclaimed water for nondrinking uses.
- **Electrification:** Encourage the installation of charging stations for EVs and bicycles near major public facilities and transportation corridors.
- **Climate:** Additional climate policies that mitigate climate change impacts, such as extreme heat and smoke events.
- **Resilience:** Promote resilience to climate change with adaptive plantings, cooling centers, and other essential community services.
- **High-performing buildings and green infrastructure:** Apply sustainability performance standards from the NE 85th Street Station Area Plan to other districts in the city.
- **Green spaces:** Preserve and enhance tree canopy and green spaces in the city to reduce carbon emissions.

Existing policies as part of the 2020 SSP would continue as part of the Growth Alternative, and the Kirkland 2044 Comprehensive Plan Update changes to policies and goals would be consistent with the actions recommended in the SSP.

4. Affected Environment, Impacts, and Mitigation Measures

4.1 Land Use

4.1.1 Affected Environment

4.1.1.1 Plans and Regulations

Growth Management Act

The Washington State GMA, adopted in 1990, is a set of planning regulations that establish requirements for cities and counties to plan for future growth. The GMA requires local governments to manage growth through the preparation and implementation of those plans through capital investments and development regulations including zoning.

The City of Kirkland is preparing the Kirkland 2044 Comprehensive Plan to accommodate 20-year growth projections through the year 2044. The City has a process for interim amendments to the plan between major updates. The previous major update to the comprehensive plan was Kirkland 2035 Comprehensive Plan, which the City completed in 2015.

The GMA establishes planning requirements and procedures and mandates the elements the City must address through the comprehensive plan. These elements include land use, housing, capital facilities, and transportation. HB 1181, passed by the state legislature in 2023, added a climate change and resiliency goal with a new required element to plan for climate change and resiliency. The GMA established a number of planning goals related to the elements, including two related primarily to growth and land use: encourage growth in urban areas with adequate public services and facilities and reduce sprawl and conversion of undeveloped land into low-density development.

Vision 2050

PSRC is the Metropolitan Planning Organization for the Central Puget Sound Region and is composed of nearly 100 members, including the four counties of the region and its cities, towns, tribes, ports, and agencies. PSRC develops regional plans and policies and coordinates decisions about regional growth in King, Pierce, Snohomish, and Kitsap Counties. The PSRC Vision 2050 plan is the long-range plan for growth in the Central Puget Sound Region and includes actions for local governments in support of the plan's vision. The two main components of the plan are the Regional Growth Strategy to focus the region's growth in designated growth centers and near high-capacity transit and the Multicounty Planning Policies that provide a common policy framework for city and county planning.

The Vision 2050 plan also informs the PSRC Regional Transportation Plan, which is a long-range plan for transportation investments in the Central Puget Sound Region. This plan builds on the transportation element in Vision 2050 and is updated every 4 years with investments and policies to create a safe and efficient transportation system for the region.

Kirkland 2035

Kirkland's 2035 Comprehensive Plan was adopted by the City in 2015. The plan's citywide land use concept aims "to maintain a balanced and complete community by retaining the community's character and quality of life, while accommodating growth and minimizing traffic congestion and service delivery costs." The Land Use Element of the Kirkland 2035 Plan envisioned a community with a mix of services, employment, and recreational opportunities and compact growth that supports a multimodal transportation network. The Land Use Element includes goals and objectives that help define this vision. The goals of the plan support the Greater Downtown and Totem Lake Urban Centers, which are also PSRC-designated regional growth centers, and the development of the NE 85th Street Station Area Plan. The City's Future Land Use Map captures this vision through broader land use categories that are implemented in the City's zoning code. The City's Future Land Use map is shown in Figure 4.1-1.

NE 85th Street Station Area Plan

The City of Kirkland adopted the NE 85th Street Station Area Plan in 2022 in response to upcoming regional transit investment. The City led the effort to plan for the future of the area surrounding the future Stride BRT station planned by Sound Transit and the new Washington State Department of Transportation (WSDOT) interchange at I-405 and NE 85th Street. The Station Area Plan adds significant housing and employment capacity to the city and outlines a vision for a mixed-use community with housing affordable to families with a range of income levels. The growth framework for the plan focused on areas where development was most feasible and focused growth in areas closest to the incoming BRT station. The plan also divided the station area into five different character districts that emphasized a different mix of uses and relationship to streets and public spaces.

The NE 85th Street Station Area Plan was the basis for the district's development standards included in the station area's Form--Based Code and Design Guidelines. The Form-Based Code regulates development in the NE 85th Street Station Area based on district, street type, and frontage type. The regulating districts within the station areas control building height, bulk, and massing. Street types within the station area regulate improvements to public right--of-way that would be associated with private development. Frontage-type standards regulate the ground floor of buildings in the station area and their relationship to the public realm and are allowed by street type in the station area. Design guidelines for the station area were informed by the character districts and ensure that proposed development meets the intent of the Station Area Plan.

Totem Lake Urban Center Enhancement and Multimodal Transportation Plan

The Totem Lake Urban Center Enhancement and Multimodal Transportation Plan was adopted in 2018. The plan for the Totem Lake Business District and Urban Center was incorporated into the Kirkland 2035 Comprehensive Plan. This plan includes policies intended to establish visual connections and effective transitions within and around the district. The plan called for a design and amenities plan to create a distinctive identity for Totem Lake and develop concepts for wayfinding, improved streets, and connections to the Cross Kirkland Corridor. The plan also encourages improvements to the district's public realm by integrating public spaces into new development.

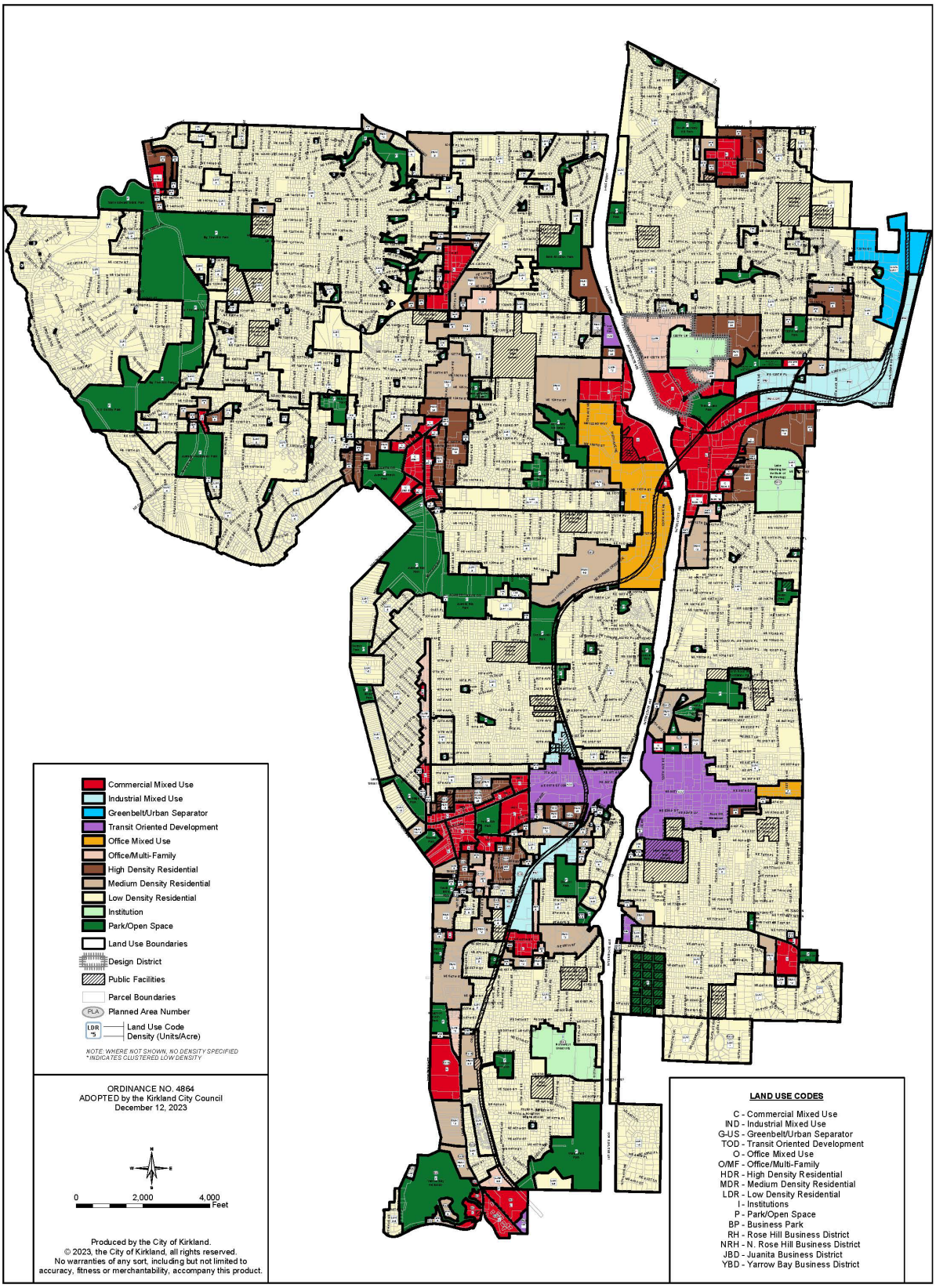


Figure 4.1-1. Kirkland 2035 Future Land Use Map as Adopted

4.1.1.2 Existing Land Uses

The City of Kirkland includes approximately 17.8 square miles and, excluding rights-of-way and water bodies, there are approximately 13.7 square miles of buildable areas in Kirkland. Current land uses in the city include a range of uses. The largest current land use category in Kirkland is single-unit residential, which comprises 55% of existing land uses in the city, according to 2023 King County tax assessor's data. Different forms of multi-unit residential development account for approximately 12% of Kirkland's existing land uses, the most common being apartments and condominiums with five or more units. Vacant land [3] comprises a total of nearly 10% of Kirkland's land area, while open space, recreational, and institutional uses (including education) comprise between 6% and 7% of the city's land area. A detailed breakdown of Kirkland's land uses by category is shown in Table 4.1-1.

Table 4.1-1. Current Land Uses in Kirkland

Land Use	Land Area (acres)	Percentage of Developable Area
Unclassified	13.4	0.1%
Single-Unit Residential	5,065.8	55.5%
Multi-Unit Residential	1,037.9	11.4%
Mixed Use	49.1	0.5%
Retail, Restaurant, and Commercial Services	303.3	3.3%
Office	253.0	2.8%
Institutional	553.6	6.5%
Industrial	176.1	1.9%
Utilities	118.8	1.3%
Parking	37.1	0.4%
Open Space and Recreational	611.5	6.7%
Vacant	905.8	9.9%

Source: King County Tax Assessor, 2020

The greatest concentrations of nonresidential uses are in Kirkland's designated Urban Centers in Greater Downtown Kirkland and Totem Lake and along specific corridors or neighborhood centers outside of designated Urban Centers. A map of existing land uses by parcel is shown in Figure 4.1-2.

[3] Vacant land as designated by the King County assessor includes undeveloped land that is not designated a public park or other recreational use. This includes some woodland and wetland areas and parkland that is not classified by the assessor's office.

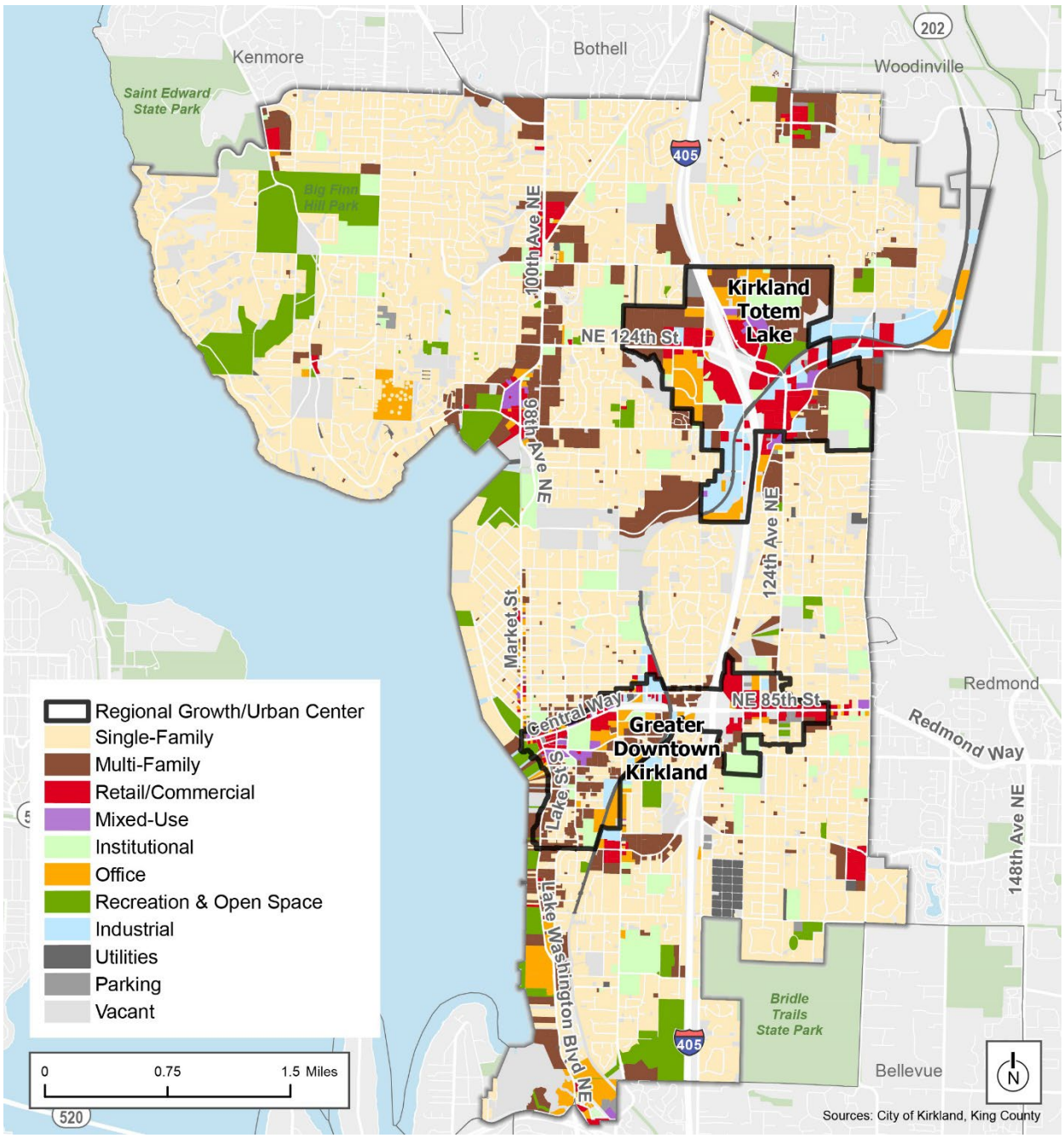


Figure 4.1-2. Existing Land Uses by Property

Urban Centers

Kirkland's designated Urban Centers in Greater Downtown and Totem Lake have denser development patterns relative to the rest of the City. Both of Kirkland's Urban Centers are PSRC-designated regional growth centers and are areas where the City has focused housing and jobs growth. PSRC measures the activity levels of regional centers in activity units, which is the sum of housing and employment. Activity levels are often measured by density for PSRC regional centers, or the sum of housing units and jobs per acre. Both the Greater Downtown and Totem Lake are zoned for a higher-density, residential, nonresidential and mixed-use development (which can include multi-unit residential uses). Together, Kirkland's Urban Centers include 27,230 jobs, or 54% of jobs citywide, and 13,020 housing units, or 31% of housing units citywide, as shown in Table 4.1-2.

Table 4.1-2. Current Employment and Housing in Urban Centers (PSRC-Designated Growth Centers)

Summary Statistic	Greater Downtown	Totem Lake	Total in Urban Centers
Land Area	564 acres	842 acres	1,406 acres
Population	16,800	6,170	22,970
Housing Units	9,700	3,320	13,020
Employment	12,830	14,400	27,230
Activity Units (housing and jobs) per Acre	53	24	29
Jobs per Resident	0.8	2.3	1.2

Source: PSRC, 2024

Greater Downtown Kirkland

Greater Downtown Kirkland is the cultural and civic heart of the community and stretches from the lakefront east past the NE 85th Street Interchange with I-405. The boundaries of this Urban Center include sections of several neighborhoods, many of the City's public and government services, and the Kirkland Transit Center. PSRC designated Greater Downtown Kirkland as a Regional Growth Center in 2023.

Greater Downtown Kirkland includes a diverse mix of land uses and has a more even mix of housing units and employment, with an estimated 0.8 jobs per resident. The downtown core primarily consists of nonresidential and mixed-use development surrounded by high-density residential and mixed-use development. The eastern end of Greater Downtown includes portions of the NE 85th Street Station Area, which is intended to support transit-oriented development around the Stride BRT station at the interchange of NE 85th Street and I-405.

Totem Lake

Totem Lake was designated as a Regional Growth Center in 2003. Totem Lake has more employment than Greater Downtown and a much larger number of jobs than housing units, with an estimated 2.3 jobs per resident. Totem Lake has a mix of retail, commercial services, and office use concentrated around the interchange at NE 124th Street and I-405 and primarily multi-unit residential development located farther from arterial roadways and I-405. Industrial uses in Totem Lake are located primarily along the Cross Kirkland Corridor, west of I-405.

NE 85th Street Station Area

The NE 85th Street Station Area was designated as part of the Greater Downtown Urban Center in 2022 with the adoption of the NE 85th Street Station Area Plan. Development in the station area is regulated by a form-based code described in further detail in the following section. Since the Station Area Plan and development regulations for this area were adopted recently, the station area has not yet developed according to the City's plans, and existing land uses are more reflective of past zoning regulations. This area overlaps heavily with the eastern end of the Greater Downtown Urban Center. Because the plan and form-based code were recently adopted, this area currently has a higher proportion of single-unit residential development (41.5%) and a higher proportion of vacant land than the Greater Downtown Urban Center. Existing land uses in the NE 85th Street Station Area are shown in Table 4.1-3.

4.1.1.3 Zoning and Development Standards

The KZC includes standards to regulate use, bulk scale, and elements of design for new development in Kirkland. Height, density, setbacks, and lot size are regulated by district in Chapters 15 through 56 in the KZC. The Form-Based Code for NE 85th Street Station Area Plan defines detailed standards and guidelines to regulate development in the station area in Chapter 57, and standards specific to overlay zones are in Kirkland are in KZC Chapters 70 through 80. Kirkland's zoning districts fall under several overarching categories.

Low Density Residential Zones

Low-density residential zones accommodate attached and detached single-unit homes; accessory dwelling units; cottage and other middle housing developments, such as duplexes and triplexes; and a range of other recreation, government, and utility uses. The minimum lot sizes in these zones range from 5,000 to 35,000 square feet, and height limits for most uses range from 25 to 30 feet above average building elevation (ABE). The zones in this category include designations RS, RSX, RSA, WD II, PLA 3C, PLA 6E, and PLA 1.

Medium Density Residential Zones

Medium-density residential zones permit attached and detached single-unit residential development and stacked multi-unit residential development at moderate densities and a range of complementary commercial, recreational, and group living uses. The minimum lot sizes in these zones range from 3,600 to 7,200 square feet for most uses and districts, but some specific uses and/or areas have larger lot size requirements. Building height limits for most uses in these zones range from 25 to 35 feet above ABE. The zones in this category include designations RM 5.0, RMA 5.0, RM 3.6, RMA 3.6, WD I, WD II, PLA 2, PLA 3B, PLA 6F, PLA 6H, PLA 6K, PLA 7C, PLA 9, PLA 15B, and PLA 17.

High Density Residential Zones

High-density residential zones permit attached and detached single-unit residential development and stacked multi-unit residential development at higher densities with a similar range of complementary commercial, recreational and group living uses included in medium-density residential zones. The required lot area per residence in these zones generally ranges from 1,800 to 3,600 square feet and for other uses ranges from 3,600 to 7,200 square feet. Height limits for the vast majority of uses in these zones are between 30 and 35 feet above ABE. The zones in this category include designations RM 2.4 RMA 2.4, RM 1.8, RMA 1.8, HENC 2, PLA 5A, PLA 5D, PLA 5E, PLA 6A, PLA 6D, PLA 6I, PLA 6J, PLA 7A, and PLA 7B.

Commercial Zones

Commercial zones permit a wide range of nonresidential and residential uses as part of mixed-use development. There are no minimum lot sizes for most uses in these districts, but there are some restrictions on gross floor area of nonresidential uses and lot area per unit for residential and assisted living units. Height limits in commercial zones range from 30 to 60 feet above ABE, depending on location. The zones in this category include designations BN, BNA, FHNC, BC 1, BC 2, BCX, HENC 1, and HENC 3.

Office Zones

Office zones permit various office and nonresidential uses, including retail, government and institutional land uses in specific zones or subject to certain additional review processes. Residential uses are permitted in a number of office zones, but may be subject to additional development or performance standards. In most office zones and for most uses, the height limits range from 30 to 60 feet above ABE, depending on location. The zones in this category include designations PO, PR 8.5, PR 5.0, PR 3.6, PR 2.4, PRA 2.4, PR 1.8, PRA 1.8, PLA 5B, PLA 5C, PLA 6B, PLA 15A, and PLA 17A.

Central Business District Zones

Central Business District zones, including CBD 1A and CBD 1B, permit a wide range of residential and commercial service, office, government and institutional uses with design review requirements. These zones do not have minimum lot sizes and require no setbacks for permitted uses. Height limits in the CBD zones range from 45 feet above ABE in CBD 1A and 55 feet above ABE in CBD 1B.

Industrial Zones

Industrial zones, including LIT and PLA 6G, permit a number of industrial, office, and larger footprint commercial service uses. The LIT zone is more flexible and accommodates a wider range of commercial uses primarily as accessory uses, while PLA 6G permits heavier industrial uses, including manufacturing, that are not permitted in the LIT zone. These zones do not have a minimum lot size and have a height limit of 35 feet above ABE in most cases.

Institutional Zones

Institutional zones, including P, PLA1 and PLA 14 permit primarily government, utilities, and public uses, but also permit some educational uses in certain areas. Detached single-unit homes are also permitted in the PLA 1 and PLA 14 zones. Lot sizes in these zones are very variable based on the permitted use, and height limits range from 25 feet to 35 feet above ABE.

Specific Corridors and Neighborhoods

Other specific corridors and neighborhood zoning designations apply to specific areas of Kirkland and include the Market Street Corridor (MSC), Juanita Business District (JBD), North Rose Hill Business District (NRHBD), Totem Lake (TL), and the Yarrow Bay business District (YBD). Along the Market Street Corridor, this zoning is intended to accommodate mixed-use development at higher densities than the surrounding neighborhoods. The neighborhood business districts put context-specific regulations on mixed-use and commercial uses in those zones. The Totem Lake zones allow for a wide range of uses at higher densities, with taller buildings and greater lot coverage than other zones.

Form-Based Code for the NE 85th Street Station Area

Development in the NE 85th Street Station Area is regulated by a separate form-based code. The districts and street types together regulate the street frontage, bulk, and height of buildings as well as the character of and improvements to local streets.

Overlay Districts

Kirkland has several overlay zones that apply additional regulations in specific areas, accommodate specific uses, or delineate processes for specific uses or types of development. These include the Holmes Point Overlay Zone, Adult Entertainment Overlay Zone, Historic and Landmark Overlay Zone, Secure Community Transition Facility Overlay Zone, and Equestrian Overlay Zone.

4.1.2 Potential Impacts

The Existing Plan Alternative and Growth Alternative were evaluated for potential land use impacts associated with higher intensity uses. One primary factor was considered in the analysis of land use:

1. **Increased density in appropriate planning areas:** Increases in housing and employment density can support GMA and PSRC planning goals and policies where sufficient density would help create more compact, walkable, and transit-supportive neighborhoods. Future growth and increases in density that are insufficient or would not advance these planning goals and policies and would represent a land use impact.

4.1.2.1 Impacts of the Existing Plan Alternative

The Existing Plan Alternative would continue the City's current land use policies and regulations in the Kirkland 2035 Comprehensive Plan and KZC. Kirkland would accommodate 13,200 additional housing units and 26,490 additional jobs by 2044 based on 2019 citywide housing unit and employment totals. Since 2019, Kirkland has seen residential growth of nearly 3,130 units and employment growth of over 1,500 jobs and has a remaining target of approximately 10,070 housing units and 24,980 jobs.

Expected residential and employment growth in Kirkland is based on PSRC growth forecasts and King County's allocation of growth as growth targets. Forecasted growth was distributed in proportion to available residential and nonresidential development capacity from the City's existing zoning. Table 4.1-3 shows growth forecasts in Kirkland under the Existing Plan Alternative. The Kirkland neighborhoods with the greatest expected housing growth in the Existing Plan Alternative are Totem Lake, North Rose Hill, and Juanita, which together are expected to accommodate over 54% of new housing units citywide by 2044. The Kirkland neighborhoods with the greatest expected employment growth in the Existing Plan Alternative are Totem Lake and South Rose Hill (within the Greater Downtown Urban Center), which together are expected to accommodate over 70% of new jobs citywide by 2044. Actual growth by 2044 may exceed anticipated growth based on the King County growth targets, but development patterns would be consistent with policy guidance from PSRC and Washington State.

Table 4.1-3. Housing and Employment Growth by Neighborhood for the Existing Plan Alternative

Neighborhood	Current (2022) Housing Units	Forecasted Existing Plan Additional Housing Units by 2044	Current (2022) Employment	Forecasted Existing Plan Additional Employment by 2044
Bridle Trails	1,028	298	826	-24
Central Houghton	1,510	602	1,247	560
Everest	668	25	3,348	539
Finn Hill	6,345	906	1,174	414
Highlands	1,075	59	99	8
Juanita	8,367	1,080	2,913	573
Kingsgate	5,174	664	1,214	141
Lakeview	1,827	350	6,726	1,529
Market	766	118	445	126
Moss Bay	4,375	714	9,104	1,563
Norkirk	1,736	72	1,785	246
North Rose Hill	3,828	1,314	3,064	1,714
South Rose Hill	1,488	788	1,472	7,562
Totem Lake	3,598	3,081	17,369	10,032
Citywide Total	**41,785**	**10,071**	**50,786**	**24,984**
Growth from 2019 Base Year for County Growth Targets	**3,129**	**13,200**	**1,506**	**26,490**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Growth by 2044 would contribute to additional residential and employment density in most Kirkland neighborhoods. Density is evaluated as units and jobs per acre, a measure of how intensive residential and nonresidential land uses are concentrated by neighborhood or citywide. This measure differs from the total number of new housing units and jobs because it relates the total number of units to the total land area. With forecasted growth, overall residential density in Kirkland would reach 4.47 housing units per acre citywide by 2044, an increase of 0.87 housing units per acre, or 24% compared to existing residential density. By 2044, overall employment density in Kirkland is expected to reach 8.53 jobs per acre citywide, an increase of over four jobs per acre, or 49% compared to existing employment density. Citywide housing and employment density in the Existing Plan Alternative would be the same as housing and employment density in the Growth Alternative, as shown in Table 4.1-4.

In the Existing Plan Alternative, Totem Lake, South Rose Hill, and North Rose Hill would potentially experience the greatest increase in housing density by 2044. Totem Lake would see the greatest increase in housing density, an increase of 3.5 units per acre (86%) by 2044. South Rose Hill and North Rose Hill would also see a greater increase in housing density compared to other neighborhoods, an increase of 1.6 units per acre (53%) in South Rose Hill and 1.3 units per acre (34%) in North Rose Hill. Central Houghton would see a moderate increase in residential density of 1 unit per acre but a large percent increase in residential density (40%) relative to the neighborhood's existing density. Moss Bay, which currently has the highest residential density in Kirkland, would become denser by 2044, with an increase in residential density of 2.1 units per acre (16%) compared to current density, but the percent change is comparable to other Kirkland neighborhoods. Development patterns under the Existing Plan Alternative would reflect a focus on new residential growth in Kirkland's Totem Lake and Greater Downtown Urban Centers.

Table 4.1-4. Housing and Employment Density by Neighborhood for the Existing Plan Alternative

Neighborhood	Current (2022) Residential Density (units/acre)	Forecasted Existing Plan Residential Density (units/acre) by 2044	Current (2022) Employment Density (jobs/acre)	Forecasted Existing Plan Employment Density (jobs/acre) by 2044
Bridle Trails	1.68	2.17	1.35	1.31
Central Houghton	2.47	3.46	2.04	2.96
Everest	3.04	3.15	15.23	17.69
Finn Hill	2.42	2.77	0.45	0.61
Highlands	2.96	3.12	0.27	0.30
Juanita	4.45	5.02	1.55	1.85
Kingsgate	4.04	4.56	0.95	1.06
Lakeview	4.38	5.22	16.13	19.80
Market	2.04	2.35	1.18	1.52
Moss Bay	12.55	14.60	26.12	30.61
Norkirk	3.39	3.54	3.49	3.97
North Rose Hill	3.88	5.21	3.10	4.84
South Rose Hill	2.93	4.48	2.90	17.78
Totem Lake	4.10	7.60	19.78	31.20
Citywide	**3.60**	**4.47**	**4.37**	**6.53**

Source: City of Kirkland, 2024, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

In the Existing Plan Alternative, Totem Lake, South Rose Hill, and North Rose Hill would potentially experience the greatest increase in employment density by 2044. South Rose Hill would experience the greatest increase in employment density—14.9 jobs per acre—an over 500% increase compared to the existing employment density in the neighborhood. Totem Lake and North Rose Hill would also see a greater increase in employment density compared to other neighborhoods: an increase of 11.4 jobs per acre (58%) in Totem Lake and 1.7 jobs per acre (56%) in North Rose Hill. Increased employment density in South Rose Hill and North Rose Hill is primarily a result of zoning changes made with the NE 85th Street Station Area Plan in 2022 and 2023. The Lakeview and Everest neighborhoods would also become denser by 2044, with an increase of 3.7 jobs per acre (23%) in Lakeview and 2.5 jobs per acre (16%) in Everest. Both neighborhoods currently have high employment density, and percent change in the number of jobs per acre is comparable to other Kirkland neighborhoods. Development patterns in the Existing Plan Alternative would reflect a focus of new nonresidential development in Kirkland's Totem Lake and Greater Downtown Urban Centers.

Increased housing and jobs density in Kirkland's Urban Centers is consistent with the City's existing 10-minute neighborhood goals that are incorporated in the SSP. Denser housing and employment would help support more 10-minute neighborhoods in and around Greater Downtown and Totem Lake, with access to retail and commercial services, employment opportunities and public service. Development in Urban Centers would also support surrounding neighborhoods with destinations that can support the daily needs of new and current residents.

Together Kirkland's Urban Centers are expected to accommodate 51% of new housing units and 76% of new employment citywide by 2044. Actual growth by 2044 may be less concentrated in Kirkland's Urban Centers, with more growth outside or these planning areas where 49% of housing growth capacity and 24% of employment growth capacity is located. Substantial growth outside Totem Lake and Greater Downtown and away from frequent transit would be less consistent with PSRC and Washington State guidance and would potentially constitute a land use impact.

Development projects over a certain size would be subject to project-level SEPA review for a determination of potential impacts and mitigation.

The pattern of housing and jobs growth expected in the Existing Plan Alternative is consistent with PSRC's Vision 2050 goals and MPPs, including:

- MPP-RGS-6: Encourage efficient use of urban land by optimizing the development potential of existing urban lands and increasing density in the urban growth area in locations consistent with the Regional Growth Strategy.
- MPP-RGS-8: Attract 65% of the region's residential growth and 75% of the region's employment growth to the regional growth centers and high-capacity transit station areas to realize the multiple public benefits of compact growth around high-capacity transit investments. As jurisdictions plan for growth targets, focus development near high-capacity transit to achieve the regional goal.
- MPP-RGS-9: Focus a significant share of population and employment growth in designated regional growth centers.
- MPP-RGS-12: Avoid increasing development capacity inconsistent with the Regional Growth Strategy in regional geographies not served by high-capacity transit.
- MPP-DP-1: Develop high-quality, compact urban communities throughout the region's urban growth area that impart a sense of place, preserve local character, provide for mixed uses and choices in housing types, and encourage walking, bicycling, and transit use.

Development patterns under the Existing Plan Alternative would focus development both in Kirkland's Urban Centers and in other nearby mixed-use areas that have adequate public services and facilities to support new development and greater activity as a result of growth. Additional density in these areas would support the planning goals of the GMA (RCW 36.70A.020) including:

- Urban growth: Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
- Reduce sprawl: Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.

Focusing growth in an already urbanized area can result in direct and indirect environmental benefits to the natural environment, including minimizing air and water pollution, reducing GHG emissions, conserving resources, and preserving natural and environmentally sensitive lands.[4]

4.1.2.2 Impacts of the Growth Alternative

The Growth Alternative would shift future growth to areas along transit corridors and in select commercial or business centers. This alternative would include higher-density residential zoning along key transit and zoning for higher-density development in and around the commercial and mixed-use areas in Totem Lake and Juanita. Under this alternative, population and job growth would align with the City's growth targets of 13,200 additional housing units and 26,490 additional jobs by 2044. Since 2019, Kirkland has seen residential growth of nearly 3,130 units and employment growth of over 1,500 jobs. For the time span from 2022 to 2044, the City has a remaining target of approximately 10,070 housing units and 24,980 jobs.

[4] Environmental Protection Agency (EPA), Our Built and Natural Environments: A Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality (2nd Edition).

Expected residential and employment growth in Kirkland is based on PSRC growth forecasts and King County's allocation of growth as growth targets. Kirkland's overall growth forecast was distributed in proportion to available residential and nonresidential development capacity included with targeted land use changes to support higher-density development. Table 4.1-5 shows the forecasted growth in Kirkland under the Growth Alternative. The Kirkland neighborhoods with the greatest expected housing growth by total units in the Growth Alternative are Totem Lake, North Rose Hill, and Central Houghton, which together are expected to accommodate over 47% of new housing units citywide by 2044. The Kirkland neighborhoods with the greatest expected employment growth in the Growth Alternative were Totem Lake and South Rose Hill, which together are expected to accommodate over 56% of new jobs citywide by 2044. Forecasted growth in these areas reflects a focus on development in Kirkland's Urban Centers.

Table 4.1-5. Housing and Employment Growth by Neighborhood for the Growth Alternative

Neighborhood	Current (2022) Housing Units	Forecasted Growth Alternative Additional Housing Units by 2044	Current (2022) Employment	Forecasted Growth Alternative Additional Employment by 2044
Bridle Trails	1,028	464	826	343
Central Houghton	1,510	1,322	1,247	1,619
Everest	668	135	3,348	566
Finn Hill	6,345	493	1,174	314
Highlands	1,075	43	99	38
Juanita	8,367	763	2,913	673
Kingsgate	5,174	362	1,214	107
Lakeview	1,827	439	6,726	1,555
Market	766	720	445	867
Moss Bay	4,375	513	9,104	1,460
Norkirk	1,736	543	1,785	828
North Rose Hill	3,828	1,742	3,064	2,563
South Rose Hill	1,488	854	1,472	6,272
Totem Lake	3,598	1,678	17,369	7,779
Citywide Total	**41,785**	**10,071**	**50,786**	**24,984**
Growth from 2019 Base Year for County Growth Targets	**3,129**	**13,200**	**1,506**	**26,490**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Growth by 2044 would contribute to additional residential and employment density in all Kirkland neighborhoods under the Growth Alternative, as shown in Table 4.1-6. With forecasted growth, citywide residential density would reach 4.47 housing units per acre by 2044, an increase of 0.87 housing units per acre or 24% compared to existing housing density. By 2044, employment density is expected to reach 8.53 jobs per acre, an increase of over 4 jobs per square acre or 49% compared to existing employment density. Citywide housing and employment density in the Growth Alternative would be the same as housing and employment density in the Existing Plan Alternative.

In the Growth Alternative, the Central Houghton, Market, and Totem Lake neighborhoods would potentially experience the greatest increase in housing density by 2044. Existing housing density in Central Houghton and Market is the lowest in the City along with Bridle Trails and Finn Hill, thus expected increases in density as a percent of existing housing density are relatively large. Central Houghton would see the greatest increase in housing density, an increase of 2.2 units per acre (88%) by 2044. Market and Totem Lake would see a similar increase in residential density of 1.9 units per acre, a 94% increase in residential density for Market and a 47% increase in residential density for Totem Lake. South Rose Hill and North Rose Hill, including portions of the Greater Downtown Urban Center, would also experience sizable increases in residential density, with an increase of 1.7 units per acre (57%) in South Rose Hill and 1.8 units per acre (46%) in North Rose Hill.

Increased housing density in the Growth Alternative reflects growth that is distributed primarily along key transit corridors and in Kirkland's Urban Centers. Additional housing density in Totem Lake, North Rose Hill, and South Rose Hill are primarily a result of growth in the Totem Lake and Greater Downtown Urban Centers, while growth in other neighborhoods would be concentrated along frequent transit routes where zoning changes would allow for denser residential and mixed-use development.

Table 4.1-6. Housing and Employment Density by Neighborhood for the Growth Alternative

Neighborhood	Current (2022) Residential Density (units/acre)	Forecasted Growth Alternative Housing Density (units/acre) by 2044	Current (2022) Employment Density (jobs/acre)	Forecasted Growth Alternative Employment Density (jobs/acre) by 2044
Bridle Trails	1.68	2.44	1.35	1.92
Central Houghton	2.47	4.64	2.04	4.70
Everest	3.04	3.66	15.23	17.81
Finn Hill	2.42	2.61	0.45	0.57
Highlands	2.96	3.07	0.27	0.38
Juanita	4.45	4.85	1.55	1.91
Kingsgate	4.04	4.33	0.95	1.03
Lakeview	4.38	5.44	16.13	19.86
Market	2.04	3.96	1.18	3.49
Moss Bay	12.55	14.03	26.12	30.31
Norkirk	3.39	4.46	3.49	5.11
North Rose Hill	3.88	5.64	3.10	5.70
South Rose Hill	2.93	4.61	2.90	15.24
Totem Lake	4.10	6.01	19.78	28.63
Citywide Total	**3.60**	**4.47**	**4.37**	**6.53**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

In the Growth Alternative, South Rose Hill, Totem Lake, and Lakeview would potentially experience the greatest increase in employment density by 2044. South Rose Hill would experience the greatest increase in employment density and an increase of 12.4 jobs per acre, a 426% increase compared to the existing employment density in the neighborhood. Totem Lake and Lakeview would also see a greater increase in employment density compared to other neighborhoods, an increase of 8.9 jobs per acre (45%) in Totem Lake and 3.7 jobs per acre (56%) in Lakeview. The Central Houghton, North Rose Hill, and Everest neighborhoods would also experience increases in employment density of 2.6 to 2.7 jobs per acre.

Similar to housing density, increased employment density in the Growth Alternative reflects growth that is distributed primarily along key transit corridors and in Kirkland's Urban Centers. However, employment growth would be more concentrated in Kirkland's Urban Centers in comparison to housing growth. Additional employment density in Totem Lake, North Rose Hill, and South Rose Hill are all expected to see larger increases in employment density as a result of new nonresidential development in the Totem Lake and Greater Downtown Urban Centers by 2044. While zoning changes along key transit corridors would allow for some additional nonresidential development outside Kirkland's Urban Centers, this new nonresidential space would mainly consist of limited commercial and retail space as part of mixed-use development.

Increased housing and jobs density across a wider area would support the City's current 10-minute neighborhood goals that are incorporated in the SSP. Denser housing and mixed-use development along transit corridors would help bring more daily needs, such as retail and commercial services, within a 10-minute walk of more Kirkland residents. This would help create more walkable environments outside of Kirkland's Urban Centers, with destinations along key transit corridors.

Together, Kirkland's Urban Centers are expected to accommodate 36% of new housing units and 65% of new employment under the Growth Alternative by 2044. Likely housing growth in this alternative is more concentrated within a quarter mile of key transit corridors, where 74% of new housing units and 75% of new jobs would be located by 2044. Actual growth by 2044 may be less focused on key transit corridors and may include more development outside these planning areas, where 26% of housing growth capacity and 25% of employment growth capacity is located. Substantial growth away from frequent transit on these corridors would potentially constitute a land use impact. Development projects over a certain size would be subject to project-level SEPA review for a determination of potential impacts and mitigation.

Residential density allowances greater than the 50 units per acre along key transit corridors used for land use and housing analysis (up to 100 units per acre) would further concentrate housing growth on these corridors. Additional housing density on key transit corridors may reduce potential housing growth in Kirkland's Urban Centers but would primarily affect areas that are farther from frequent transit. This would not represent an adverse land use impact because citywide development patterns would still focus housing and employment growth in Kirkland's Urban Centers and would not reduce future development capacity in Totem Lake or Greater Downtown, consistent with the goals of the GMA and PSRC's Vision 2050 goals and MPPs.

Additional growth along transit corridors (beyond 50 units/acre) would support increased transit access and associated per capita reductions in vehicle miles traveled and air pollution emissions, as discussed in Section 4.2.2. Although specific zoning proposals that increase densities along transit corridors beyond 50 units an acre should be examined for potential environmental impacts, they are not expected to result in program-level impacts beyond those identified in this SEIS. Planning for higher densities of 100 units/acre along transit corridors is not expected to result in adverse program-level environmental impacts and could potentially result in environmental benefits.

The overall pattern of housing and jobs growth expected in the Growth Alternative is consistent with PSRC's Vision 2050 goals and MPPs including:

- MPP-RGS-6: Encourage efficient use of urban land by optimizing the development potential of existing urban lands and increasing density in the urban growth area in locations consistent with the Regional Growth Strategy.
- MPP-RGS-8: Attract 65% of the region's residential growth and 75% of the region's employment growth to the regional growth centers and high-capacity transit station areas to realize the multiple public benefits of compact growth around high-capacity transit

investments. As jurisdictions plan for growth targets, focus development near high-capacity transit to achieve the regional goal.

- MPP-RGS-9: Focus a significant share of population and employment growth in designated regional growth centers.
- MPP-RGS-12: Avoid increasing development capacity inconsistent with the Regional Growth Strategy in regional geographies not served by high-capacity transit.
- MPP-DP-1: Develop high-quality, compact urban communities throughout the region's urban growth area that impart a sense of place, preserve local character, provide for mixed uses and choices in housing types, and encourage walking, bicycling, and transit use.

Development patterns under the Growth Alternative would focus development along key transit corridors designated by the City and near Kirkland's Urban Centers. These areas have the infrastructure and public services in place to effectively serve new development. Additional density in these areas would support the planning goals of the GMA (RCW 36.70A.020) including:

- Urban growth: Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
- Reduce sprawl: Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.

Similar to the Existing Plan Alternative, focusing growth in an already urbanized area in the Growth Alternative can result in direct and indirect environmental benefits to the natural environment, including minimizing air and water pollution, reducing GHG emissions, conserving resources, and preserving natural and environmentally sensitive lands.[5]

4.1.2.3 Comparison Land Use Impacts between Alternatives

Consistency with Countywide Planning Policies

Both the Existing Plan Alternative and the Growth Alternative are largely consistent with King County's 2021 Countywide Planning Policies. The Existing Plan Alternative, however, would not be entirely consistent with the County's framework policies on equity. This alternative would further concentrate employment and housing growth in Kirkland's Urban Centers. The Growth Alternative would promote more diverse housing and employment options at higher densities near frequent transit. The differences in how the two alternatives would address countywide planning policies for development patterns is described in Table 4.1-7.

Table 4.1-7. Consistency with Comprehensive Planning Policies by Alternative

King County Countywide Planning Policy	Existing Plan Alternative	Growth Alternative
FW-7. Develop and use an equity impact review tool when developing plans and policies to test for outcomes that might adversely impact Black, Indigenous, and other People of Color communities; immigrants and refugees; people with low incomes; people with disabilities; and communities with language access needs. Regularly assess the	Equity impact assessment tools are part of the City of Kirkland Diversity, Equity, Inclusion and Belonging 5-year roadmap, but not incorporated into the Comprehensive Plan per King County's overarching equity goal.	Equity impact assessment tools would be integrated into comprehensive planning policies to ensure test for potential adverse impacts to priority populations in Kirkland.

[5] Environmental Protection Agency (EPA), Our Built and Natural Environments: A Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality (2nd Edition).

Table 4.1-7. Consistency with Comprehensive Planning Policies by Alternative (continued)

King County Countywide Planning Policy	Existing Plan Alternative	Growth Alternative
impact of policies and programs to identify actual outcomes and adapt as needed to achieve intended goals.		
DP-3. Develop and use residential, commercial, and manufacturing land efficiently in the Urban Growth Area to create healthy, vibrant, and equitable urban communities with a full range of urban services, and to protect the long-term viability of the Rural Area and Natural Resource Lands. Promote the efficient use of land within the Urban Growth Area.	Higher-density residential and nonresidential development concentrated primarily in Urban Centers.	High-density commercial and office development is focused in Urban Centers, and residential development is focused in both Urban Centers and along key transit corridors.
DP-5. Reduce greenhouse gas emissions through land use strategies that promote a mix of housing, employment, and services at densities sufficient to encourage walking, bicycling, transit use, and other alternatives to auto travel, and by locating housing closer to areas of high employment.	Mix of uses at appropriate densities to encourage modes of transportation other than driving.	Mix of housing, services, and employment at higher densities in Urban Centers and along key transit corridors to encourage transit use.
DP-31. Focus housing and employment growth into designated regional growth centers, at levels consistent with the Regional Growth Strategy, and at densities that maximize high-capacity transit.	More concentrated growth in Kirkland's Urban Centers (PSRC-designated regional growth centers). Potential development capacity in Kirkland's Urban Centers and along key transit corridors would remain the same.	Development focused on transit corridors and Urban Centers (PSRC-designated regional growth centers), with more housing growth along key transit corridors. Potential development capacity in Kirkland's Urban Centers would be higher in this alternative, but forecast growth is distributed differently because of overall changes to development regulations.
DP-45. Adopt flexible design standards, parking requirements, incentives, or guidelines that foster green building, multimodal transportation, and infill development that enhances the existing or desired urban character of a neighborhood/community. Ensure adequate code enforcement so that flexible regulations are appropriately implemented.	Policies and plans include guidelines and standards for green building and multimodal transportation options for new development.	Policies include strengthened green building incentives and standards as well as regulations that integrate multimodal transportation in the design of new development.

Source: 2021 King County Countywide Planning Policies, amended August 15, 2023

Potential Land Use Impacts

While the amount of expected growth citywide would be the same for both the Existing Plan and Growth Alternatives, the distribution of housing and job growth would differ between the two alternatives. A comparison of growth forecasts by neighborhood between the two alternatives is shown in Table 4.1-8. Policy and regulatory changes in the Growth Alternative would shift more growth to key transit corridors and select business and commercial centers in Juanita and Totem Lake. Key transit corridors and neighborhoods are shown in Figure 4.1-3. Overall, housing and employment growth in the Growth Alternative would be more diffuse, with growth distributed into more of Kirkland's neighborhoods but concentrated around frequent transit. Zoning to support higher-density development, particularly within one-quarter mile of transit corridors, would result in more housing and employment growth in areas with access to frequent transit and parts of the Central Houghton, Market, and Lakeview neighborhoods in particular.

Table 4.1-8. Comparison of Residential and Employment Growth in the Growth and Existing Plan Alternatives

Neighborhood	Forecasted Existing Plan Additional Housing Units by 2044	Forecasted Growth Alternative Additional Housing Units by 2044	Forecasted Existing Plan Additional Employment by 2044	Forecasted Growth Alternative Additional Employment by 2044
Bridle Trails	298	464	-24	343
Central Houghton	602	1,322	560	1,619
Everest	25	135	539	566
Finn Hill	906	493	414	314
Highlands	59	43	8	38
Juanita	1,080	763	573	673
Kingsgate	664	362	141	107
Lakeview	350	439	1,529	1,555
Market	118	720	126	867
Moss Bay	714	513	1,563	1,460
Norkirk	72	543	246	828
North Rose Hill	1,314	1,742	1,714	2,563
South Rose Hill	788	854	7,562	6,272
Totem Lake	3,081	1,678	10,032	7,779
Citywide Total	**10,071**	**10,071**	**24,984**	**24,984**
Growth from 2019 Base Year	**13,200**	**13,200**	**26,490**	**26,490**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Note: The Growth Alternative adds development capacity beyond the growth targets that are not reflected in expected growth.

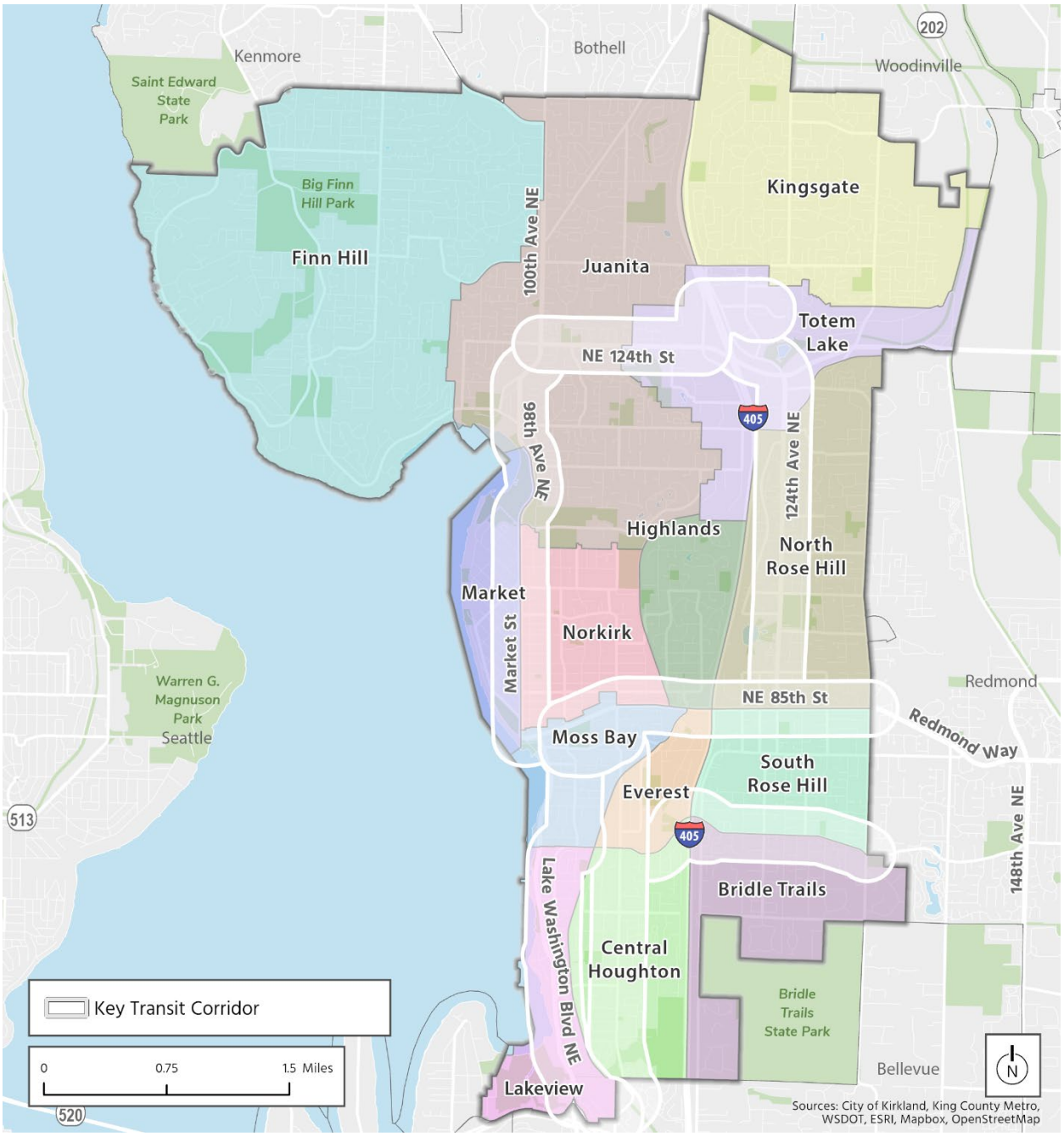


Figure 4.1-3. Key Transit Corridors and Neighborhoods

Development capacity in the Existing Plan Alternative is more limited and is primarily located in Totem Lake and the Greater Downtown Urban Center. The Existing Plan Alternative would result in more concentrated growth in Totem Lake, North Rose Hill, and South Rose Hill because these neighborhoods currently have the most development capacity with current zoning for the Totem Lake and the NE 85th Street Station Area (within the Greater Downtown Urban Center). Both planning areas are appropriate for denser development and align with investments in public services, transit and other infrastructure. The intense focus of development in Kirkland's Urban Centers, however, would concentrate potential temporary impacts from construction related to new development in Totem Lake and Greater Downtown. A comparison of growth forecasts in Urban Centers between the Existing Plan and Growth Alternatives is shown in Table 4.1-9.

Table 4.1-9. Comparison of Housing and Employment Growth in Planning Areas in the Existing Plan and Growth Alternatives

Planning Area	Existing Plan Alternative Additional Housing Units by 2044	Growth Alternative Additional Housing Units by 2044	Existing Plan Alternative Additional Employment by 2044	Growth Alternative Additional Employment by 2044
Key Transit Corridors & Urban Centers	8,537 (70% of forecasted growth)	8,537 (85% of forecasted growth)	23,751 (92% of forecasted growth)	23,751 (95% of forecasted growth)
Urban Centers	5,163 (51% of forecasted growth)	3,631 (36% of forecasted growth)	19,017 (76% of forecasted growth)	19,017 (65% of forecasted growth)
Greater Downtown	2,445	1,335	9,606	6,582
Totem Lake	2,718	2,296	9,411	9,588
Transit Corridors	6,687 (66% of forecasted growth)	7,416 (74% of forecasted growth)	20,575 (82% of forecasted growth)	18,659 (75% of forecasted growth)
NE 124th St/ NE 128th St	613	290	896	585
NE 68th St/ NE 70th Pl	62	603	9	696
Central Way/ NE 85th St	3,891	2,249	10,247	7,272
Market St/ 98th Ave NE	235	1,351	490	1,648
108th Ave NE/ 6th St S	53	850	245	1,137
Lake St/ Lake Washington Blvd NE	1,216	1,035	4,293	3,609
124th Ave NE/ Totem Lake Blvd	616	1,038	4,397	3,712
Citywide Total	**10,071**	**10,071**	**24,984**	**24,984**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Future development in the Growth Alternative would still be focused on Kirkland's Urban Centers but would shift more development to key transit corridors in other neighborhoods. The vast majority of both housing and jobs growth would be in either Urban Centers or along key transit corridors. Housing and employment growth in this alternative would be somewhat more diffuse because development capacity would be less constrained than in the Existing Plan Alternative. Future development under the Growth Alternative would potentially result in more residential and employment growth along key transit corridors, where services and infrastructure would also support growth. Potential temporary construction impacts related to new development would be somewhat

more distributed in this alternative compared to the Existing Plan Alternative, with more new development likely to occur on corridors outside of Urban Centers.

4.1.2.4 Avoidance, Minimization, and Mitigation Measures

The Existing Plan Alternative and Growth Alternative are not anticipated to have any significant adverse environmental impacts to land use impacts in Kirkland and would require no avoidance, minimization, or mitigation measures. Development under either alternative would be subject to the City's development regulations and would be required to comply with the City's design standards in Chapter 92 of the KZC, and, where applicable, design guidelines in Section 3.30.040 of the Kirkland Municipal Code (KMC).

4.2 Transportation

4.2.1 Affected Environment

4.2.1.1 Plans and Regulations

Complete Streets Policy (2016)

The City of Kirkland's Complete Streets ordinance was adopted in 2006 and updated in 2016. The Complete Streets approach integrates people and place in the planning, construction, operation, and maintenance of transportation networks, helping to ensure streets are safe for people of all ages and abilities while balancing the needs of different modes. The City's ordinance emphasizes safe, convenient, and comfortable travel for all ages and abilities by any combination of foot, bicycle, transit, or motor vehicle be accommodated to the maximum extent practical in all transportation facilities.

Transportation Master Plan (2015)

The City of Kirkland's previous TMP was adopted in 2015 and incorporated into the Transportation Element of the Kirkland 2035 Comprehensive Plan. The TMP set forth transportation policy for the City of Kirkland and recognized the City's transportation needs at the time it was adopted. The plan provides more detail and context to the goals and objectives of the Transportation Element and includes actions to implement the policies in the element. The TMP includes a hierarchy of transportation modes that help prioritize projects and make decisions related to the transportation system. This mode hierarchy prioritizes vulnerable users and sustainable forms of transportation, placing priority in the following order from highest to lowest: (1) walking, (2) biking, (3) transit, (4) motor vehicles. This hierarchy is intended to ensure that the needs of each group of users is considered in the City's planning process.

The TMP includes a 20-year list of Capital Projects, defining the transportation projects to be included in the City's Capital Facilities Plan and incorporated into the Kirkland 2035 Comprehensive Plan. A plan for new transportation connections was developed in response to the policies and actions in the TMP and incorporated into the Kirkland 2035 Comprehensive Plan, as shown in Figure 4.2-1. The projects detailed in this section of the plan help guide investments in the City's transportation system as part of the 6-year Capital Improvement Program.

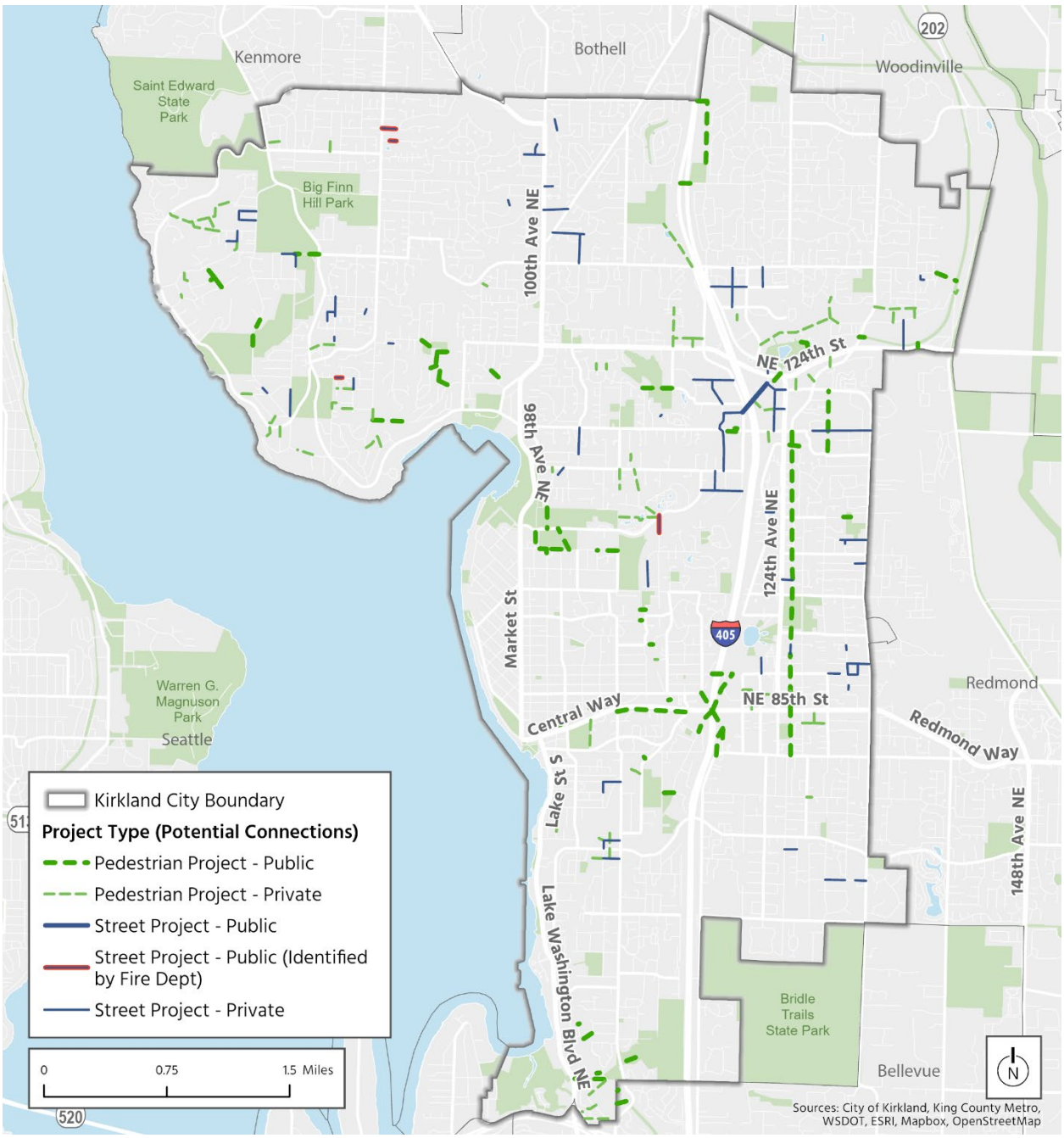


Figure 4.2-1. Citywide Transportation Connections

Active Transportation Plan (2022)

The Active Transportation Plan, adopted in June 2022, reaffirms Kirkland's commitment to a multimodal system of transportation choices by providing network and infrastructure improvement recommendations to enable people of all ages and abilities to safely walk, bike, and roll in Kirkland. The implementation of these recommendations is intended to increase the number of people using active modes for transportation, which provides benefits for public health and the environment and reduces traffic congestion as well. This plan also addresses the City Council goal for more balanced transportation and reduced reliance on single-occupancy vehicles.

The three primary goals of the plan are as follows:

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

Transit Implementation Plan (2019)

The Kirkland Transit Implementation Plan (KTIP) is a tool to improve transit in Kirkland to connect residents with where they want to go in the fastest and most convenient way possible. The plan incorporates the work of the regional Metro and Sound Transit plans as well as community input that was used to develop the City's TMP in 2015. The KTIP was developed based on input from the community during outreach efforts between fall 2017 and fall 2018. The KTIP builds on the goals of the TMP and is the result of a year-long process that involved local stakeholders, transit agencies, community members, and comprehensive technical analyses to understand the current state of fixed-route transit service and plan. KTIP also identifies key speed and reliability projects and two programmatic projects along with recommended timelines for implementation to coincide with regional transit agency projects.

Vision Zero Action Plan (2022)

The City of Kirkland's first Vision Zero Action Plan was developed to achieve the Kirkland City Council Vision Zero goal to eliminate all transportation-related serious and fatal injuries in the city. The City Council adopted a zero-fatality, zero-serious injury safety goal as a part of Kirkland's 2015 TMP. The Kirkland 2035 Comprehensive Plan also includes Safety Goal T-0, stating that by 2035, all transportation-related fatal and serious-injury crashes are eliminated in Kirkland. The Vision Zero Action Plan was adopted in June 2022 to guide progress toward this goal. Vision Zero focuses on a Safe System Approach to achieving Vision Zero.

The Vision Zero Action Plan includes four key objectives:

- Build a robust and transparent data framework.
- Prioritize safe street design.
- Operate safe streets.
- Promote and institutionalize a culture of safety.

Intelligent Transportation Systems Strategic Plan (2020)

The City of Kirkland's Intelligent Transportation System (ITS) Plan, adopted in May 2020, 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 that is 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 follow:

- Field elements consist of traffic signal controllers and associated equipment, closed-circuit television cameras, and multimodal detection.
- Communications network includes the media (fiber, cellular, or other), equipment, and software to manage communications from the Traffic Management Center to the field and between traffic signals.
- Systems and software provide traffic signal control, system health monitoring, video management, closed-circuit television camera control, and other functions.
- Staff and skills encompass the staff hours and skills needed to operate and maintain the ITS elements.

Safer Routes to School Action Plans (2020)

The Safer Routes to School Action Plans were developed in cooperation with the Lake Washington School District, law enforcement, design professionals, students, parents, and neighborhoods. The City Council adopted the plans in September 2020. The action plans identify key steps to make walking, biking, and riding the bus to school safer, more convenient, and fun. The action plans lay out obtainable goals and actions, as follows:

- Engage all demographic groups to ensure safe, healthy, and fair outcomes for all students, including students from low-income families, students of color, and students with disabilities.
- Fill gaps in the sidewalk network, and improve crosswalks to make it safer to walk and bike to schools and to bus stops.
- Improve traffic circulation in and around schools through traffic calming, education, and enforcement.
- Promote the benefits of walking, biking, taking the bus, and carpooling and provide incentives to encourage more students to choose these modes of transportation for getting to school.
- Educate students, parents, and the community about road safety rules for all modes of transportation to reduce collisions and make it safer for all students.
- Deter unsafe driver, pedestrian, and bicyclist behaviors through safe street design, education, meaningful police-community relationships, and enforcement.

Totem Lake Urban Center Enhancement and Multimodal Transportation Network Plan (2018)

The Totem Lake Urban Center Enhancement and Multimodal Transportation Network Plan provides direction for the Totem Lake Business District in Kirkland, which is a PSRC-designated Regional Growth Center. The plan emphasizes compact development, increased density, and proximity to transit to reduce VMT and GHG emissions. As a primary center of activity for Kirkland, the Totem

Lake Urban Center is expected to attract continued growth in housing and employment. The plan addresses land use policies through 2035, with development capacity allowing for levels above growth targets. The plan also highlights the City's commitment to seeking grants for transportation improvements in line with the region's designated Urban Centers.

Cross Kirkland Corridor Master Plan (2014)

The Cross Kirkland Corridor Master Plan, adopted by the City Council in June 2014, outlines the development of the regional trail that is a portion of the larger Eastrail trail corridor along the Eastside (formerly Eastside Rail Corridor). The plan identifies the community's vision for the Cross Kirkland Corridor, types and locations of amenities, and strategies for handling road crossings and mixing zones. Its adoption reflects a comprehensive approach to shaping the trail's evolution in alignment with community goals and needs.

NE 85th Street Station Area Plan (2022)

The City adopted the NE 85th Station Area Plan in June 2022 in response to the voter-approved transit funding package, Sound Transit 3 (ST3), which involves a reconfigured interchange and a BRT Stride station at NE 85th Street and I-405 by 2026. The Stride BRT line will connect Kirkland to Link Light Rail service at stations in downtown Bellevue and the Lynnwood Transit Center, with bus service every 10 to 15 minutes. The Station Area Plan considers changes to policies, regulations, and zoning to encourage transit-oriented development near the BRT station and includes planned active transportation improvements for people of all ages and abilities.

Other Relevant Studies

In addition to the policies and plans described above, the City has also conducted corridor-specific studies listed below. All of the studies listed identify potential multimodal safety improvements.

Holmes Point Street Design Standards and Corridor Study (2022)	Updated street standards and proposed improvements for multimodal safety given anticipated development.
Juanita Drive Corridor Study (2014)	Identifies key multimodal safety improvements along Juanita Drive for future construction in the Capital Improvement Program.
Lake Washington Boulevard Promenade Study (2023)	Identifies recommended pedestrian and bicycle improvements to the Lake Washington Boulevard corridor.
NE 128th Street Corridor Study (2022)	Identifies key multimodal safety improvements along the NE 128th Street corridor and four secondary corridors within the Totem Lake Urban Center.
NE 131st Way/90th Ave NE Multimodal Corridor Study (2021)	Identifies concepts for pedestrian and bicycle safety improvements and solutions to stormwater drainage concerns along NE 131st Way/90th Ave NE.

King County Metro Plans

Metro’s Metro Connects Plan is a long-range service and capital plan to for bus service to all of King County, originally published in 2017 and subsequently updated in 2021. The plan responds to regional challenges, including historic inequities, displacement risk, a worsening climate crisis, integration of a wide range of mobility services, and new sustainable funding sources (Figure 4.2-2). Metro Connects is key to Metro’s ability to advance its mission, vision, and policy goals.

Source: King County Metro 2021

Figure 4.2-2. Metro Connects' Strategic Plan Goals

Regional Transportation Projects

Major transit improvements from Metro and Sound Transit are expected to be in place by 2044.

In 2016, the Sound Transit 3 Plan was approved for funding by voters in the Regional Transit Authority District. This plan includes regional high-capacity transit improvements, with the expansion of light rail, BRT, and commuter rail. In Kirkland, two projects funded through Sound Transit 3 would expand transit access to and from Kirkland. The Stride S2 BRT line will run from Lynnwood to Bellevue on I-405 through Kirkland, connecting the Lynnwood City Center and Bellevue Transit Center light rail stations, now known as the Sound Transit STRIDE project. This BRT line would stop at the Brickyard Park & Ride, at the Totem Lake/Kingsgate Station, and at the NE 85th Street/I-405 Station Area in Kirkland and is expected to begin service in 2028. Sound Transit 3 also includes a new light rail line between the South Kirkland Park & Ride and Issaquah via Bellevue, with South Kirkland Park & Ride as the northern terminus and the only station in Kirkland. Service is expected to begin in 2044.

Metro is also planning an expansion of RapidRide BRT service in Kirkland with the RapidRide K Line, currently in design. The RapidRide K Line would connect the Totem Lake and Kirkland Transit Center with downtown Bellevue, terminating at the Eastgate Park & Ride. Service on the RapidRide K Line is expected to bring more frequent, reliable bus service to Kirkland in 2030.

4.2.1.2 Roadways

Kirkland's streets are categorized into five functional classifications based on their intended use, including freeways, principal arterials, minor arterials, collectors, and local streets (Figure 4.2-3). Freeways provide high-speed connections between regional destinations. Functional classifications are used to determine roadway design, including characteristics such as the number of lanes, speed limit, and roadway capacity. The only freeway in the city is I-405, a north-south interstate through Kirkland. Speed limits correlate with roadway functional classification, with the highest speed limit of 60 mph along I-405. Most principal and minor arterials have a posted speed limit of 35 mph (Figure 4.2-4).

The WSDOT Freight and Goods Transportation System classifies important freight routes throughout the state based on the annual freight tonnage moved (Figure 4.2-5). I-405, classified as a T-1 route, carries the highest freight volumes, although most trucks along the corridor are passing through the city rather than traveling along local roadways. Two principal arterials—NE 85th Street and NE 124th Street—are classified as T-2 and carry 4 to 10 million tons of freight each year. Several additional arterials are classified as T-3 truck corridors, and one collector street is classified as a T-4 truck corridor. Local destinations for freight include Kirkland's large retail hubs in the Greater Downtown, Totem Lake, and the mixed-use industrial zone along the Cross Kirkland Corridor.

In 2022, the highest daily traffic volumes were along NE 85th Street, NE 124th Street, and 100th Avenue NE (Figure 4.2-6). Traffic conditions were collected at 40 intersections throughout the city to determine peak hour conditions for vehicles. Analysis results provided the average seconds delay per vehicle at signalized and unsignalized intersections, which were classified into intersection level of service based on their overall delay (Table 4.2-1).

Figure 4.2-3. Roadway Network

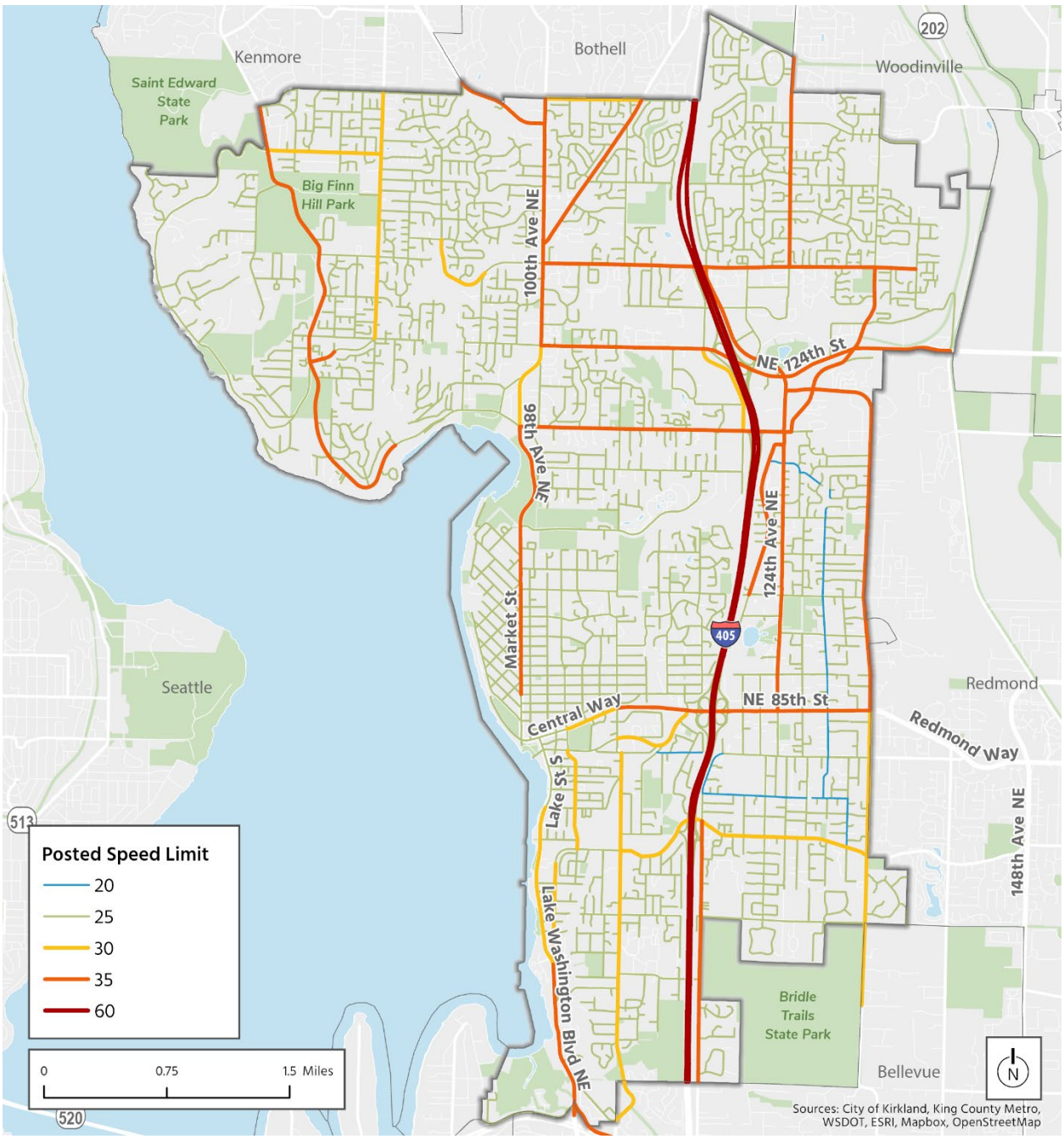


Figure 4.2-4. Posted Speed Limits

Figure 4.2-5. Freight and Goods Transportation System

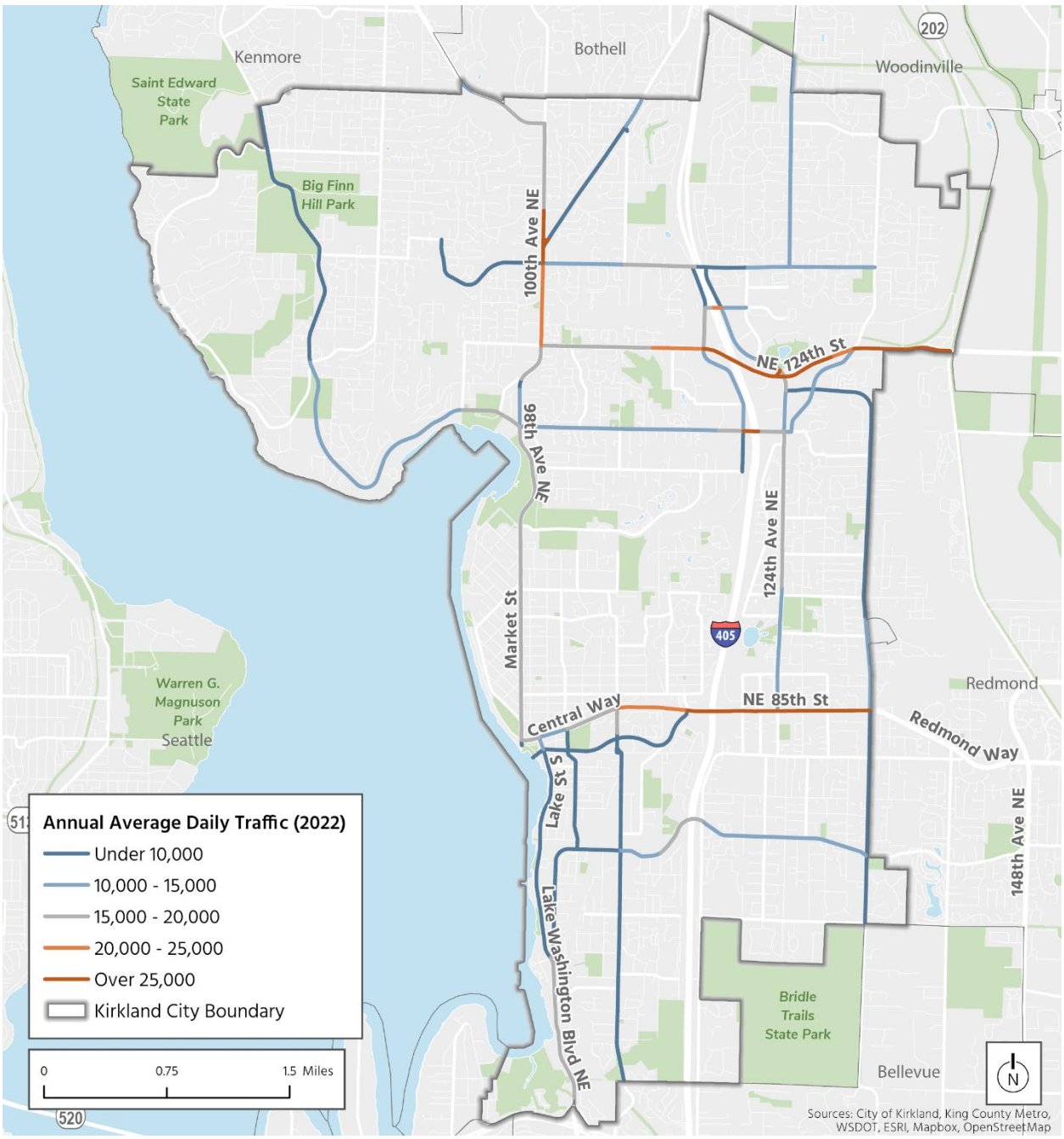


Figure 4.2-6. Annual Average Daily Traffic for Arterial Roadways in Kirkland (2022)

Table 4.2-1. Peak Hour Delay at Major Intersections (2022)

ID	Intersection	AM LOS	AM Delay	PM LOS	PM Delay
1	NE 85th St & 132nd Ave NE	D	37.2	D	45.4
2	NE 85th St & 124th Ave NE	C	20.6	D	35.5
3	NE 85th St & 122nd Ave NE	A	5.3	A	6.9
4	NE 85th St & 120th Ave NE	C	21.4	D	42.1
5	NE 85th St & 114th Ave NE	C	28.9	D	38.5
6	Central Way & 6th St	C	22.5	D	41.3
7	Central Way & 3rd St	B	16.9	C	26.2
8	Central Way & Lake St	B	19.4	C	34.7
9	Kirkland Ave NE & Lake St	B	11.2	B	14.8
10	Lake WA Blvd & NE 38th Pl	B	11.7	C	20.2
11	Lake WA Blvd & Lakeview Dr	D	37.3	C	27.5
12	NE 68th St & 108th Ave NE	C	26.4	C	30.4
13	NE 70th Pl & 116th Ave NE	C	34.8	C	27.6
14	98th Ave NE & Forbes Creek Dr	C	27.1	A	7.4
15	98th Ave NE & Juanita Dr/NE 116th St	C	32.6	D	54.8
16	NE 116th St & 120th Ave NE/I-405 On-Ramp	C	33.8	D	36.9
17	NE 116th St & 124th Ave NE	C	21.9	C	31.0
18	100th Ave NE & NE 124th St	D	36.9	D	40.6
19	100th Ave NE & NE 132nd St	C	29.7	D	46.1
20	100th Ave NE & Juanita-Woodinville Way NE	B	19.1	B	17.4
21	100th Ave NE & Simonds Rd	D	39.0	C	33.2
22	100th Ave NE & NE 145th St	C	30.5	C	34.8
23	NE 124th St & 124th Ave NE	C	26.6	D	48.9
24	NE 124th St & 116th Ave NE/I-405 On-Ramp	F	80.5	E	55.3
25	NE 124th St & Slater Ave	E	70.2	E	58.9
26	NE 124th St & Willows Rd	D	43.2	D	41.0
27	NE 132nd St & 116th Way NE	E	63.5	D	45.4
28	NE 132nd St & Totem Lake Blvd	F	83.7	C	32.8
29	NE 132nd St & 124th Ave NE	C	25.4	D	37.3
30	NE 132nd St & 132nd Ave NE	D	40.4	D	37.4
31	Totem Lake Blvd & 120th Ave NE	C	22.0	C	33.3
32	NE 128th St & 120th Ave NE	D	36.4	D	44.0
33	NE 128th St & Totem Lake Blvd	B	12.7	C	25.9
34	NE 128th St & Direct Access Ramps	C	22.7	C	26.3
35	NE 128th St & 116th Ave NE	C	32.0	D	37.3
36	NE 144th St & 124th Ave NE	B	13.8	B	16.7
37	NE 145th St & Juanita Woodinville Way NE	C	31.8	C	23.3
38	NE 72nd Pl & I-405 Ramp	B	19.7	B	18.4
39	NE 120th St & Slater Ave NE	C	22.6	C	30.2
40	NE 120th St & 124th Ave NE	B	16.3	B	15.0

LOS = level of service

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: LOS Analysis, 2023

Safety

Between 2018 and 2022, 4,670 crashes occurred on Kirkland streets (excluding the interstate system), as shown in Figure 4.2-7. Table 4.2-2 summarizes the total crashes by severity level and location type in Kirkland excluding I-405 in severity but reporting crashes on I-405 in total number. Over 63% of crashes occurred on segments as opposed to intersections. Nine fatal crashes and 66 serious-injury crashes occurred during this period, with a fairly equal split between segments and intersections. Several crashes have occurred outside of public roadways, including four fatal and five serious injury crashes in parking lots. Most crashes (78%) were no-injury crashes.

Table 4.2-2. Crash Frequency by Severity (2018–2022)

	Segments	Intersections	Total
Fatal	3	5	8
Serious Injury	19	33	52
No Injury	1051	1,37	2,391
Total (Including I-405)	**1,410**	**1,995**	**3,403**

Table 4.2-3 summarizes the total crashes by crash type and location type. Rear-end crashes were the most common crash type overall (39%), with over 65% occurring on segments. Rear-end crashes were also the most common crash type on segments (42%). Angle crashes were the next most common crash type (21%) and the most common intersection crash type (41%). Pedestrian- and bicyclist-involved crashes accounted for 4% of crashes, the majority occurring at intersections (64%).

Table 4.2-3. Crashes by Type (2018–2022)

	Fatal Collisions	Injury Collisions	Total
Right Angle/Broadside	1	119	372
Sideswipe/Lane Change	0	48	355
Rear-End	1	296	963
Head-On	1	25	88
Parked Vehicle/Fixed Object	2	118	825
Approach Turn	0	90	257
Pedestrian/Bicycle Involved	3	178	201
Backing	0	5	47
Other	0	86	295
Total	8	965	3,403

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 may provide the City with a basis for prioritization and a comparison of locations within a network. Segment crash rates are calculated by total crashes per million vehicles miles traveled along the segment and intersection crash rates are calculated by total crashes per million entering vehicles at an intersection. Figure 4.2-8 shows the crash rates along key and arterial corridors, and Figure 4.2-9 shows the crash rates at major intersections within the city.

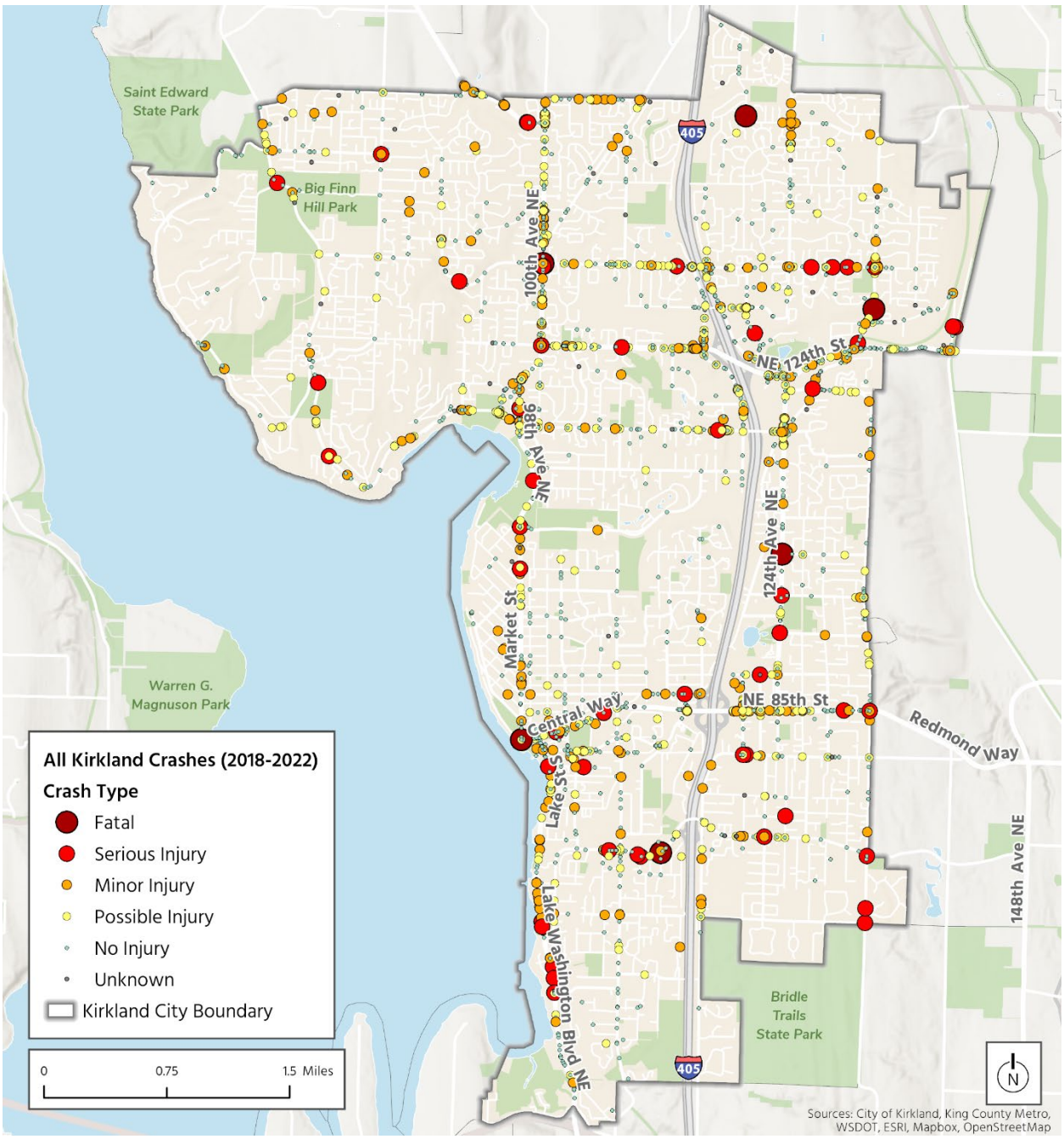


Figure 4.2-7. All Crashes (2018–2022)

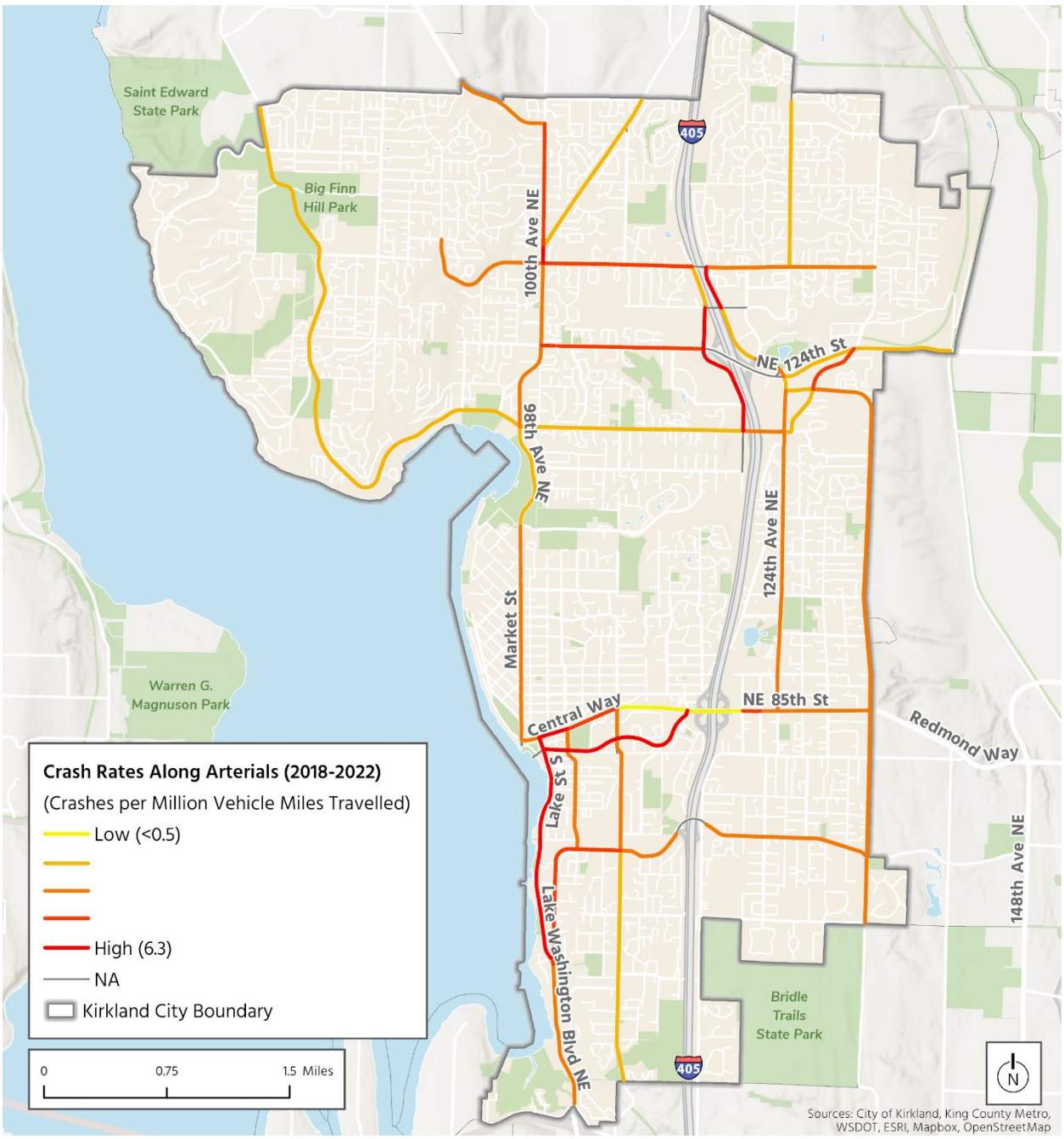


Figure 4.2-8. Crash Rates along Major Arterial Corridors (2018–2022)

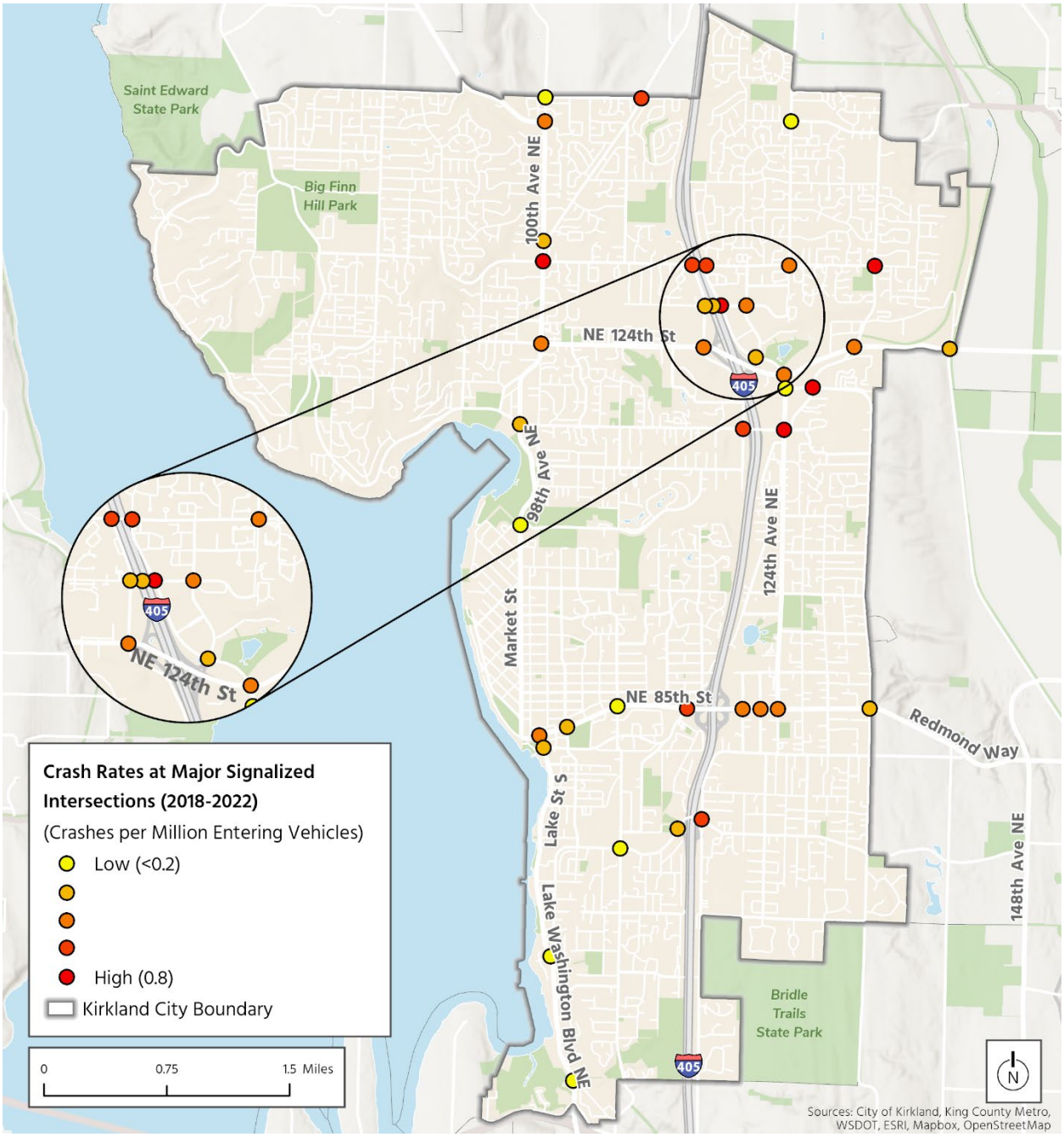


Figure 4.2-9. Crash Rates at Major Signalized Intersections (2018–2022)

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.

For intersections, crash rates 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.

4.2.1.3 Transit Service

Transit service in Kirkland includes bus service provided by Metro, Community Transit, and Sound Transit (Table 4.2-4 and Figure 4.2-10). Frequent bus service is provided by four Metro routes, including the combined 230/231 route in Kirkland, with headways of 15 minutes. Four all-day bus routes with headways of 30 minutes or more are provided by Metro and Sound Transit. Metro Flex is an on-demand transit service that operates in Juanita and Finn Hill (Figure 4.2-11). Major transit connections in Kirkland include the Downtown Kirkland Transit Center, Kingsgate Park & Ride, and the South Kirkland Park & Ride. Metro Route 255 had the City of Kirkland's highest weekday ridership in 2022, averaging approximately 2,000 daily riders. Routes 245 and 250 had the next highest levels of ridership, with approximately 1,900 and 1,700 weekday riders on average in 2022 (Figure 4.2-12).

Metro is currently planning to restructure bus service in Kirkland and across the Eastside to integrate bus service with Sound Transit's new light rail line, the East Link Extension (2 Line), between Seattle and Redmond with an emphasis on connections to nearby stations at Redmond Technology Center and Bellevue Transit Center. The first portion of the East Link Extension (2 Line) between Bellevue and Redmond opened on April 27, 2024. The restructured routes will come into effect when the connection to Seattle, which is anticipated to open in 2025.

Table 4.2-4. Transit Routes and Connections

Frequency and Service Hours	Service Provider	Route	Major Transit Connections in Kirkland
Frequent All-Day Route	King County Metro	230/231	Kirkland Transit Center
		245	Kirkland Transit Center
		250	Kirkland Transit Center, South Kirkland Park & Ride
		255	Kirkland Transit Center, Totem Lake Transit Center, South Kirkland Park & Ride
All-Day Route	King County Metro	225	Totem Lake Transit Center, Kingsgate Park & Ride
		239	Totem Lake Transit Center
		249	South Kirkland Park & Ride
	Sound Transit	535	I-405 & Totem Lake Freeway Station
Peak-Only Route	King County Metro	257	Kingsgate Park & Ride
		311	I-405 & Totem Lake Freeway Station
	Sound Transit	532	I-405 & Totem Lake Freeway Station
	Community Transit	424	I-405 & Totem Lake Freeway Station
Dial-a-Ride (DART)	King County Metro	DART 930	Totem Lake Transit Center, Kingsgate Park & Ride
Custom Route	King County Metro	893	Lake Washington High School
		895	Lake Washington High School
		981	Lakeside School, South Kirkland Park & Ride
		986	University Preparatory Academy and Lakeside School, South Kirkland Park & Ride

Sources: City of Kirkland Transit Route Data, King County Metro, Sound Transit, Community Transit

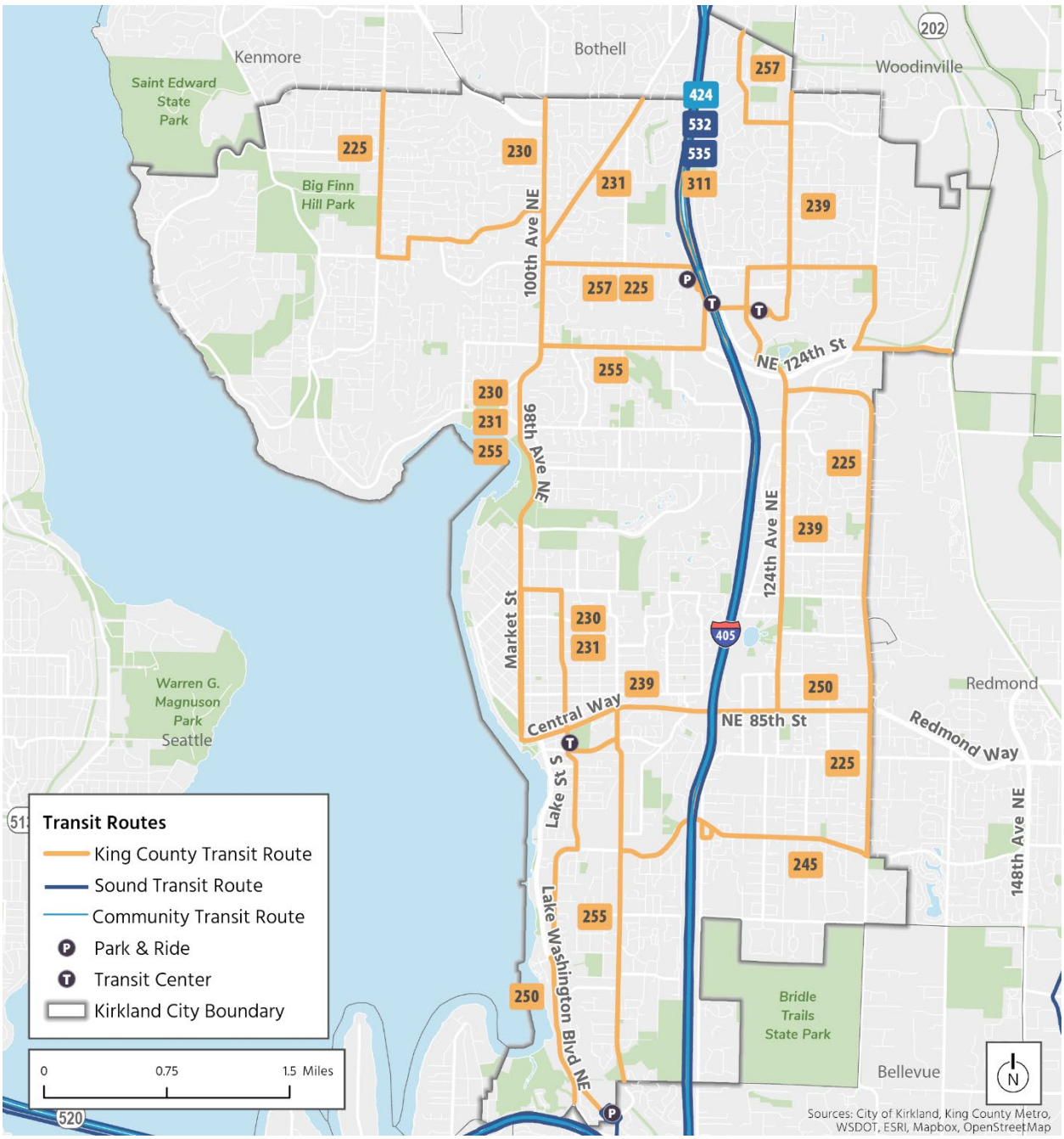


Figure 4.2-10. Transit Network

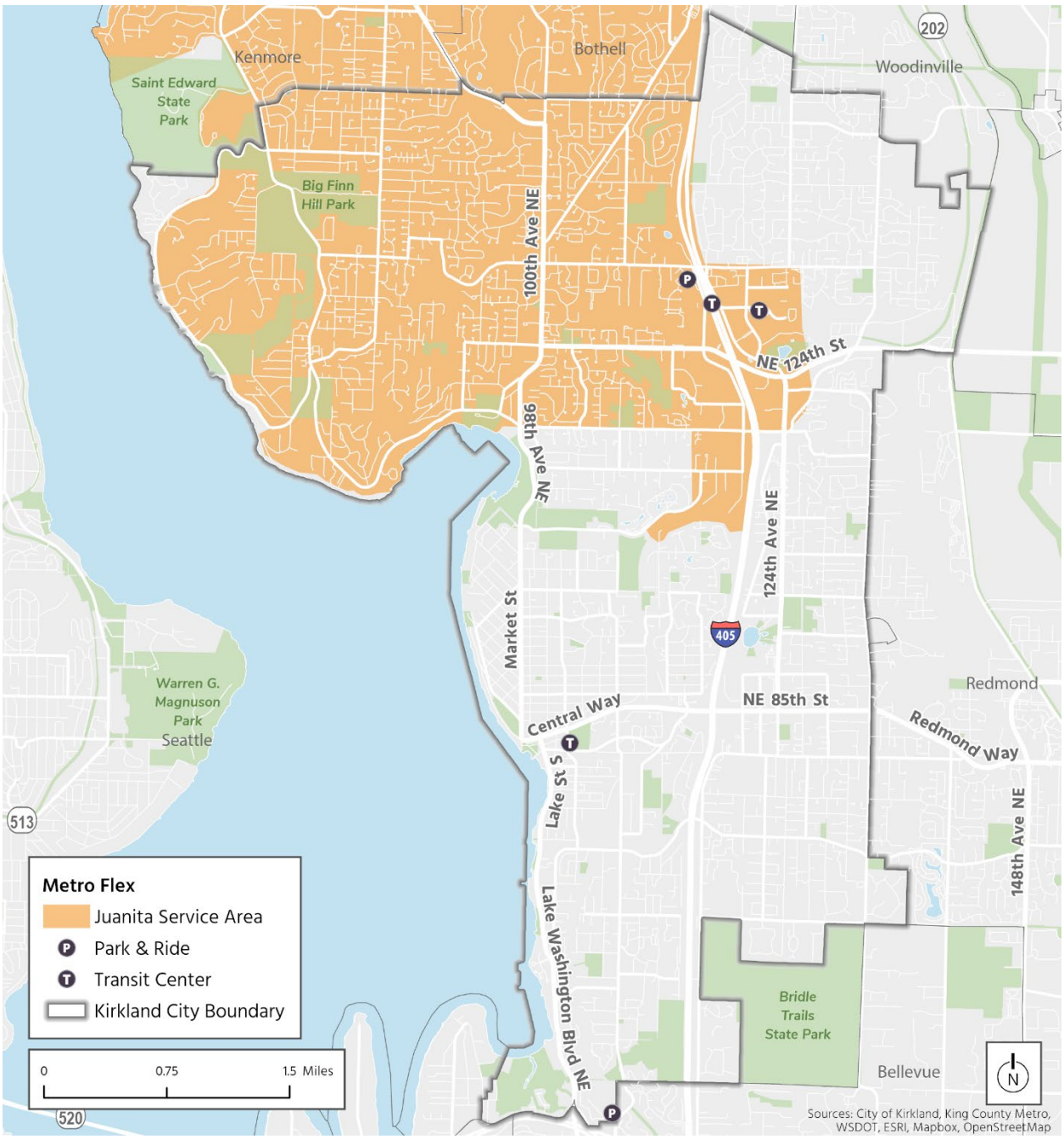


Figure 4.2-11. Metro Flex Service Area

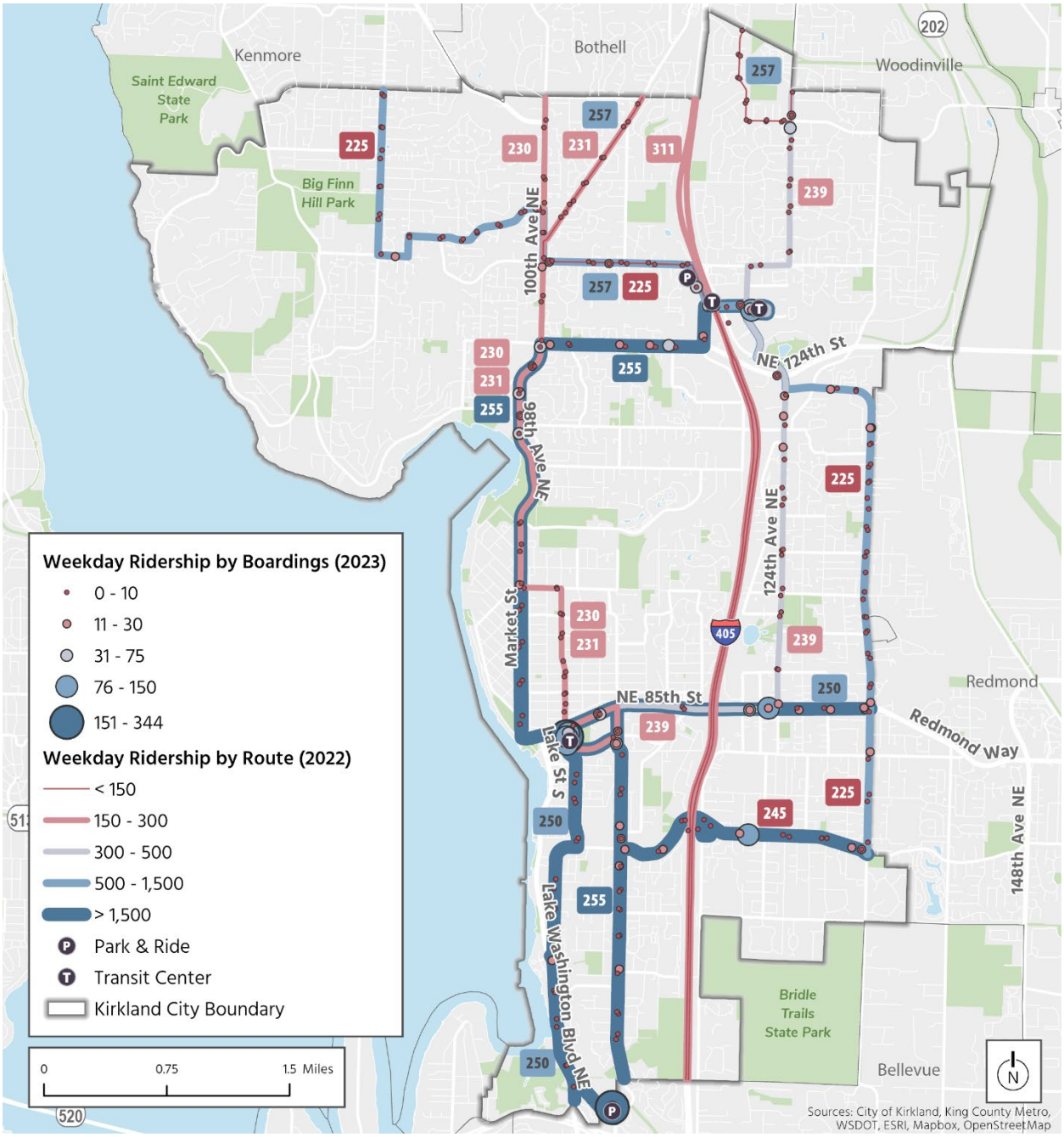


Figure 4.2-12. Weekday Transit Ridership

4.2.1.4 Active Transportation

Active transportation involves transportation users who walk, bike, and roll along the City's bicycle and pedestrian facilities. Pedestrian facilities in Kirkland include sidewalks and shared-use paths (Figure 4.2-13). Along Kirkland's arterial and collector roadways, approximately 59% of roadways have sidewalks present on both sides of the roadway (Table 4.2-5).

Table 4.2-5. Sidewalk Availability

	Sidewalk Availability (miles)		
Road Type	Both Sides	One Side	None
Arterial	26.9	6.3	5.0
Collector	18.1	14.8	5.7
Total	**45.0**	**21.1**	**10.7**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Sidewalk Analysis, 2023

Other active transportation facilities along street segments include shared-use paths, bike lanes, protected and buffered bike lanes, and neighborhood greenways (Table 4.2-6 and Figure 4.2-14). Buffered bike lanes include those with painted buffers, while protected bike lanes, such as those in Totem Lake Village, have a physical separation, such as curbs or parking between bicycle users and traffic. Shared-use paths, which are designed for use by both bicyclists and pedestrians, include the Cross Kirkland Corridor and the Eastrail segment owned by King County in the Totem Lake area. Sharrows indicate shared use of the roadway between bicyclists and vehicles. Neighborhood Greenways are low-volume, low-speed streets designated for shared use among pedestrians, bicyclists, and vehicles. Two new greenway routes were added in South and North Rose Hill. Kirkland has an additional 26 miles of trails for recreational purposes within parks, with some trails that serve as connectors between local roads throughout the city.

Table 4.2-6. Active Transportation Facilities

Facility Type		Facility (miles)
Bike Lanes	Bike Lane	56.8
	Buffered Bike Lane	9.0
	Protected Bike Lane	0.3
Shared-Use Path	Cross Kirkland Corridor	6.1
	Eastrail	0.8
	Other Shared-Use Path/Trail	8.4
Neighborhood Greenway		3.4
Sharrow		2.1
	Total	**86.9**

Source: City of Kirkland Bicycle Facilities and Trails Data, 2023

Figure 4.2-13. Pedestrian Network

Figure 4.2-14. Bicycle Network

Safety

Pedestrians and bicyclists are the most vulnerable roadway users, as they are less protected than users within vehicles. 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.

Table 4.2-7 summarizes the pedestrian- and bicyclist-related crashes by severity, while Table 4.2-8 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 four fatal pedestrian crashes and no fatal bicyclist-related crashes. Just under 15% of crashes were serious-injury crashes. Figure 4.2-15 shows the annual trend in active transportation crashes between Kirkland and King County overall and Figure 4.2-16 shows crash types by user.

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 4.2-7. 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

Table 4.2-8. Pedestrian and Bicyclist Crashes by Location (2018–2022)

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

Pedestrian crashes occurred throughout Kirkland, with most in urban areas that have 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 4.2-17 and Figure 4.2-18 show all crashes from 2018 to 2022 involving pedestrians and bicyclists, respectively.

Bicyclist-related crashes also occurred throughout Kirkland, but there was more prominent clustering than with 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 includes additional analysis on contributing factors for bicycle and pedestrian crashes.

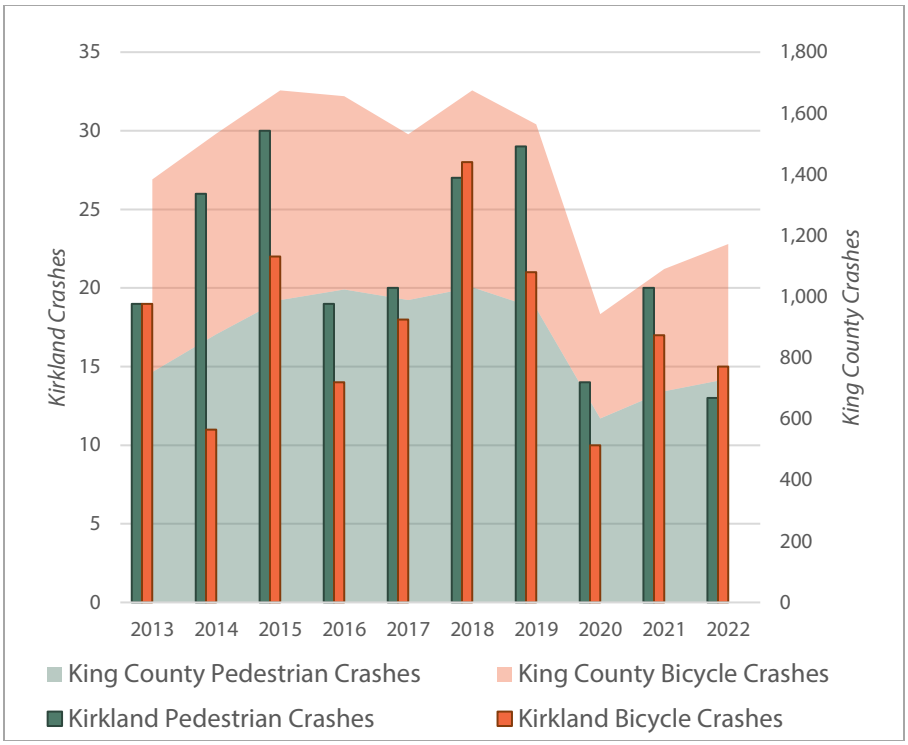


Figure 4.2-15. Active Transportation Crashes (2013–2022)

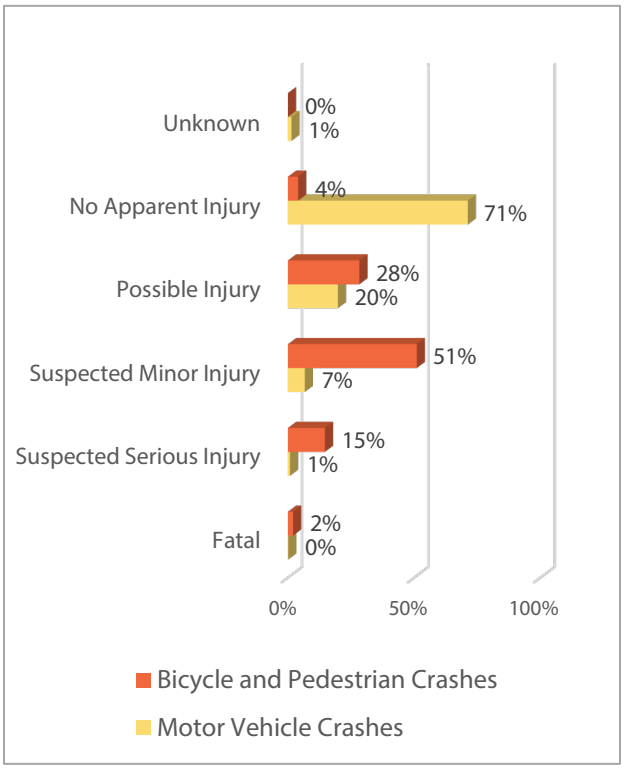


Figure 4.2-16. Crash Types by Users (2018–2022)

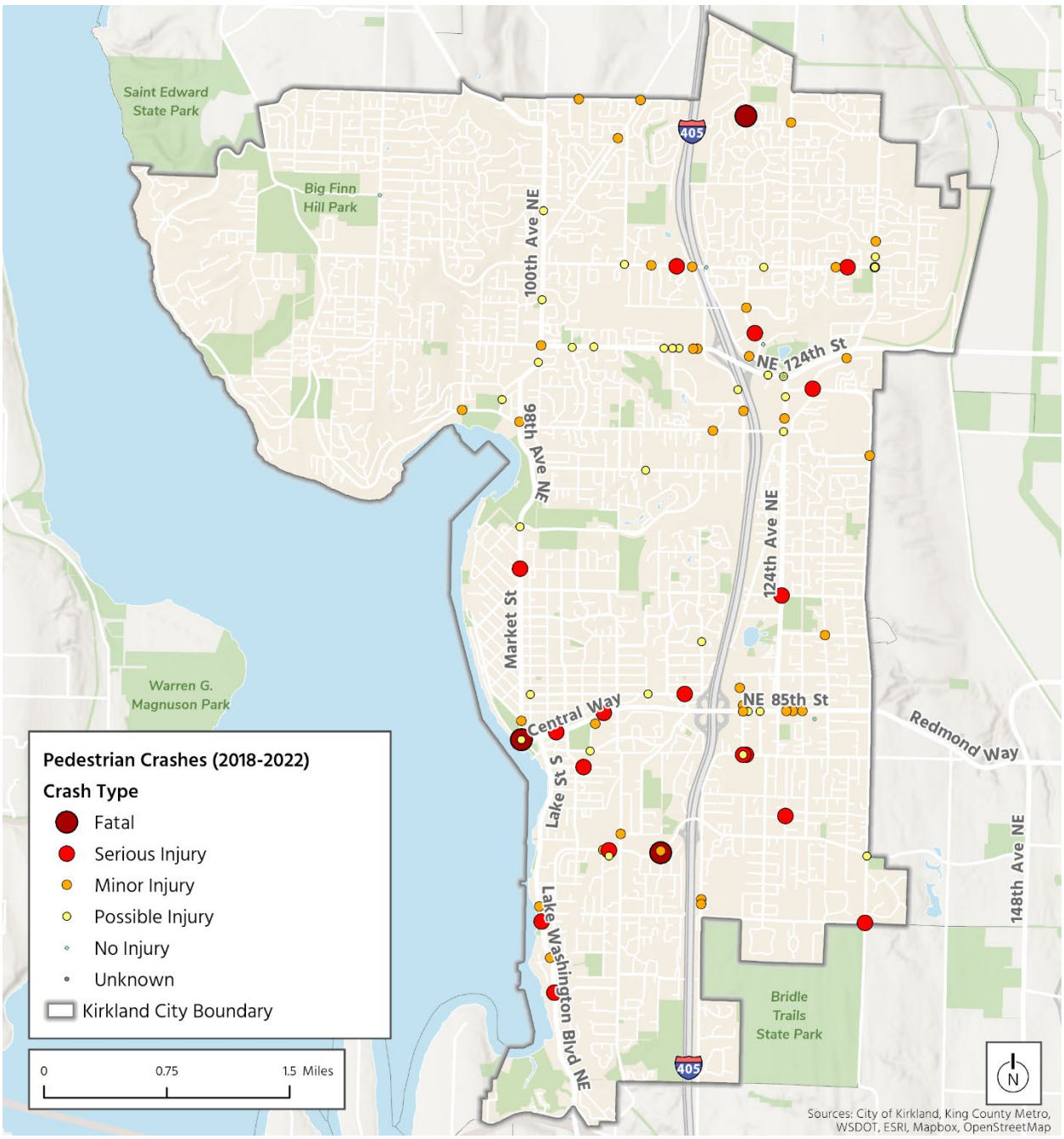


Figure 4.2-17. Pedestrian Crashes (2018–2022)

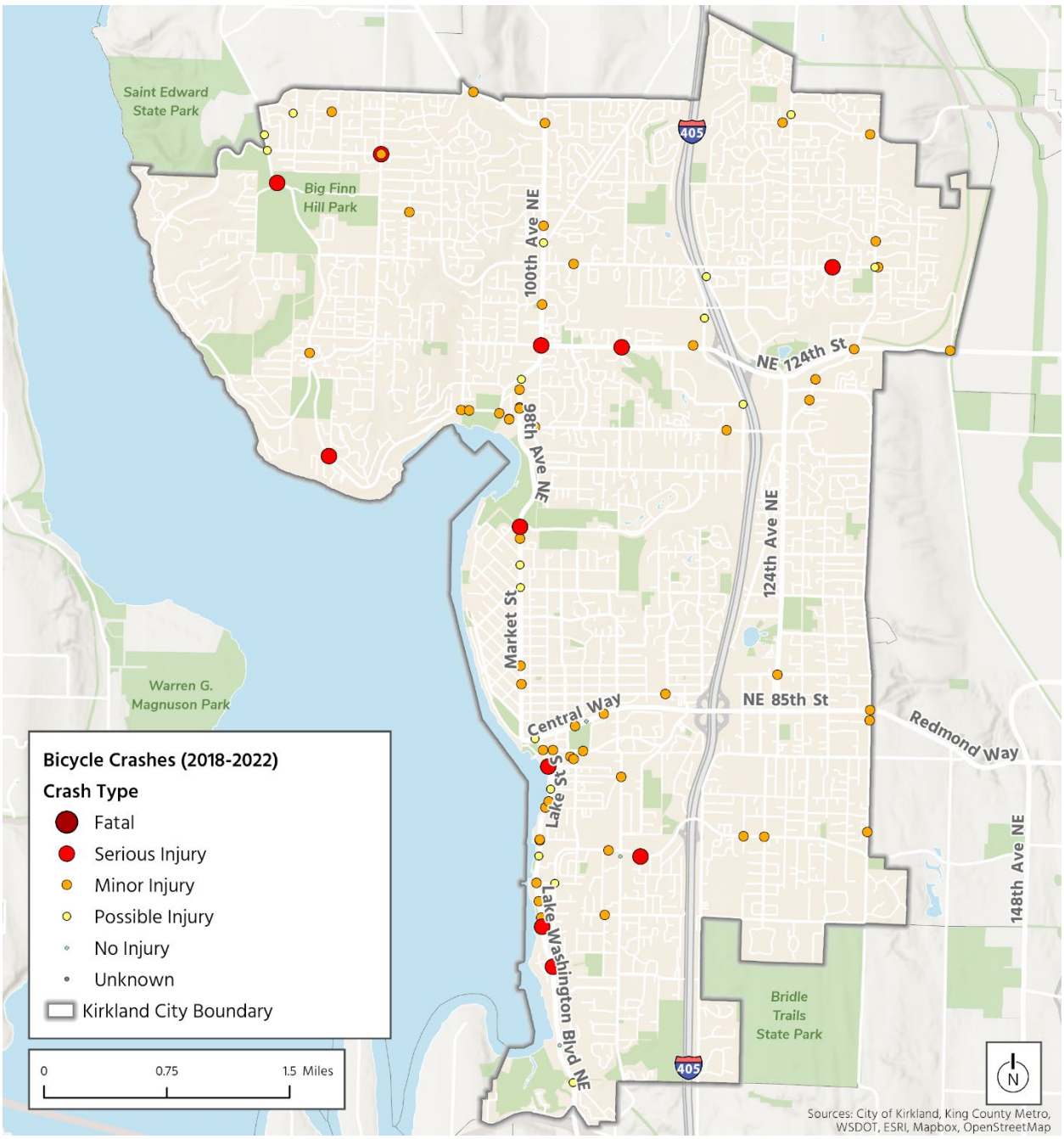


Figure 4.2-18. Bicycle Crashes (2018–2022)

4.2.2 Potential Impacts

The Existing Plan Alternative and Growth Alternative were evaluated for potential transportation impacts associated with housing and employment growth. The factors considered in the analysis of transportation impacts include:

1. Future transportation improvements: The number and type of improvements included in both future transportation networks and their potential to affect future per capita VMT or support modes other than driving, including bicycle, pedestrian, and transit projects and the ability to access transit from new development.
2. Future investments in safety of all users: The number of future projects included in the alternatives that would address the safety of Kirkland's transportation system, including those that scored high prioritization scores on safety, especially intersection improvements, bike facilities, and sidewalks.
3. Traffic volumes and distribution: The number of capacity projects included in the alternatives and potential for increased traffic volumes based on trip distribution in both alternatives and intersections with potential impacts to traffic operations.
4. Construction impacts: Potential for construction impacts from transportation projects.

4.2.2.1 Impacts of the Existing Plan Alternative

In the Existing Plan Alternative, Kirkland would continue to implement funded and unfunded projects included in the Kirkland's current plans that are likely to be implemented by 2044, including the 2023–2028 Capital Improvement Program and the 2023–2028 Transportation Improvement Program and Capital Facilities Plan. This includes 99 projects that are likely to be implemented by 2044, with a mix of active transportation, roadway, and transit speed and reliability projects. Of the Existing Plan Alternative projects, 65 would include pedestrian improvements, 60 would include bicycle improvements, six would include transit improvements. All of the City's 27 new or enhanced roadway or vehicle facilities that would benefit multiple different users, consistent with the City's Complete Street Policy. Projects likely to be implemented by 2044, based on current plans that were included in the Existing Plan Alternative, are shown in Figure 4.2-19.

Active Transportation

Pedestrian and bicycle projects in the Existing Plan Alternative would improve access and safety for people walking and rolling. New greenways, sidewalk and trail improvements, and crossing enhancements in the 65 pedestrian projects that would be implemented under the Existing Plan Alternative would create a safer and more comfortable walking environment. Improved and expanded bicycle facilities with rechannelization, new bicycle lanes, greenways, trails and intersection treatments in the 60 bicycle projects that would be implemented under the Existing Plan Alternative would improve both bicycle access and safety. Together these projects would have a net benefit for current and future Kirkland residents, particularly in and around Greater Downtown where multimodal and active transportation projects in the Existing Plan Alternative are concentrated.

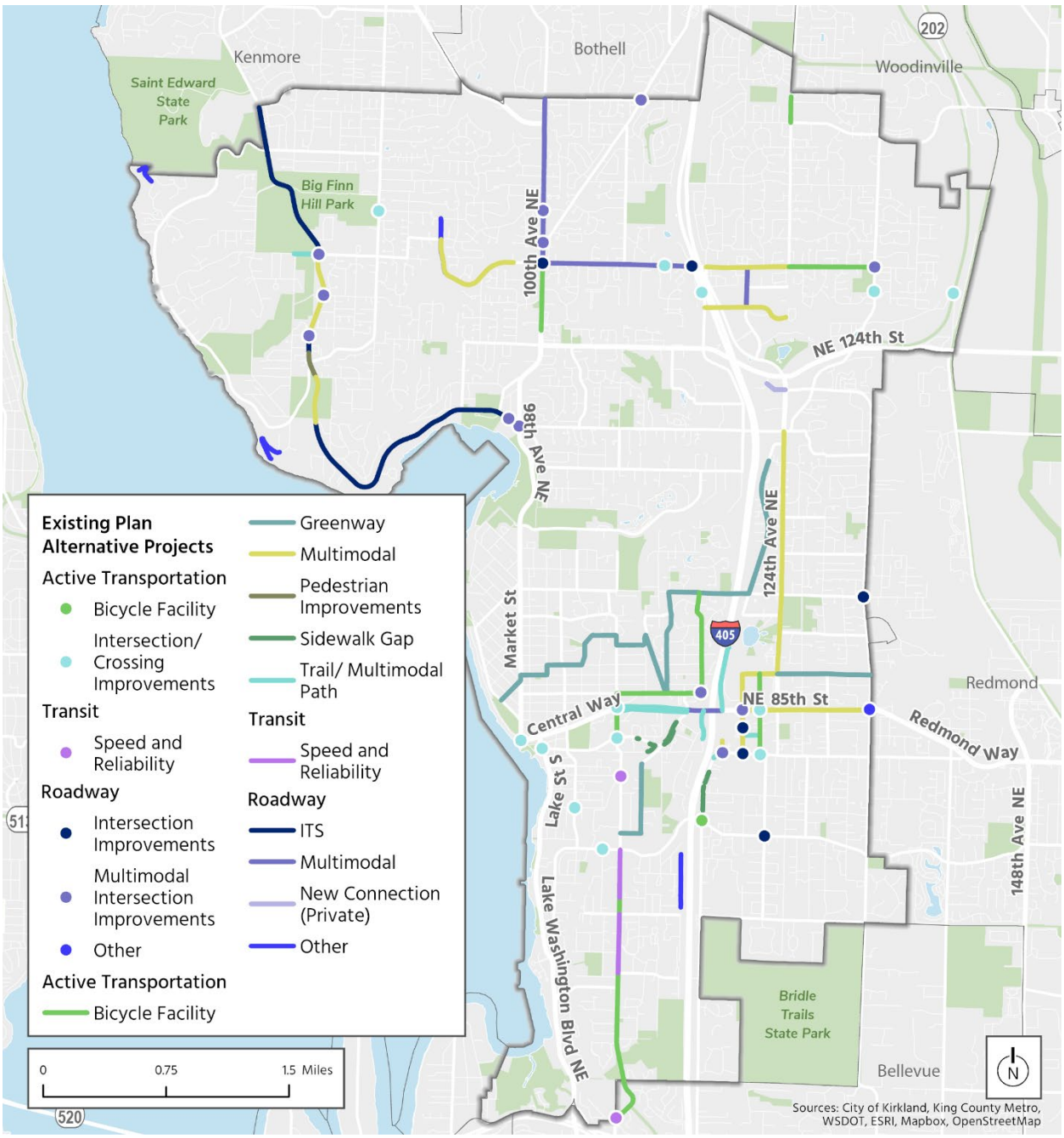


Figure 4.2-19. Transportation Projects under the Existing Plan Alternative

Transit

In the Existing Plan Alternative, new housing and employment growth would be primarily concentrated in Kirkland's Urban Centers. Both the Totem Lake and Greater Downtown Urban Centers areas currently have access to frequent transit and will have improved access to transit in the future with implementation of the Stride S2 Line BRT and the RapidRide K Line. Metro's planned restructure of service on the Eastside for integration with the East Link Extension (2 Line) in 2025 would also reduce travel times for some transit riders traveling to Seattle.

Although forecasted growth under the Existing Plan Alternative would be concentrated in Urban Centers, with some growth in neighborhoods with smaller business centers, these areas have heavy overlap with the key transit corridors identified by the City. Housing and jobs growth would be concentrated on key transit corridors to some degree because the centers in which development is focused tend to be located along frequent transit corridors, as shown in Table 4.2-9. If current development trends based on the KZC continue, most housing and employment growth would be located near frequent transit corridors and would be accessible by transit. This alternative would support the development of commercial and office spaces and, to a lesser degree, residences near transit, which could reduce reliance on driving to access housing and jobs expected by 2044.

Table 4.2-9. Housing and Employment Growth by Planning Area in the Existing Plan Alternative

Planning Area	Existing Plan Alternative Additional Housing Units by 2044	Existing Plan Alternatives Additional Employment by 2044
Key Transit Corridors & Urban Centers	8,537 (70%)	23,751 (92%)
Urban Centers	5,163 (51%)	19,017 (76%)
Greater Downtown	2,445	9,606
Totem Lake	2,718	9,411
Key Transit Corridors	6,687 (66%)	20,575 (82%)
NE 124th St/NE 128th St	613	896
NE 68th St/NE 70th Pl	62	9
Central Way/NE 85th St	3,891	10,247
Market St/98th Ave NE	235	490
108th Ave NE/6th St S	53	245
Lake St/Lake Washington Blvd NE	1,216	4,293
124th Ave NE/Totem Lake Blvd	616	4,397
Citywide Total	**10,071**	**24,984**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis 2024

There are a total of six future transit projects that would be implemented under the Existing Plan Alternative, including northbound queue jumps on 108th Avenue NE and new signals and transit signal priority at multiple intersections. These future projects would improve transit speed and reliability in Kirkland. King County Metro is currently evaluating alternatives for the RapidRide K Line, which would connect the Totem Lake and Kirkland Transit Center with downtown Bellevue, improve transit access, and bring more reliable and frequent transit options to Kirkland.

Other funded regional projects would also improve transit access in Kirkland. Sound Transit's Stride S2 BRT will run from Lynnwood to Bellevue on I-405 through Kirkland, with stations at the Brickyard Park & Ride, Totem Lake/Kingsgate, and NE 85th Street in Kirkland, and is expected to start service in 2028. Sound Transit is also planning to extend a new light rail line between the South Kirkland Park & Ride and Issaquah via Bellevue, which is expected to begin operations in 2044.

Vehicular Traffic

Regionwide population and employment growth, including within the City of Kirkland, would contribute to increased VMT. Estimates of VMT from the BKR Travel Demand Model indicate that regional growth would contribute an increase of 13,860,000 in daily VMT regionally by 2044 and an increase of 375,000 in daily VMT within the City of Kirkland. While overall VMT would increase by 2044, per capita VMT would decrease, with an estimated 50.6 VMT per household in 2044 compared to 58.4 VMT per household in 2019.With current policies and regulations in place, there would be greater traffic volumes on Kirkland's roadway network, and there would potentially be more congestion on local roads and at highway access points. Traffic volumes in this alternative are likely to increase along connections to Kirkland Urban Centers, where growth in the Existing Plan Alternative would be concentrated.

Detailed traffic analysis for forecast 2044 traffic conditions used Synchro, a traffic simulation and analysis software that models conditions at intersections, to determine the traffic effects of forecast growth in the Existing Plan Alternative. Expected local and regional growth under the Existing Plan Alternative would result in higher traffic volumes primarily on five corridors:

- Central Way/NE 85th Street (primarily east of 6th Street)
- 100th Avenue NE (north of NE 124th Street)
- 116th Avenue NE (south of NE 80th Street)
- NE 124th Street (east of 100th Avenue NE)
- 124th Avenue NE (between NE 85th Street and NE 124th Street)

Increased traffic volumes on these corridors may affect traffic volumes at intersections that currently have constrained capacity for additional vehicle traffic, including access points for I-405.

There are 27 projects that would be implemented under the Existing Plan Alternative and would improve vehicular circulation on Kirkland's roadway network. These include signal and intersection improvements, roadway rehabilitation, and new street connections or extensions. Six projects would add vehicle capacity at existing intersections and on roadways in Kirkland. This additional capacity could accommodate some additional vehicle travel expected under the Existing Plan Alternative, but the limited scale of these vehicle projects would have limited and more localized effects on citywide vehicle travel patterns.

Safety

The projects that would be implemented under the Existing Plan Alternative were scored based on their proximity to high crash corridors and whether they provide a safety benefit or countermeasure. Of the projects that would be implemented under the Existing Plan Alternative, 23 scored medium or high in terms of safety, meaning they are near high crash corridors and provided a safety benefit or countermeasure. Ten of these projects are intersection or crossing improvements, and 13 are corridor projects that include new or improved facilities. All projects that meet these criteria were active transportation and/or roadway projects with multimodal elements. Together these projects would make up 23% of the future transportation projects to be implemented under the Existing Plan Alternative and would have safety benefits to current and future Kirkland residents.

The City is in the process of reviewing and analyzing speed limits citywide for a comprehensive policy that would reduce roadway injuries and fatalities. Implementation of this policy may change speed limits at certain intersections to improve safety particularly for vulnerable users. Currently, no roadways under City jurisdiction have a posted speed limit over 35 miles per hour.

Construction

Transportation projects that would be implemented under the Existing Plan Alternative are concentrated in the Greater Downtown Urban Center. Future residential and nonresidential development would also be concentrated in the Greater Downtown Urban Center, with 24% of forecasted residential growth and 38% of forecasted employment growth citywide through 2044. While access during construction would be maintained according to the requirements of KMC Chapter 19.04, transportation and development projects would potentially have impacts to street and roadway access during construction. Potential disruptions to pedestrian, bike, transit and vehicular access would be greatest in Greater Downtown, where both development and transportation projects are focused, and in Totem Lake, which is also expected to receive a large share of new housing and employment growth by 2044. Construction impacts are expected to be gradual as improvements to the transportation network are implemented and development and redevelopment take place through 2044.

4.2.2.2 Impacts of the Growth Alternative

In the Growth Alternative, Kirkland would implement a wide range of transportation projects included in the TSP and the Transportation Element of the Kirkland 2044 Comprehensive Plan. The unconstrained project list includes 2,230 different projects that would be prioritized for funding and implementation in the Growth Alternative. The prioritized project list includes 430 projects, which were scored based on developed evaluation criteria that align with the City's goals and policies. The remainder of projects that make up the unconstrained project list are primarily sidewalk completion projects (approximately 1,640 projects) among others that are grouped into programs, including the sidewalk program, or are flagged as studies or development driven.

The potential projects to be implemented by the City emphasize active transportation and safety for pedestrians and bicyclists, with 274 projects that would include pedestrian improvements (not including those in the sidewalk program) and 322 projects that would include improvements to bike infrastructure. Another 39 projects would improve vehicular circulation and traffic operations, and 7 projects would improve transit access and operations. The full list of TSP projects and programs that are prioritized and may potentially be implemented by 2044 based on funding constraints is shown in Figure 4-2.20. Potential transportation projects that would be prioritized for funding and inclusion in the 20-year project list for the Comprehensive Plan in the Growth Alternative are categorized based on benefits by travel mode. Many of the potential projects would include new or enhanced facilities that would benefit multiple different users and are reflected in multiple categories in Table 4.2-10.

Table 4.2-10. Growth Alternative Projects by Type

Project Mode	Number of Projects	Percent of Projects
Pedestrian	274	64%
Bicycle	322	75%
Transit	7	1.6%
Vehicle	39	9%
N/A*	4	1%
Total	**430**	

Source: Kirkland Transportation Strategic Plan Project Prioritization, 2024

* Projects include embankment stabilization/reconstruction and surface water drainage repair

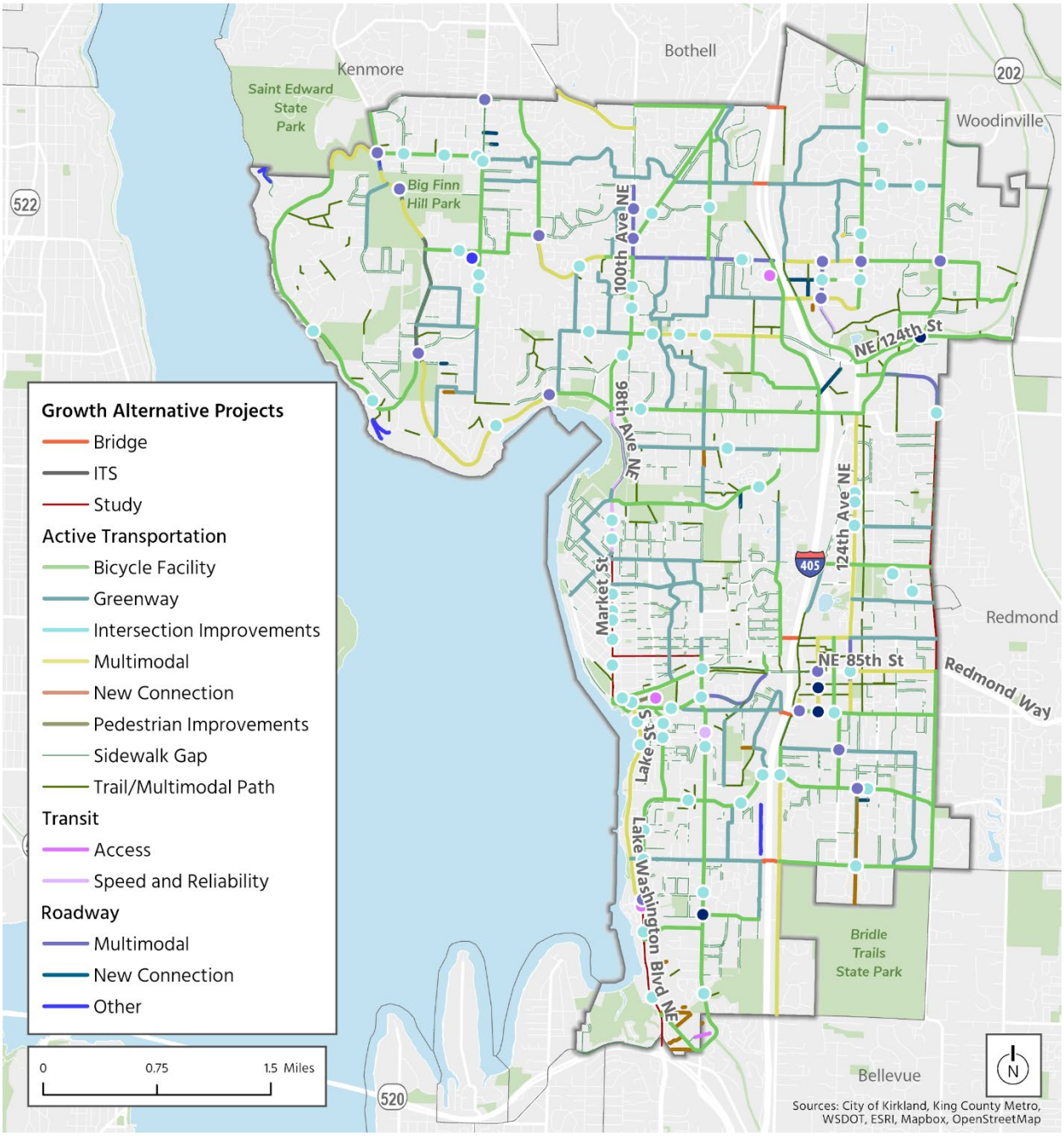


Figure 4.2-20. Potential Transportation Projects in the Growth Alternative

Active Transportation

Pedestrian and bicycle projects in the Growth Alternative would improve access and safety for people walking and rolling. New greenways, sidewalk, and trail improvements and new connections and crossing enhancements are among 274 proposed projects that are prioritized and would potentially be implemented under the Growth Alternative to create a safer and more comfortable walking environment. Improved and expanded bicycle facilities with rechannelization, new bicycle lanes, greenways, trails, and intersection treatments are among the 322 proposed projects that are prioritized and would potentially be implemented under the Growth Alternative to improve both bicycle access and safety. In this alternative, 396 projects would benefit both bicyclists and pedestrians. Together, these projects would have a net benefit for current and future Kirkland residents, particularly in and around Greater Downtown where multimodal and active transportation projects in the Existing Plan Alternative are concentrated.

Pedestrian and bicycle projects in the Growth Alternative represent a majority of the potential projects that would be prioritized for funding. Together, these projects would fill sidewalk gaps, develop new greenways, add Complete Streets features to existing roadways, and upgrade or create new connections for people walking and rolling. A large majority of potential projects that would be prioritized for funding in the Growth Alternative would benefit people walking and biking, with 64% of projects including pedestrian elements and 75% of prioritized projects, including bicycle elements. A full breakdown of active transportation projects with benefits to bicyclists and pedestrians is shown in Table 4.2-11.

Table 4.2-11. Growth Alternative Active Transportation Projects

Project Type	Number of Projects	Percent of Projects
Multimodal/Trail	133	34%
Pedestrian Improvement*	3	1%
Intersection Improvement	70	18%
Greenway	57	14%
Bicycle Facility	100	25%
New Connection	8	2%
Other**	25	6%
Total Projects	**396**	**100%**

Source: Kirkland Transportation Strategic Plan Project Prioritization, 2024

* Not including Sidewalk Program projects.

** Project type identified as roadway, transit, etc. but includes pedestrian and bicycle improvements.

A large majority of potential projects would include pedestrian improvements, and most pedestrian projects are intended to address gaps in the sidewalk network. These projects may be combined into a program with portions of the program to be implemented on an annual basis as funding allows. Many of the other potential projects include multimodal improvements or have multiple discrete elements that would benefit both bicycle and pedestrian access. These projects would include a number of elements that would improve conditions for people walking and biking in Kirkland. While not all of these projects may be implemented in the growth alternative, the projects prioritized for funding and implemented by 2044 would benefit people walking and rolling in Kirkland.

Transit

In the Growth Alternative, new housing and employment growth would be focused both in Kirkland's Urban Centers and along key transit corridors, with more residential and employment growth along frequent transit corridors outside of Kirkland's Urban Centers. Key transit corridors and the Totem Lake and Greater Downtown Urban Centers currently have access to frequent transit and will have improved access to transit in the future with implementation of the Stride S2 Line BRT and the RapidRide K Line. Metro's planned restructure of service on the Eastside for integration with the East Link Extension (2 Line) in 2025 would also reduce travel times for some transit riders.

Housing and jobs growth in the Growth Alternative would be located almost entirely along transit corridors or in the Totem Lake and Greater Downtown Urban Centers, as shown in Table 4.2-12. Housing growth would be concentrated primarily along key transit corridors. Job growth, however, is expected to be focused both along key transit corridors and in Urban Centers, with heavy overlap between these two planning areas for employment capacity. Under the Growth Alternative, a majority of housing and employment growth would be located near frequent transit corridors and would be accessible by transit. This alternative would support the development of commercial and office space and housing near transit, which could reduce reliance on driving to access future development through 2044.

Table 4.2-12. Housing and Employment Growth by Planning Area in the Growth Alternative

Planning Area	Growth Alternative Additional Housing Units by 2044	Growth Alternatives Additional Employment by 2044
Key Transit Corridors & Urban Centers	8,537 (85%)	23,751 (95%)
Urban Centers	3,631 (36%)	19,017 (65%)
Greater Downtown	1,335	6,582
Totem Lake	2,296	9,588
Key Transit Corridors	7,416 (74%)	18,659 (75%)
NE 124th St/NE 128th St	290	585
NE 68th St/ NE 70th Pl	603	696
Central Way/NE 85th St	2,249	7,272
Market St/98th Ave NE	1,351	1,648
108th Ave NE/6th St S	850	1,137
Lake St/Lake Washington Blvd NE	1,035	3,609
124th Ave NE/ Totem Lake Blvd	1,038	3,712
Citywide Total	**10,071**	**24,984**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

There are 7 transit projects that would be prioritized for funding under the Growth Alternative. Most of these transit projects are speed and reliability improvements, such as queue jumps, signal priority, and bus stop consolidation, that would improve transit operations through Kirkland. Other access to transit or multimodal projects would include improvements for a variety of different roadway users and would improve the experience for people connecting to transit from other modes. If fewer of these projects were implemented, there would be less benefit to people riding and connecting to transit in Kirkland.

Vehicular Traffic

Regionwide population and employment growth, including within the City of Kirkland, would contribute to increased VMT. Estimates of VMT from the BKR Travel Demand Model is expected to be comparable to the Existing Plan Alternative. Forecast increases in VMT in the Existing Plan Alternative are expected to be approximately 13,860,000 in daily VMT regionally by 2044 and an increase of 375,000 in daily VMT within the City of Kirkland, but a per household decrease in VMT. VMT in the Growth Alternative is expected to be comparable because forecast housing and employment growth is the same between both alternatives, but trip distribution and potential future traffic volumes and congestion would differ for the Growth Alternative. The Growth Alternative also includes a number of features that are associated with VMT reductions in established research discussed in Section 4.2.2.3.

With new policies and projects in plan in the Growth Alternative, there would be greater traffic volumes on Kirkland's roadway network, and there would be potential for more congestion on certain corridors. Traffic volumes in this alternative would increase along transit corridors, where 74% of employment growth and 75% of residential growth is expected by 2044. Detailed traffic analysis for forecast 2044 traffic conditions used Synchro, a traffic simulation and analysis software that models conditions at intersections, to determine the traffic effects of forecast growth in the Growth Plan Alternative. Expected local and regional growth under the Growth Plan Alternative would result in higher traffic volumes primarily on five corridors.

- Central Way/NE 85th Street
- 100th Avenue NE (north of NE 124th Street)
- 116th Avenue NE (south of NE 80th Street)
- NE 124th Street (east of 100th Avenue NE)
- 124th Avenue NE (between NE 85th Street and NE 124th Street)

Increased traffic volumes on these corridors may affect traffic volumes at intersections that currently have constrained capacity for additional vehicle traffic, including access points for I-405.

There are 39 potential projects to improve vehicular circulation of Kirkland's roadway network that would be prioritized for funding and implementation in the Growth Alternative. Of these projects, six would add vehicle capacity at existing intersections and on roadways in Kirkland. Roadway projects would include new street connections, roadway widening and realignment, and programs that facilitate maintenance and small roadway improvements. All roadway projects would include multimodal or Complete Streets elements to ensure the safety of all roadway users.

Safety

The projects that would be prioritized for funding and implementation in the Growth Alternative were scored based on their proximity to high crash corridors and whether they provide a safety benefit or countermeasure. Of the projects that would be implemented under the Growth Alternative, 86 scored medium or high in terms of safety, meaning they are near high crash corridors and provide a safety benefit or countermeasure. Forty-three of these projects are intersection crossing improvements, including signals, rechannelization, crosswalk infrastructure, or roundabouts, and 43 are corridor projects that would add or improve active transportation infrastructure or make multimodal roadway improvements. Together, these projects would make up 20% of the future transportation projects to be prioritized for funding and implementation under the Growth Alternative and would have safety benefits to current and future Kirkland residents. If only a portion of these projects were implemented by 2044, there would be fewer safety benefits for current and future Kirkland residents.

The City is in the process of reviewing and analyzing speed limits citywide for a comprehensive policy that would reduce roadway injuries and fatalities. Implementation of this policy may change speed limits at certain intersections to improve safety particularly for vulnerable users. Currently, no roadways under City jurisdiction have a posted speed limit over 35 miles per hour.

Construction

Transportation projects that would be prioritized for funding and implementation in the Growth Alternative cover a wide area of Kirkland, with potential projects and programs in all neighborhoods of the City. While construction of these projects would be spread evenly across Kirkland, the full list of projects under consideration is expansive and includes corridor projects on all key transit corridors where future growth would be focused. While access during construction would be maintained according to the requirements of KMC Chapter 19.04, transportation and development projects would potentially have impacts to access along Kirkland's streets and roadways. Potential disruptions to pedestrian, bike, transit, and vehicular access would be greatest along key transit corridors. Construction impacts would be gradual as improvements to the transportation network are implemented and development and redevelopment take place through 2044.

4.2.2.3 Comparison of Transportation Impacts between Alternatives

Consistency with Countywide Planning Policies

Both the Existing Plan Alternative and the Growth Alternative are consistent with King County's 2021 Countywide Planning Policies. The Growth Alternative would include more multimodal investments that would improve safety for pedestrians and bicyclists and encourage travel by modes other than driving to support implementation of these policies locally. The differences in how the two alternatives would address countywide planning policies for transportation are described in Table 4.2-13.

Table 4.2-13. Consistency with Comprehensive Planning Policies by Alternative

King County Countywide Planning Policy	Existing Plan Alternative	Growth Alternative
T-3. Increase the share of trips made countywide by modes other than driving alone through coordinated land use planning, public and private investment, and programs focused on centers and connecting corridors, consistent with locally adopted mode split goals.	Land use regulations in the Kirkland Zoning Code (KZC) and transportation projects likely to be implemented by 2044 are coordinated, with investments in Kirkland's Urban Centers that would promote travel by modes other than driving.	Policies included in the updated comprehensive plan would expand opportunities for development along key transit corridors that connect Urban Centers and/or have access to frequent transit. More investments in active transportation and transit compared to the Existing Plan Alternative would further advance mode split goals.
T-5. Prioritize transportation investments that provide and encourage alternatives to single-occupancy vehicle travel and increase travel options, particularly to and within centers and along corridors connecting centers.	Transportation projects likely to be implemented by 2044 are focused on active transportation and safety and include investments in the Greater Downtown Urban Center in the City's station area transportation projects.	Projects that would be prioritized for funding and implementation include more investments in modes other than driving but are also more distributed throughout Kirkland.

Table 4.2-13. Consistency with Comprehensive Planning Policies by Alternative (continued)

King County Countywide Planning Policy	Existing Plan Alternative	Growth Alternative
T-19. Address the needs of people who do not drive, either by choice or circumstances (e.g., elderly, teens, low-income, and persons with disabilities), in the development and management of local and regional transportation systems.	Transportation projects likely to be implemented by 2044 are focused on active transportation and would improve access to transit as Metro and Sound Transit expand connections.	Projects that would be prioritized for funding and implementation include some additional active transportation and access to transit projects that would expand local access and improve connections to an expanded regional transit system.
T-28. Promote road and transit facility design that includes well-defined, safe, and appealing spaces for pedestrians and bicyclists.	The Existing Plan Alternative would include a more limited set of projects, but those projects are focused on active transportation, and a larger share of them address safety.	The Growth Alternative would include more projects to improve pedestrian and bicycle facilities and safety for vulnerable roadway users.
T-29. Design roads, including retrofit projects, to accommodate a range of travel modes within the travel corridor in order to reduce injuries and fatalities, contribute to achieving the state goal of zero deaths and serious injuries, and encourage physical activity.	The Existing Plan Alternative would include fewer projects, but those projects are focused on active transportation and safety for vulnerable roadway users. This would also include the City speed limit study to reduce traffic injuries and fatalities.	The Growth Alternative would include some additional projects to improve pedestrian and bicycle facilities and safety for vulnerable roadway users. This would also include the City speed limit study to reduce traffic injuries and fatalities.
T-33. Apply technologies, programs, and other strategies (e.g., intelligent transportation systems (ITS), first and last mile connections) to optimize the use of existing infrastructure and support equity; improve mobility; and reduce congestion, vehicle miles traveled, and greenhouse gas emissions.	Current Comprehensive Plan and functional plans would include policies that would reduce GHG emissions by connecting transportation and land use to changes in order to promote shorter trips and encourage transition to zero-emissions vehicles	Changes to development regulations in the KZC in the Growth Alternative would encourage more development near frequent transit, and policies in the Kirkland 2044 Comprehensive Plan Update would include additional policies to support electrification of the transportation system.

Source: 2021 King County Countywide Planning Policies, amended August 15, 2023

Potential Transportation Impacts

The Growth Alternative would shift housing growth to areas within one-quarter mile of key transit corridors, while employment growth would be concentrated both along key transit corridors and in Urban Centers, as shown in Table 4.2-14. Compared to the Growth Alternative, growth in the Existing Plan Alternative would be more focused in Kirkland's Urban Centers, but primarily in the Greater Downtown Urban Center. More of the forecasted employment growth in the Existing Plan Alternative would be located in areas that are both in Urban Centers and along key transit corridors with more limited opportunities for development concentrated the NE 85th Street Station Area, part of the Greater Downtown Urban Center.

The Growth Alternative would shift forecasted growth in Kirkland to areas within one-quarter mile of frequent transit, with 74% of housing growth and 75% of employment growth along key transit corridors. The Existing Plan Alternative would also locate a majority of the city's growth near frequent transit, but less housing growth in this alternative would be along key transit corridors, with an estimated 66% of housing growth and 82% of employment growth on those same corridors. The Growth Alternative would include more potential projects to improve pedestrian, bicycle, and transit access in Kirkland compared to the Existing Plan Alternative.

Table 4.2-14. Housing and Employment Growth in Planning Areas by Alternative

Planning Area	Existing Plan Alternative Additional Housing Units by 2044	Growth Alternative Additional Housing Units by 2044	Existing Plan Alternatives Additional Employment by 2044	Growth Alternative Additional Employment by 2044
Key Transit Corridors & Urban Centers	8,537 (70%)	8,537 (85%)	23,751 (92%)	23,751 (95%)
Urban Centers	5,163 (51%)	3,631 (36%)	19,017 (76%)	19,017 (65%)
Greater Downtown	2,445	1,335	9,606	6,582
Totem Lake	2,718	2,296	9,411	9,588
Transit Corridors	6,687 (66%)	7,416 (74%)	20,575 (82%)	18,659 (75%)
NE 124th St/ NE 128th St	613	290	896	585
NE 68th St/ NE 70th Pl	62	603	9	696
Central Way/ NE 85th St	3,891	2,249	10,247	7,272
Market St/ 98th Ave NE	235	1,351	490	1,648
108th Ave NE/ 6th St S	53	850	245	1,137
Lake St/ Lake Washington Blvd NE	1,216	1,035	4,293	3,609
124th Ave NE/ Totem Lake Blvd	616	1,038	4,397	3,712
Citywide Total	**10,071**	**10,071**	**24,984**	**24,984**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Changes to forecast travel patterns in the Growth Alternative are expected to affect traffic operations at four more intersections in Kirkland and increase traffic volumes on two more arterial corridors in the city. Most intersections along the corridors that are expected to experience increases in traffic volumes in the Existing Plan Alternative would have more severe congestion by 2044 under the Growth Alternative. These potential changes do not account for potential future mode shift, which may differ between the two alternatives based on policies, projects, and programs to incentivize active transportation and improve transit access in the Growth Alternative.

Per capita VMT from forecasted growth is expected to be similar for the Existing Plan Alternative and Growth Alternative, but per capita VMT is expected to decline in both alternatives. The Growth Alternative includes more policy changes and potential transportation projects that are likely to further reduce VMT. Higher-density development, like that included in the Growth Alternative, has been shown to reduce VMT (WSDOT 2013). Land use controls for denser urban development could provide an overall reduction in vehicle trips of 5% or a VMT reduction of 5% to 12%. Transit service expansions and increases in service frequency could also reduce VMT, with up to 50% reductions in VMT for increased transit frequency alone (EPA 2014). Bike infrastructure also has the potential to reduce VMT by encouraging mode shift from driving (NCST 2017), but the estimated reduction in VMT from bike lanes, paths, and trails is relatively small, with a 0.1% reduction in VMT (EPA 2014). Local research based on a 2006 PRSC household activity survey found that sidewalk availability combined with mixed land use was associated with reduced VMT (SDOT and WSDOT 2011).

VMT reductions observed in the established research above reflect mode shift for certain trips, where more facilities are available and land mix and density supports travel by other modes. More expansive investments in active transportation as part of the Growth Alternative and mixed-use development across a wider area of the city would help shift some short trips to biking and walking. A shift in growth to focus development more intensely on areas with access to frequent transit (Urban Centers and key transit corridors) in the Growth Alternative would potentially support more transit accessible development, particularly for residential growth.

4.2.2.4 Avoidance, Minimization, and Mitigation Measures

The Existing Plan Alternative and Growth Alternative are not anticipated to have any significant adverse environmental impacts to transportation in Kirkland, and no avoidance, minimization, or mitigation measures would be necessary. Development under either alternative would be subject to the City's regulations and policies that minimize transportation impacts and would contribute impact fees to fund roadway and multimodal transportation improvements.

Both the Existing Plan Alternative and the Growth Alternative would, however, add additional traffic volume to specific corridors in Kirkland. Potential capital projects that would accommodate local trips with other modes, primarily walking and biking, could also help mitigate potential impacts on corridors that are expected to experience higher traffic volumes. Active transportation projects that would expand the bike network are included in the transportation projects and programs that are prioritized and would potentially be implemented in the Growth Alternative but could be included as mitigation for traffic effects in both alternatives. These projects include the following corridors that would see experience greater traffic volumes in either alternative.

Table 4.2-15. Projects Prioritized in the Growth Alternative Offering Potential Mitigation Benefits

Corridors with Higher Traffic Volumes in the Existing Plan and Growth Alternatives	
NE 85th Street	Pedestrian, multimodal, and greenway improvements
100th Avenue NE	Bicycle facilities and greenway improvements
NE 124th Street	Greenways, bicycle facilities, and multimodal improvements
116th Avenue NE	Greenway, multimodal improvements, and pedestrian improvements
Corridors with Higher Traffic Volumes Primarily in the Growth Alternative	
Central Way	Bicycle facilities
108th Avenue NE	Bicycle facilities

The City will be studying changes to transportation impact fees through 2025, based on the cost per person trip, or a trip taken by one person on any mode of transportation. Changes to Kirkland's impact fee schedule may help fund transportation improvements that prioritize pedestrian, bike, and transit access and reduce overall VMT and transportation emissions between 2024 and 2044.

4.3 Housing

4.3.1 Affected Environment

4.3.1.1 Plans and Regulations

Growth Management Act

The Washington State GMA, adopted in 1990, is a set of planning regulations that establishes requirements for cities and counties to plan for future growth. The GMA requires local governments

to manage growth through the preparation of comprehensive plans and implementation of those plans through capital investments and development regulations including zoning.

The City of Kirkland is preparing the Kirkland 2044 Comprehensive Plan to accommodate 20-year growth projections through the year 2044. The City has a process for interim amendments to the plan between major updates. The previous major update to the comprehensive plan was the Kirkland 2035 Comprehensive Plan, which the City completed in 2015.

The GMA establishes planning requirements and procedures and mandates the elements the City must address through the comprehensive plan. These elements include land use, housing, capital facilities and transportation. HB 1181, passed by the state legislature in 2023, added a climate change and resiliency goal with near required element to plan for climate change and resiliency. The GMA also establishes planning goals related to a number of these elements including to plan for and accommodate housing affordable to families of all incomes.

Vision 2050

PSRC is the Metropolitan Planning Organization for the Central Puget Sound Region and is composed of nearly 100 members, including the four counties of the region and its cities, towns, tribes, ports, and agencies. PSRC develops regional plans and policies and coordinates decisions about regional growth in King, Pierce, Snohomish and Kitsap Counties. The PSRC Vision 2050 Plan is the long-range plan for growth in the Central Puget Sound Region and includes actions for local governments in support of the plan's vision. The two main components of the plan are the Regional Growth Strategy to focus the region's growth in designated growth centers near high-capacity transit and the Multicounty Planning Policies that provide a common policy framework for City and County planning.

The Vision 2050 plan also informs the PSRC Regional Transportation Plan, which is a long-range plan for transportation investments in the Central Puget Sound Region. This plan builds on the transportation element in Vision 2050 and is updated every 4 years with investments and policies to create a safe and efficient transportation system for the region.

King County Housing Needs Assessment

King County developed a Housing Needs Assessment in 2023 to accompany the 2024 King County Comprehensive Plan and help inform the policies included in the plan. HB 1220 was passed by the state legislature in 2021 and requires cities and counties to plan for sufficient affordable housing to meet local housing needs. The study of existing housing units in King County found that approximately half of the over 950,000 housing units in the County were single-unit homes. This analysis focused on unincorporated King County and found that there was excess land capacity to meet the housing needs analyzed for unincorporated King County.

King County Countywide Planning Policies

In 2023, King County amended the Countywide Planning Policies to include housing needs allocation for affordable housing based on analysis from the King County Department of Human and Community services. The jurisdictional housing needs allocation broke out the City's residential growth allocation by affordability level as shown in Table 4.3-1. That analysis also set an emergency housing goal of 2,522 units for the City, separate from these affordability levels.

Table 4.3-1. King County Housing Need Allocation for Kirkland

Affordability Level	Allocated Need (Housing Units)
30% or under	7,388
Permanent Supportive Housing	2,546
Non- Permanent Supportive Housing	4,842
31% – 50% AMI	3,052
51% – 80% AMI	1,022
81% – 100% AMI	228
101% – 120% AMI	259
121% + AMI	1,251
Total	**13,200**

AMI = area median income

Source: 2021 King County Countywide Planning Policies

Kirkland Housing Strategy Plan

In 2018, Kirkland adopted an updated Housing Strategy Plan that includes a short-term work program for the City over the following 3 to 5 years and serves as a framework for ongoing and future actions. This plan identified gaps in types of households and housing needs for different populations, such as lower- and middle-income families, people experiencing homelessness, a more diverse population, and local workers. The plan also identifies gaps in the types of housing and programs available to help guide the City's approach to housing. This includes programs to facilitate aging in place; small housing units, including accessory dwelling units; preservation of existing affordable housing; transit-oriented development; and homeownership opportunities for a variety of income levels.

The strategies identified in the plan to address these gaps include the following:

- Expanded housing choices: Expand neighborhood services and open space, reevaluate development regulations to allow different types of housing and greater density, support transit-oriented development, and reduce the cost of development and permitting.
- Indirect assistance: Support services that allow older adults to age in place, promote opportunities for accessory dwelling units, reduce barriers to home ownership and condominium construction, and incentivize affordable housing development.
- Direct assistance: Establish a regular funding source and continue to fund local affordable housing programs and provide other nonmonetary support for affordable housing, including integration into public developments or public-private partnerships.

The Housing Strategy Plan also includes policy direction in addition to the policies included in the Kirkland 2035 Comprehensive Plan. These additional policies are consistent with those included in the plan but are more specific to support affordable housing and address the needs of people with disabilities, older adults, and people experiencing homelessness. The City adopted interim affordable housing targets in 2021 with Resolution R-5493. Kirkland's affordable housing targets were based on cost-burdened households and King County growth targets, as shown in Table 4.3-2.

Table 4.3-2. Kirkland Interim Affordable Housing Targets

Household Income (percentage of AMI)	Estimated Cost-Burdened Households 2017	Estimated Cost-Burdened Households 2044
30% or under	3,009	4,374
31% – 50%	2,220	2,227
51% – 80%	2,199	3,196
81% – 100%	1,154	1,677
Total	**8,582**	**12,474**
Affordable (<100% AMI) Units Needed per year 2017–2044:		**462**

AMI = area median income
Source: City of Kirkland, 2021

Affordable Housing Regulations

KZC Chapter 112 currently provides affordable housing requirements for new multi-unit development in specific zoning districts and subareas. In most zoning districts, new multi-unit development with four or more housing units is required to set aside 10% of those units as affordable. Middle Housing regulations are described in KZC Chapter 113 for Cottage, Carriage and Two/Three-Unit Homes and in KZC Chapter 115 for Accessory Dwelling Units. In other areas of the city—for example, in the NE 85th Street Station Area, Kingsgate Park & Ride (PR 1.8 zone), and South Kirkland Park & Ride (YBD 1 zone)—the KZC requires affordable housing for different income levels based on area medium income and a mix of owner- and renter-occupied affordable units. Affordable housing requirements in these zones are between 10% and 15% of units set aside as affordable.

The City also has impact fee and property tax exemptions for developments that include affordable housing. These impact fee exemptions are defined in KMC 27.04.050 for traffic impact fees, KMC 27.06.50 for park impact fees, KMC 27.08.050 for school impact fees. KZC also permits fee exemptions for planning, building, plumbing, and electrical fees. Properties providing affordable housing are also eligible for multifamily housing property tax exemption under KMC 5.88 in certain residential target areas.

House Bill 1110

In 2023, the state legislature enacted HB 1110. The legislation requires larger cities, including Kirkland, to allow up to four units per residential lot and up to six per lot if located within one-quarter mile of a major transit stop or if at least two units would be affordable.

House Bill 1220

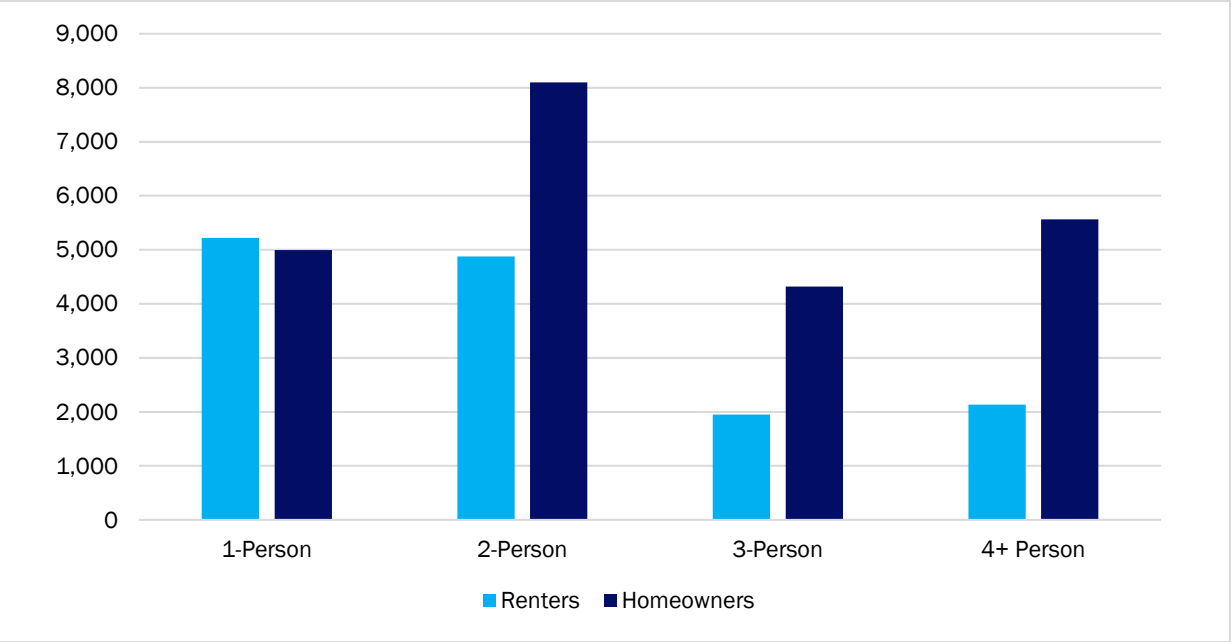
In 2021 the state enacted HB 1220, which directed the Department of Commerce to develop projected housing needs by income for every Washington County. At the local level, HB 1220 requires Kirkland to plan for and accommodate housing affordable for all income levels and allow permanent supportive housing, transitional housing, emergency housing, and emergency shelters in various zoning districts.

4.3.1.2 Existing Housing

Household Characteristics

As of 2022, there were an estimated 37,546 households in Kirkland. A majority of households in Kirkland (61.8%) own their home, and 38.2% of households rent their home. Kirkland's average household size is 2.98 citywide, and most households in Kirkland have one person (27.5%) or two people (33.9%). There are fewer households with three people (16.9%) and four or more people (20.7%). Approximately 28% of households in Kirkland include children under 18 years of age.

One-person households were overrepresented among the city's car-free households. Of the one-person households, 12.3%—or 3.3% of households citywide—did not have a car available. The number of people per household for homeowner and renter households in Kirkland is shown in Figure 4.3-1.



Source: U.S. Census Bureau American Community Survey (ACS), 5-Year Estimates 2018–2022

Figure 4.3-1. Kirkland Household Size by Tenure

Housing Supply

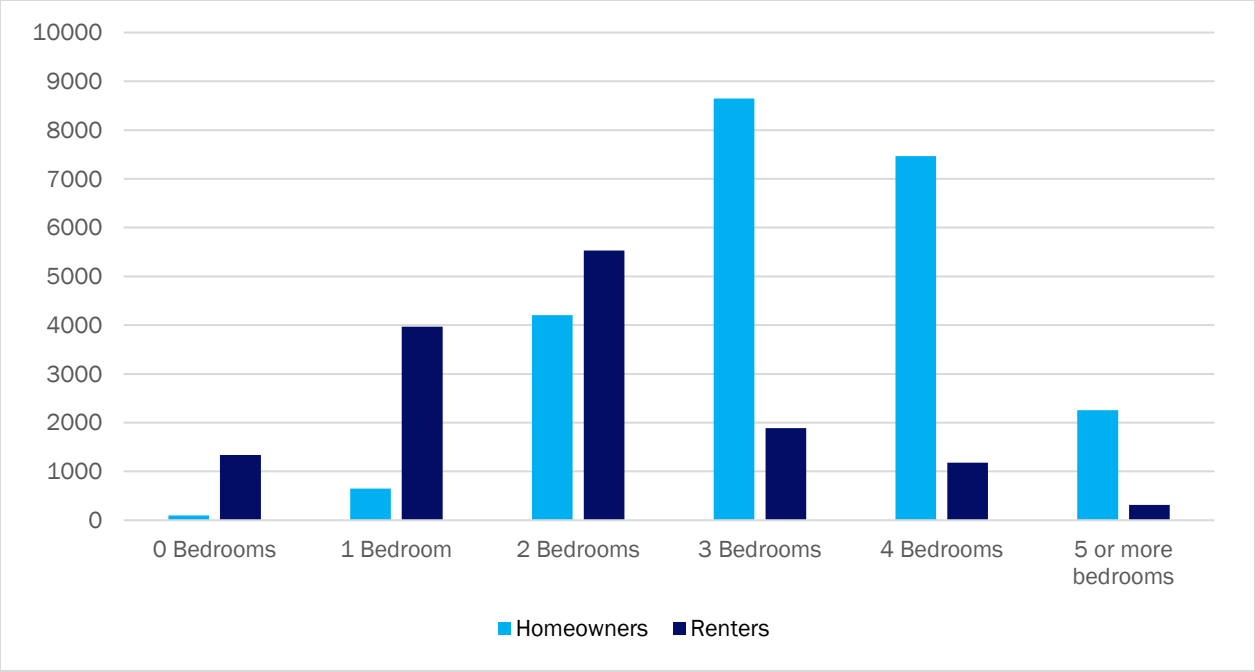
As of 2022, there were an estimated 39,869 housing units in Kirkland. Overall, the vacancy rate of housing units in the city was estimated at 5.8%, with a 1% homeowner vacancy, 3.4% renter vacancy, and 1.4% other vacancy. Single-unit homes (detached and attached) comprise 60.5% of housing units in Kirkland, while approximately 39.5% of housing units in the city are in multi-unit residential buildings with two or more units. Compared to the previous 5-year estimates in 2017, multi-unit residential buildings with 20 or more units have grown the most as a share of housing units in Kirkland. With growth in larger apartment buildings, the number of zero-bedroom efficiency units and one-bedroom units have also grown as a share of housing in the city. Table 4.3-3 displays the number of housing units in Kirkland, categorized by the type of housing as defined by the number of units in the same structure.

Table 4.3-3. Number of Units by Housing Type in Kirkland

Housing Type	Number of Housing Units
Single-Unit Detached	21,971 (55.1%)
Single-Unit Attached	2,141 (5.3%)
Duplex	339 (0.9%)
Triplex and Quadplex	1,497 (3.8%)
5–9 Multi-Unit	3,439 (8.6%)
10–19 Multi-Unit	3,192 (8.9%)
20+ Multi-Unit	7,269 (18.2%)
Other (mobile home, boat, etc.)	21 (< 0.1%)
Total	**39,869**

Source: U.S. Census Bureau American Community Survey (ACS), 5-Year Estimates 2018–2022

Most owner-occupied homes in Kirkland have three or more bedrooms (78.8%), with three- and four-bedroom homes being the most common among homeowners. Most renter-occupied homes in Kirkland have two or fewer bedrooms (76.2%), with one- and two-bedroom homes being the most common among renters. 17.5% of housing units in Kirkland are studio and one-bedroom homes, and 16.1% of households in Kirkland live in studio and one-bedroom homes. The breakdown of unit size in Kirkland between homeowner and renter households shown in Figure 4.3-2.



Source: U.S. Census Bureau American Community Survey (ACS), 5-Year Estimates 2018–2022

Figure 4.3-2. Housing Unit Size by Tenure

Housing Affordability

The U.S. Department of Housing and Urban Development considers a household as cost burdened if housing costs exceed 30% of its income. There were an estimated 12,129 cost-burdened households in Kirkland in 2022, nearly one-third (32.3%) of the city's households. Somewhat more homeowner households were cost burdened compared to renter households in Kirkland, but the two were comparable, with 52.4% of homeowner households and 47.6% of renter households spending more than 30% of their income on housing.

4.3.2 Potential Impacts

The Existing Plan Alternative and Growth Alternative were evaluated for potential housing impacts and benefits associated with expected growth. The following factors are considered in the analysis of housing impacts and benefits:

1. **Potential displacements:** The estimated number of housing units that would be directly displaced by redevelopment in each alternative would be a potential impact to current Kirkland residents. Potential for direct displacements is estimated for each alternative based on the residential development capacity of parcels identified as redevelopment in the Development Capacity Analysis. The overall residential unit yield on redevelopable properties compared to the number of existing units on those properties gives an average displacement

rate per unit that was applied to both alternatives. Indirect displacements from economic and other changes are not quantified here because of a lack of available data with reliable relationships to these factors.

2. **Potential displacements in Low-Income Areas:** The estimated number of housing units that would be directly displaced in census block groups that have a higher share of low-income residents than the countywide average. For the purposes of this analysis, low-income was defined as 200% of the federal poverty level, a measure of household income available in U.S. Census Bureau 5-year estimates based on federal poverty guidelines for the contiguous 48 states. This generally corresponds to between 30% and 40% area median income for one- to three-person households in King County. The countywide average share of residents living in households earning under 200% of the federal poverty level is 17.9%.
3. **Diversity of future housing options:** Greater diversity of future housing options would be a benefit to current and future Kirkland residents, while a lack of diversity in future housing types would be an impact.
4. **New affordable housing units:** Production of new affordable housing units would be a benefit to current and future Kirkland residents. These potential benefits are measured by the estimated number of new affordable housing units created as a result of Kirkland's affordable housing requirements.

4.3.2.1 Existing Plan Alternative

The Existing Plan Alternative would accommodate an additional 13,200 housing units by 2044 than in 2019. Since 2019, Kirkland has grown by nearly 3,130 housing units, with an additional 10,071 units expected to be developed by 2044. Much of the new housing stock in Kirkland would be created through redevelopment of properties with existing housing units, and as a result, some housing units would potentially be displaced by new residential growth.

The Existing Plan Alternative would create an additional 8,116 housing units in multi-unit residential development and 1,956 housing units in single-unit residential development. Kirkland's current housing stock is approximately 55% single-unit housing, and residential growth in this alternative would expand housing diversity. Estimates of future single- and multi-unit residential development in the Existing Plan Alternative is shown in Table 4.3-4. Multi-unit residential development in this alternative range widely in size, with the median new multi-unit residential development in the Existing Plan Alternative including 4 units and an overall average of 32 units for all new multi-unit residential developments, excluding those already under permitting review. This alternative would have the potential to expand housing options citywide in Kirkland, but those options would be limited primarily to Kirkland's Urban Centers.

Direct displacement from potential future development was estimated based on the residential development capacity of and existing housing units on redevelopable parcels in the Existing Plan Alternative. An estimated 825 housing units would potentially be displaced by redevelopment under the Existing Plan Alternative, or 8.2% of net new units by 2044 (see Table 4.3-4). New, single-unit development requires more land area per unit and therefore has a higher average rate of displacement for new single-family development, although some redevelopment may be accommodated by subdivisions that do not affect existing structures. With 19% of future development expected to take the form of single-unit housing in the Existing Plan Alternative, this development typology contributes to greater potential for direct displacements in neighborhoods that are expected to see more new single-unit development and redevelopment in the Existing Plan Alternative, including Finn Hill, Juanita, and Kingsgate, as shown in Table 4.3-4.

Table 4.3-4. Net New Housing and Displacements by Neighborhood for the Existing Plan Alternative

Neighborhood	Forecasted Existing Plan Additional Housing Units by 2044	Estimated Net New Single-Unit Housing by 2044	Estimated Net New Multi-Unit Housing by 2044	Estimated Total Displacement from Projected Growth by 2044
Bridle Trails	298	69	229	29
Central Houghton	602	85	518	36
Everest	25	15	9	6
Finn Hill	906	834	72	341
Highlands	59	54	5	22
Juanita	1,080	254	826	107
Kingsgate	664	260	404	107
Lakeview	350	28	322	12
Market	118	81	37	33
Moss Bay	714	2	712	3
Norkirk	72	52	20	21
North Rose Hill	1,314	145	1,169	63
South Rose Hill	788	77	712	34
Totem Lake	3,081	0	3,081	10
Citywide Total	**10,071**	**1,956**	**8,116**	**825**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Under the Existing Plan Alternative, 111 housing units would potentially be directly displaced in census block groups that currently have a higher percent of low-income households (200% of the federal poverty level) than the countywide average of 17.9%. Census block groups in Kirkland with higher low-income population are shown in Figure 4.3-3. While some housing units in low-income census block groups would be displaced for redevelopment, a larger number of affordable units would be constructed in these same block groups with redevelopment under the Existing Plan Alternative. An estimated 345 affordable housing units would be created in low-income block groups in Kirkland under the Existing Plan Alternative. Potential direct displacements by census block group in Kirkland under the Existing Plan Alternative are shown in Figure 4.3-4. Property owners who would potentially be displaced by redevelopment, including low-income families, may benefit from the proceeds of the property transaction, but rental households would not see the same benefit.

Under the Existing Plan Alternative, the affordable housing requirements and incentives in the KZC would remain in effect without amendments to further support production of additional affordable housing. Based on expected growth, 1,599 of the city's 10,071 forecasted new housing units, or just over 15.8% of net new housing units expected by 2044, would be affordable. This includes only affordable housing that is part of development currently in the permitting process and what could reasonably be expected to result from private development with current regulations. The estimated number of new affordable units does not include housing units created through the affordable housing trust fund maintained by A Regional Coalition for Housing (ARCH), affordable housing developers, or other programs administered by the City of Kirkland or King County.

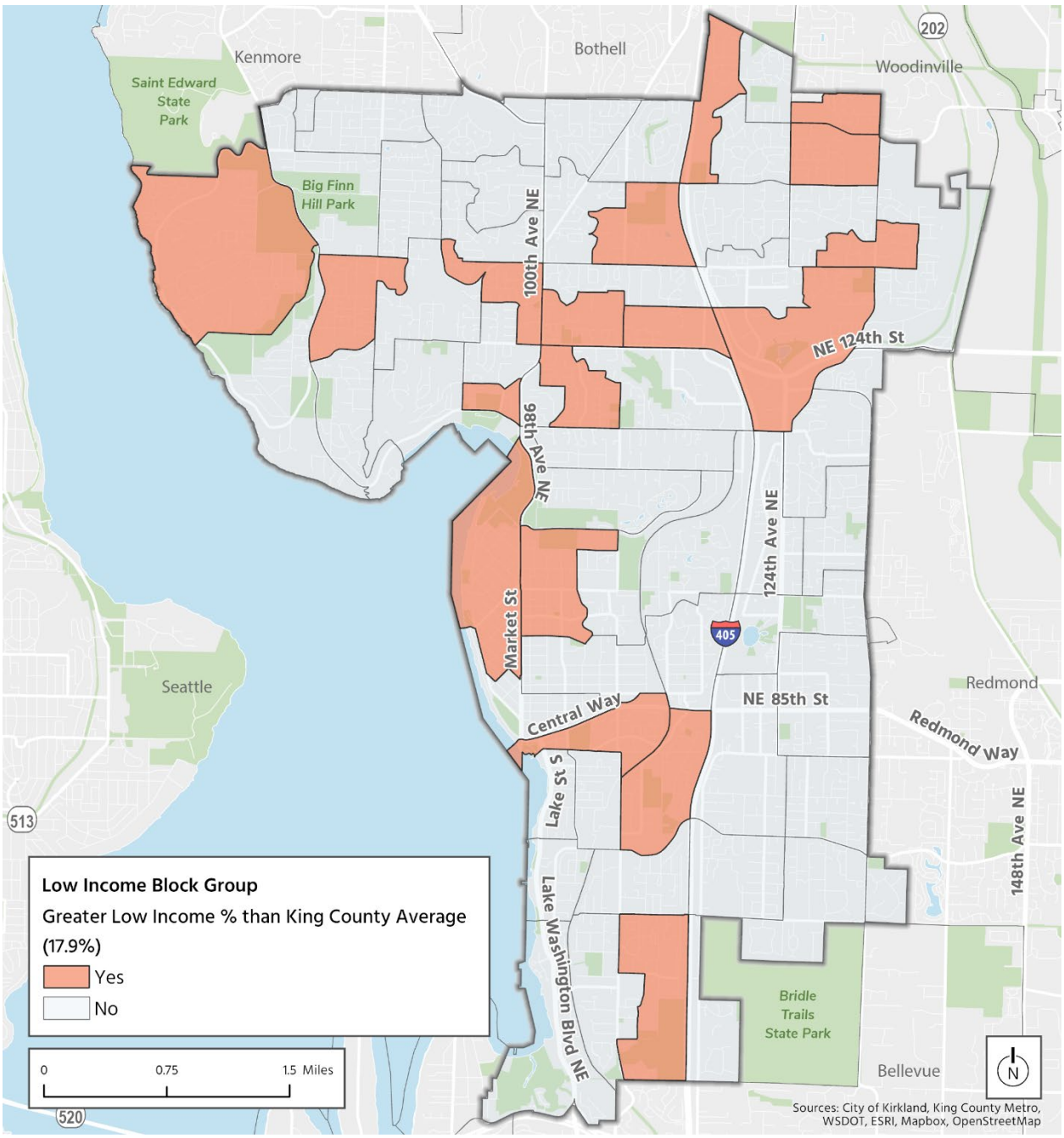


Figure 4.3-3. Census Block Groups with High Low-Income Population

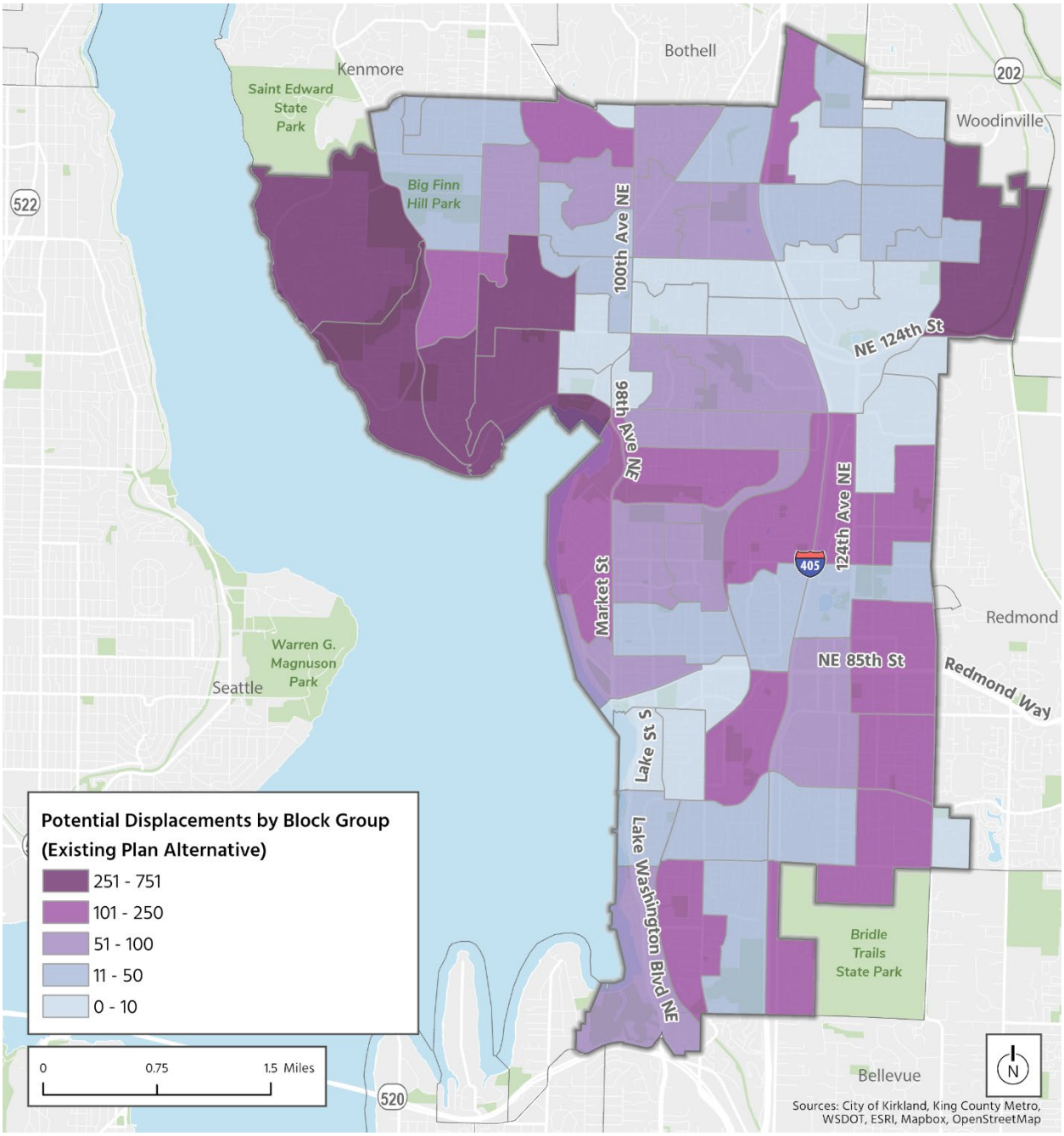


Figure 4.3-4. Potential Direct Displacements under the Existing Plan Alternative

4.3.2.2 Growth Alternative

The Growth Alternative would accommodate an additional 13,200 housing units by 2044 than in 2019. Since 2019, Kirkland has grown by nearly 3,130 housing units, with an additional 10,071 units expected to be developed by 2044. Much of the new housing stock in Kirkland would be created through redevelopment on properties with existing housing units, and as a result some housing units would be displaced by new residential growth.

The Growth Alternative would create an additional 9,242 housing units in multi-unit residential development and 829 housing units in single-unit residential development, where the City's current housing stock is approximately 55% single-unit housing. Estimates of future single- and multi-unit residential development in the Growth Alternative is shown in Table 4.3-5. Residential growth in this alternative would expand housing diversity by 2044 with new multi-unit development of varying sizes. The median new multi-unit residential development in the Growth Alternative would include 7 units, with an overall average of 10 units for all new multi-unit residential developments, excluding those already under permitting review. This alternative would potentially expand housing options, including middle housing dramatically, with capacity for smaller multi-unit developments in more neighborhoods and across a wider area of Kirkland. Combined with changes to zoning in low-density residential districts to comply with HB 1110, this alternative would help make more housing options available not only in Kirkland's Urban Centers, but also along key transit corridors and in neighborhoods that consist of predominantly low-density residential development today.

Table 4.3-5. Net New Housing and Displacements by Neighborhood for the Growth Alternative

Neighborhood	Forecast Growth Alternative Additional Housing Units by 2044	Estimated Net New Single-Family Units Housing by 2044	Estimated Net New Multi-Unit Housing Units by 2044	Estimated Total Displacement from Projected Growth by 2044
Bridle Trails	398	22	375	10
Central Houghton	1,133	24	1,109	12
Everest	130	4	125	2
Finn Hill	423	389	34	175
Highlands	37	25	12	11
Juanita	845	115	730	52
Kingsgate	310	121	189	55
Lakeview	487	5	482	3
Market	653	33	620	15
Moss Bay	470	0	470	0
Norkirk	496	22	475	10
North Rose Hill	1,493	44	1,448	21
South Rose Hill	732	25	707	12
Totem Lake	2,465	0	2,465	3
Citywide Total	**10,071**	**829**	**9,242**	**382**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Direct displacement from potential future development was estimated based on the residential development capacity of and existing housing units on redevelopable parcels in the Growth Alternative. An estimated 382 housing units would potentially be directly displaced by new development under the Growth Alternative, or 3.8% of the net new units created by 2044 (Table 4.3-5). New, single-unit development requires more land area per unit and therefore has a

higher average rate of potential displacements on average, although some redevelopment may be accommodated by subdivisions that do not affect existing structures. While single-unit development accounts for only 8% of new housing units in the Growth Alternative, potential for direct displacements from new development is highest in areas that are expected to see more single-unit growth, including Finn Hill, Juanita, and Kingsgate.

An estimated 67 housing units that would potentially be displaced by redevelopment would be in census block groups that currently have a higher percent of low-income households (200% of the federal poverty level) than the countywide average of 17.9%. Census block groups in Kirkland with higher low-income population are shown in Figure 4.3-5. While some housing units in low-income census block groups would be displaced for redevelopment, a larger number of affordable units would be constructed in these same block groups with redevelopment under the Growth Alternative. An estimated 319 affordable housing units would be created in low-income block groups in Kirkland under the Growth Alternative. Potential direct displacements by census block group in Kirkland under the Growth Alternative are shown in Figure 4.3-6 Property owners who would potentially be displaced by redevelopment, including low-income families, may benefit from the proceeds of the property transaction, but rental households would not see the same benefit.

Residential density allowances greater than the 50 units per acre along key transit corridors used for land use and housing analysis would result in a lower average displacement rate from new development citywide. Densities up to 100 units per acre would reduce overall displacements from development to reach forecasted housing and employment growth by 2044. However, greater densities near key transit corridors could also change what properties are considered redevelopable in these areas.

The analysis in this SEIS, including the land use and housing analysis, assumes residential densities of 50 units per acre along key transit corridors. Increasing residential densities to up to 100 units per acre along these key transit corridors could result in additional benefits, including a lower average displacement rate from new development citywide and more diverse housing options Although greater densities near key transit corridors could change the pattern of growth in the City, these changes are expected to be fairly modest and would not be expected to increase growth beyond what is anticipated in the City's growth target that is analyzed in this SEIS. Although specific zoning proposals that increase densities along transit corridors beyond 50 units an acre should be examined for potential environmental impacts, they are not expected to result in additional program-level environmental impacts beyond those identified in this SEIS. . Planning for higher densities of 100 units/acre along transit corridors is not expected to result in adverse program-level environmental impacts and could potentially result in environmental benefits.

Under the Growth Alternative, the affordable housing requirements and incentives in the KZC would be amended to support production of additional affordable housing and to comply with state mandates in HB 1110. Based on expected growth, 1,878 of the city's 10,071 forecasted new housing units, or nearly 18.6% of net new housing units expected by 2044, would be affordable. This only includes affordable housing as part of development currently in the permitting process and what could reasonably be expected to result from private development with changes in development regulations expected under the Growth Alternative. The estimated number of new affordable units does not include housing units created through Kirkland's affordable housing trust fund maintained by ARCH, affordable housing developers, or other programs administered by the City of Kirkland or King County.

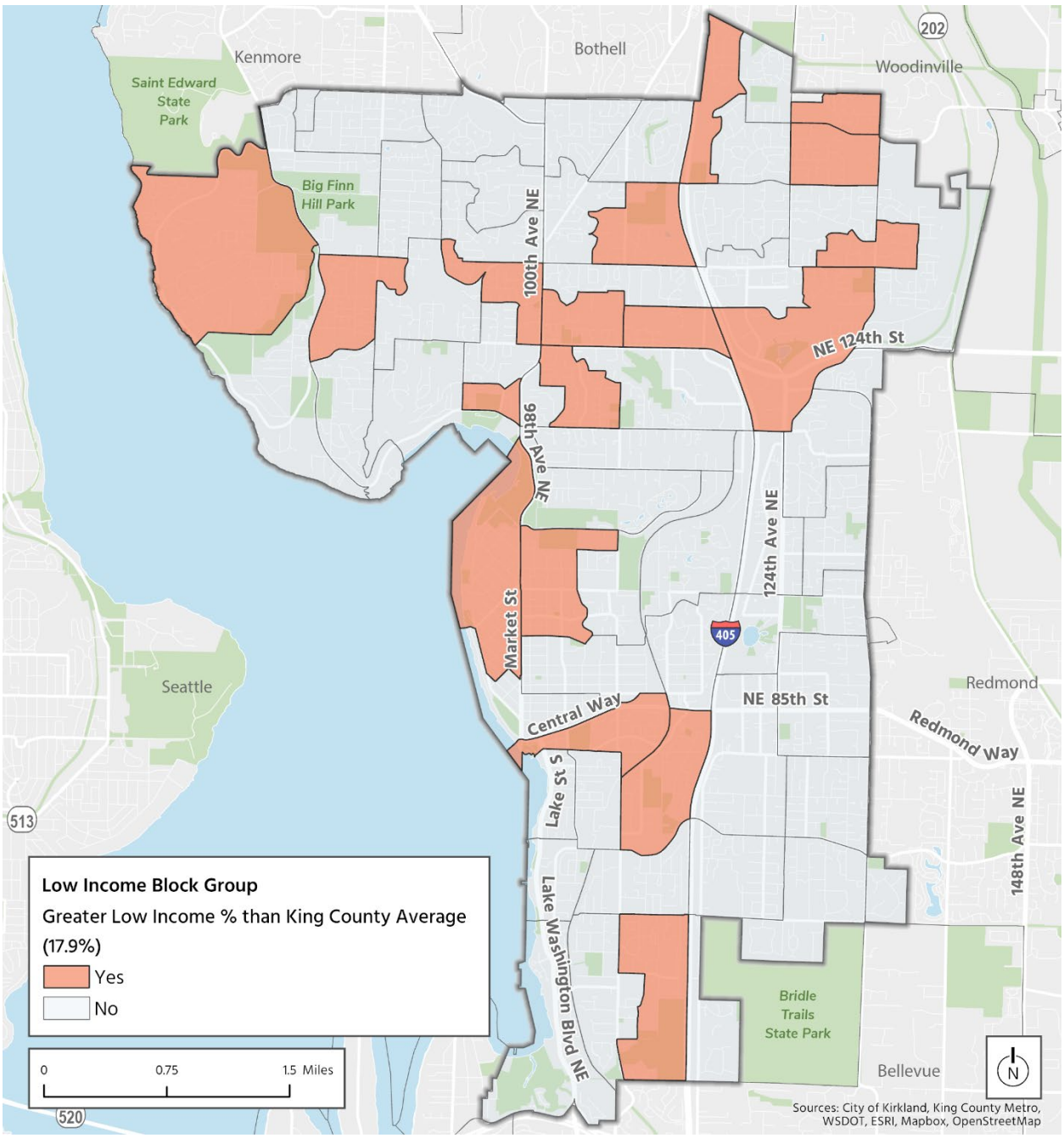


Figure 4.3-5. Census Block Groups with High Low-Income Population

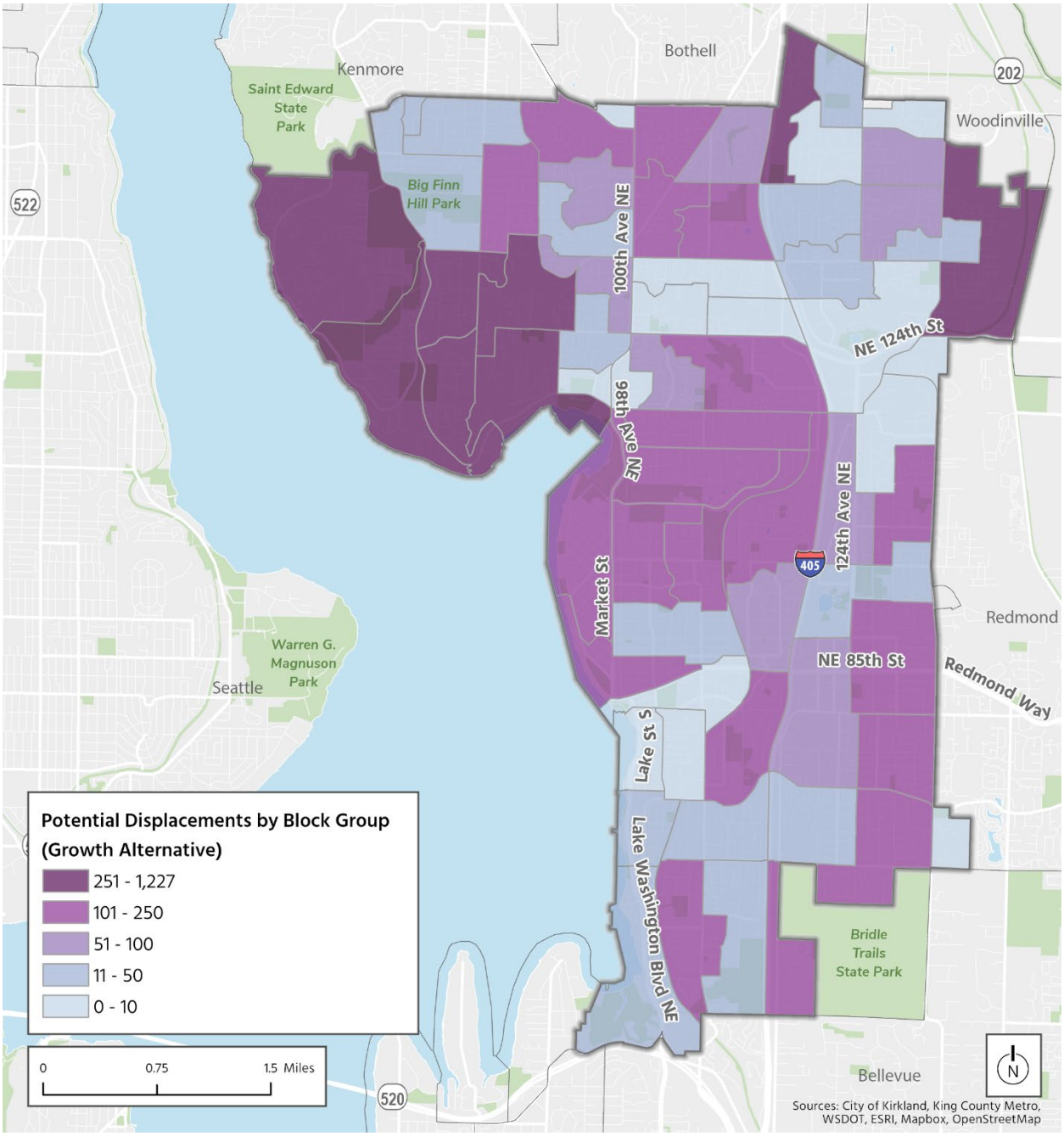


Figure 4.3-6. Direct Displacements by Census Block Group in the Growth Alternative

Other features included in proposed changes to the development regulations in the KZC as part of the Growth Alternative would reduce the impact of housing displacement on low-income communities. Under the Growth Alternative, Kirkland would implement changes to development regulations consistent with state mandates in HB 1110 that would allow denser residential development near transit and incentivize the creation of affordable housing. Amendments to the KZC in this alternative would support more multi-unit development and a wider range of housing types.

4.3.2.3 Comparison of Housing Impacts between Alternatives

Consistency with Countywide Planning Policies

Both the Existing Plan Alternative and the Growth Alternative are consistent with King County's 2021 Countywide Planning Policies. The Existing Plan Alternative, however, would not be entirely consistent with the County's framework policies on equity. The Growth Alternative would support more affordable housing and permanent supportive housing development in Kirkland. The differences in how the two alternatives would address countywide planning policies for housing are described in Table 4.3-6.

Table 4.3-6. Consistency with Comprehensive Planning Policies by Alternative

King County Countywide Planning Policy	Existing Plan Alternative	Growth Alternative
FW-7. Develop and use an equity impact review tool when developing plans and policies to test for outcomes that might adversely impact Black, Indigenous, and other People of Color communities; immigrants and refugees; people with low incomes; people with disabilities; and communities with language access needs. Regularly assess the impact of policies and programs to identify actual outcomes and adapt as needed to achieve intended goals.	Equity impact assessment tools are part of the City of Kirkland's Diversity, Equity, Inclusion and Belonging 5-year roadmap but not incorporated into the Comprehensive Plan per King County's overarching equity goal.	Equity impact assessment tools would be integrated into comprehensive planning policies to ensure evaluation for potential adverse impacts to priority populations in Kirkland.
H-1. Plan for and accommodate the jurisdiction's allocated share of countywide future housing needs for moderate-, low-, very low-, and extremely low-income households as well as emergency housing, emergency shelters, and permanent supportive housing. Sufficient planning and accommodations are those that comply with the Growth Management Act requirements for housing elements in Revised Code of Washington . . .	Affordable housing policies in the existing Comprehensive Plan and requirements in the Kirkland Zoning Code (KZC) would produce new affordable housing units and promote affordable housing for a range of income levels.	Affordable housing policies support programs to produce more affordable housing, including policies to promote emergency housing and shelters, Permanent Supportive Housing, and expanded affordable housing requirements and incentives would potentially produce more affordable housing.
H-2. Prioritize the need for housing affordable to households less than or equal to 30 percent area median income (extremely low-income) by implementing tools such as: Increasing capital, operations, and maintenance funding; Adopting complementary land use regulations; Fostering welcoming communities, including people with behavioral health needs; Adopting supportive policies; and Supporting collaborative actions by all jurisdictions.	Affordable housing policies support production of new affordable units for a range of income levels and needs, including emergency housing and shelters with strategies to preserve existing and create new affordable housing.	Affordable housing policies include specialized programs to promote production of extremely low-income and permanent supportive housing and removing barriers to the construction of shelters and emergency housing.

Table 4.3-6. Consistency with Comprehensive Planning Policies by Alternative (continued)

King County Countywide Planning Policy	Existing Plan Alternative	Growth Alternative
H-10. Adopt policies, incentives, strategies, actions, and regulations that increase the supply of long-term income-restricted housing for extremely low-, very low-, and low-income households and households with special needs.	Policies and regulations support production of affordable housing for all income levels and housing needs.	Stronger policies and regulations to produce more affordable housing and specifically support housing for extremely low-income households.
H-11. Identify sufficient capacity of land for housing including, but not limited to income-restricted housing; housing for moderate-, low-, very low-, and extremely low-income households; manufactured housing; multifamily housing; group homes; foster care facilities; emergency housing; emergency shelters; permanent supportive housing; and within an urban growth area boundary, duplexes, triplexes, and townhomes.	Zoning and development regulations in the KZC with recent plans for development in the NE 85th Street Station Area include sufficient capacity for market rate and affordable housing needs and diverse housing options.	Updated housing policies and amendments to the KZC would allow for greater capacity to meet Kirkland's housing needs across a larger area of the City and would provide for greater housing diversity.
H-15. Increase housing choices for everyone, particularly those earning lower wages, that is co-located with, accessible to, or within a reasonable commute to major employment centers and affordable to all income levels. Ensure there are zoning ordinances and development regulations in place that allow and encourage housing production at levels that improve jobs-housing balance throughout the county across all income levels.	Capacity for new residential development is focused in the City's Greater Downtown and Totem Lake Urban Centers, which are both also employment centers and have easy transit access.	Capacity for new residential development is focused along key transit corridors as well as in Kirkland's Urban Centers and would be accessible by frequent transit with local and regional connections to employment centers.
H-16. Expand the supply and range of housing types, including affordable units, at densities sufficient to maximize the benefits of transit investments throughout the county.	Range of housing types and choices with most housing growth in the form of new multi-unit development primarily in Kirkland's Urban Centers.	Broader range of "middle housing" options with more capacity for small-scale multi-unit residential development and more diverse options across larger areas of the city, including in low-density residential zones.
H-17. Support the development and preservation of income-restricted affordable housing that is within walking distance to planned or existing high-capacity and frequent transit.	Policies and regulations support development of affordable and market rate housing in Urban Centers that currently are accessible to frequent transit.	Policies and regulations support development of affordable and market rate housing along key transit corridors as well as in Urban Centers, both of which have access to frequent transit.

Source: 2021 King County Countywide Planning Policies, amended August 15, 2023

Potential Housing Impacts

Under the Growth Alternative, more citywide housing growth would take the form of multi-unit residential development, with approximately 92% of new housing by 2044 in the form of multi-unit residential development compared to 81% of housing growth under the Existing Plan Alternative. While this alternative would allow greater density and more multi-unit residential development in the city overall, many of those developments would potentially be smaller scale, with an average of 10 units compared to an average of 32 units in the Existing Plan Alternative. Although neighboring properties could be aggregated for larger multi-unit development, the Growth Alternative would create more opportunities for diverse housing options, including middle housing, compared to the Existing Plan Alternative. A comparison of key housing features for both alternatives is shown in Table 4.3-7.

The Growth Alternative would also provide for more new affordable housing units in Kirkland than the Existing Plan Alternative. Amendments to the KZC that would expand the zoning districts where affordable housing requirements would apply to residential development would potentially create 279 more affordable housing units compared to the Existing Plan Alternative. This may be higher with implementation of policies that are included in the Kirkland 2044 Comprehensive Plan Update, directing further studies on programs to expand affordable housing in Kirkland.

The Growth Alternative would potentially result in fewer direct displacements from redevelopment citywide than the Existing Plan Alternative, with an estimated 443 fewer displacements overall. More multi-unit housing options, including "middle housing," under the Growth Alternative and less single-family development would result in a lower average displacement rate for redevelopment. Therefore, there would be fewer displacements for the number of new housing units in the Growth Alternative compared to the Existing Plan Alternative. Displaced housing units in both alternatives would primarily be single-unit homes, which make up 84% of properties with existing housing that could potentially be redeveloped under both alternatives.

Table 4.3-7. Comparison of Key Housing Measures between Alternatives

Key Housing Features	Existing Plan Alternative	Growth Alternative
Total New Housing Units from 2022	10,071	10,071
Single-Unit Residential Development	1,956 (19%)	829 (8%)
Multi-Unit Residential Development	8,115 (81%)	9,242 (92%)
Average Multi-Unit Development Size	33 units	10 units
Affordable Housing Production	1,599	1,878
Affordable Housing Units in Low-Income Areas	345	319
Potential Displacements from Redevelopment	825	372
Potential Displacements in Low-Income Areas	143	67

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Under the Growth Alternative, fewer housing units would be displaced in low-income areas of Kirkland. Estimates of displacements in low-income census block groups are small relative to the scale of new housing growth and the number of new affordable housing units that would potentially be constructed in the same low-income areas. These potential displacements in low-income areas would be offset by new affordable housing units that would be created in these same areas that in both alternatives would be greater than the number of potential displacements. Affordable housing production in low-income areas would total 241% of the number of displacements in these areas in the Existing Plan Alternative and 476% of the number of displacements in these areas in the Growth Alternative. While the Growth Alternative would produce fewer affordable housing units in low-income areas, it is also less likely to displace existing housing in these areas through redevelopment because less new development is expected in these areas.

The Growth Alternative also includes more policy features that would reduce the impacts of housing displacements, particularly in low-income areas. This alternative would expand affordable housing requirements to Kirkland's low-density residential zones and amend the KZC to be consistent with HB 1110, allowing more density for projects that include affordable housing. If minimal changes to the KZC to comply with HB 1110 were incorporated into Existing Plan Alternative, future housing growth would have more potential for displacements overall but would also potentially create more affordable housing units in Kirkland.

4.3.2.4 Avoidance, Minimization, and Mitigation Measures

The Existing Plan Alternative and Growth Alternative are not anticipated to have any significant adverse environmental impacts to existing housing in Kirkland, and no additional avoidance, minimization, or mitigation is required. Development under either alternative would be subject to regulations that would create more diverse housing options, including affordable housing and would minimize potential impacts to housing.

4.4 Public Services and Utilities

The Existing Plan Alternative and Growth Alternative were evaluated for public services and utility impacts associated with housing and employment growth. The factors considered in the analysis of impacts include:

- Demand for public services: Potential demand for public services, including emergency services with growth.
- Utility demands: Potential demand for utilities based on housing and jobs growth and whether existing utility service providers account for population growth and electrification in current utilities plans.

4.4.1 Affected Environment

4.4.1.1 Plans and Regulations

Puget Sound Energy Gas Utility Integrated Resource Plan and Electric Progress Report

Puget Sound Energy (PSE) is the primary electricity and natural gas utility for Kirkland and surrounding communities on the east side of Lake Washington. PSE plans for long-term electrical and natural gas needs to ensure the utility's supply and infrastructure can deliver safe and reliable service. PSE completed a Gas Utility Integrated Resource Plan (PSE 2023a) and Electric Progress Report in March 2023 (PSE 2023b) to evaluate how future changes in the communities PSE serves could affect the utility's ability to meet its customer's needs.

The PSE 2023 Gas Utility Integrated Resource Plan included zero-customer growth in natural gas as the utility's preferred energy portfolio and assumes no new gas customer growth. Analysis of supply needs shows the need for natural gas is expected to decline by 2050. This plan analyzed electrification and found that under current conditions the "cost to increase resources and infrastructure on the electric system is greater than the social cost of GHGs saved by electrifying the gas loads."

The PSE 2023 Electric Progress Report focuses on less reliance on the wholesale electric market and more on diversified portfolio of non-emitting electricity generation to meet power needs in their service area. The PSE preferred portfolio includes variable energy resources like wind and solar. Energy storage can increase the ability of these non-emitting resources to meet demand but have limited capacity and may not be able to meet sustained peaks in demand. As a result, the utility has included some new and uncertain energy technologies in their portfolio, namely hydrogen fuel to maintain reliability of the electrical system and is continuing to monitor emerging technologies.

PSE Clean Energy Implementation Plan

PSE published its first Clean Energy Implementation Plan (CEIP) in 2021, and it describes the utility's efforts to support compliance with CETA for the first compliance period, from 2022 to 2025. The act's goals for electric utilities are that energy delivered to customers of the utility be GHG neutral by

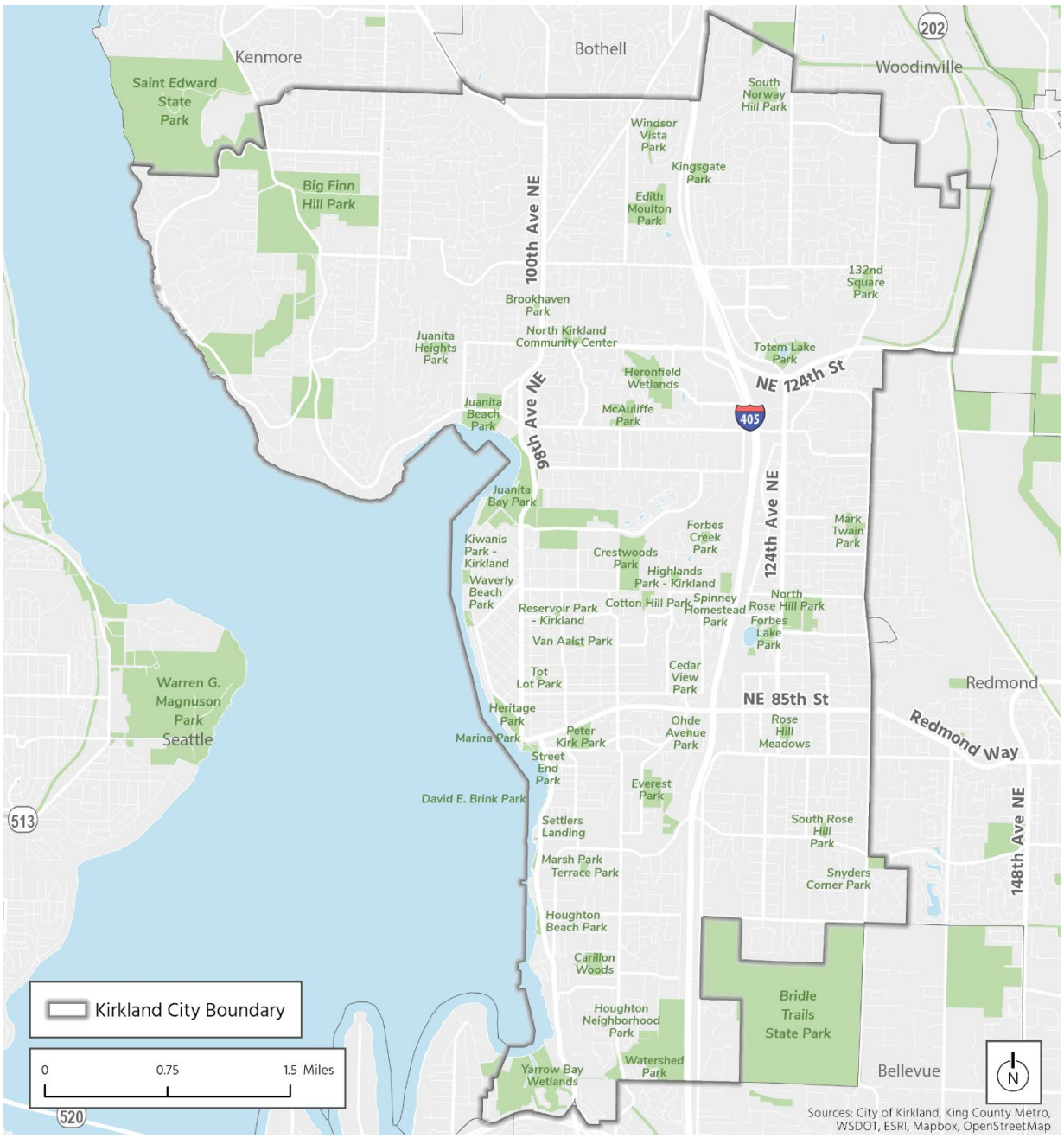
2030 and that all energy supply be clean (renewable or non-emitting) by 2045. The CEIP set the utility's annual clean energy goals through 2025, which were updated in 2023 to 60% by 2025 and an average of 54.5%. PSE also set targets for energy efficiency, demand response, and renewable energy, which were updated in 2023. The Washington Utilities and Transportation Commission placed conditions on the approval of PSE's CEIP through Order 08, which included provisions for vulnerable populations and consideration of impacts based on vulnerability factors. The CEIP establishes a methodology by which to measure customer benefits and defines PSE's approach to equity in the transition to clean energy.

2020 Sustainability Strategic Plan

One of the focus areas of the 2020 SSP is Kirkland's energy supply and emissions. Kirkland's utilities account for approximately 50% of emissions, with 29% of emissions from electricity used to power buildings and infrastructure and 21% from natural gas heat and other appliances, The plan set a goal of 100% carbon-free electricity purchased through the local utility (PSE) and the addition of 10 megawatts of additional individual and community solar power by 2030. The SSP includes strategies to reduce GHGs from vehicles through electrification, which would increase demand from electricity provided through PSE. The City also has targets to reduce emissions from pipeline gas and fossil fuels emissions from buildings by 20% by 2025 and 50% by 2030.

2022 Parks Recreation and Open Space Plan

Kirkland adopted an updated Parks Recreation and Open Space (PROS) Plan in 2022, which serves as a 6-year plan for investments in Kirkland's parks and recreation system and a framework for future planning. The goals of the plan provide a framework for future planning for the parks and recreation system focused on expanding park facilities and experiences, creating a friendly environment for walking and biking, providing a variety of programs to meet community needs, maintaining a well-organized and funded Parks and Community Services Department, improving access to parks and athletic opportunities, and protecting the natural environment. The 2015 PROS plan proposed service standards for the Parks and Community Services Department based on an investment per person standard. The 2022 PROS Plan reevaluated the investment per person level of service with the 2021 park impact fee update and multiple level of service metrics, including the Georeferenced Amenities Standards Process (GRASP) Model used to record level of service and park amenities. The 2022 PROS Plan also incorporated acreage guidelines from the previous plan of 2.25 acres of community parks per 1,000 residents and 1.5 acres of neighborhood parks per 1,000 residents. Public parks in the City of Kirkland are shown in Figure 4.4-1.



Source: King County, 2018

Figure 4.4-1. Public Parks in Kirkland

Lake Washington School District

Almost the entire City of Kirkland is within the Lake Washington School District. The school district adopts a 6-year Capital Facilities Plan each year to project the district needs based on the projected size of student enrollment. The district has a target student-to-teacher ratio based on grade level, shown in Table 4.4-1. The district also has a standard of service that establishes the school capacity of the district based on the number of available classrooms.

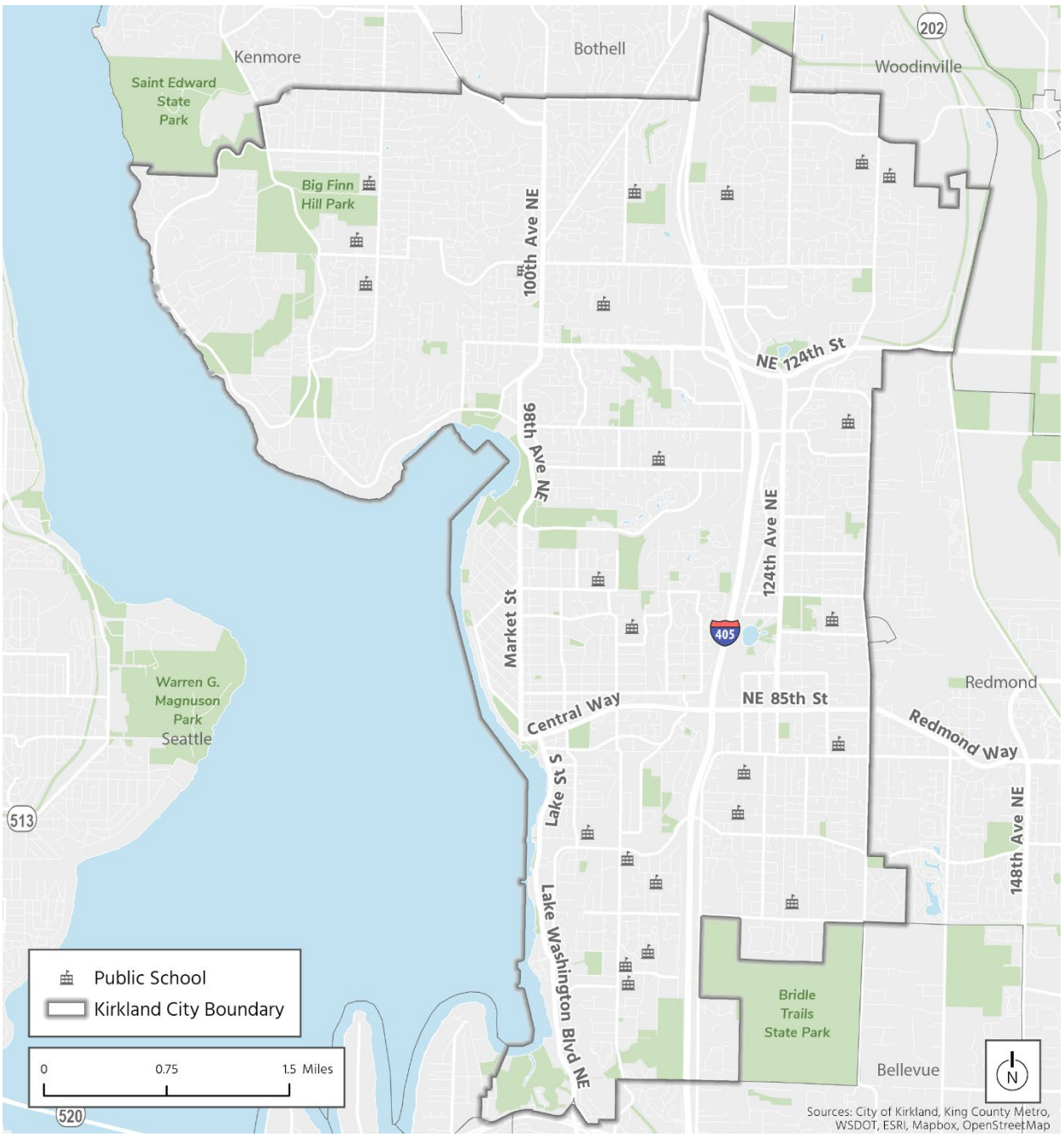
Table 4.4-1. Target Student-to-Teacher Ratios in the Lake Washington School District

Grade	Target Ratio
K–1	20 students to 1 teacher
2–3	23 students to 1 teacher
4–5	27 students to 1 teacher
6–8	30 students to 1 teacher
9–12	32 students to 1 teacher

Source: LWSD, Six-Year Capital Facilities Plan 2023–2028, 2023

There are 27 public schools and educational programs in the City of Kirkland, some of which are housed in the same facilities. A map of public schools Kindergarten through Grade 12 within the City of Kirkland is shown in Figure 4.4-2.

Kirkland has recently implemented zoning changes to support more school capacity in its Greater Downtown Urban Center. In 2023, as part of the implementation for adopted NE 85th Street Station Area Plan, the City rezoned the Lake Washington High School property to increase allowed heights up to 75 feet and to expand allowed uses to include residential, commercial, and/or civic uses. The rezone was intended to give the school district abundant options to add classroom capacity, including the potential to explore innovative options for mixed use development on the site.



Source: Washington Office of the Superintendent of Public Instruction, 2021

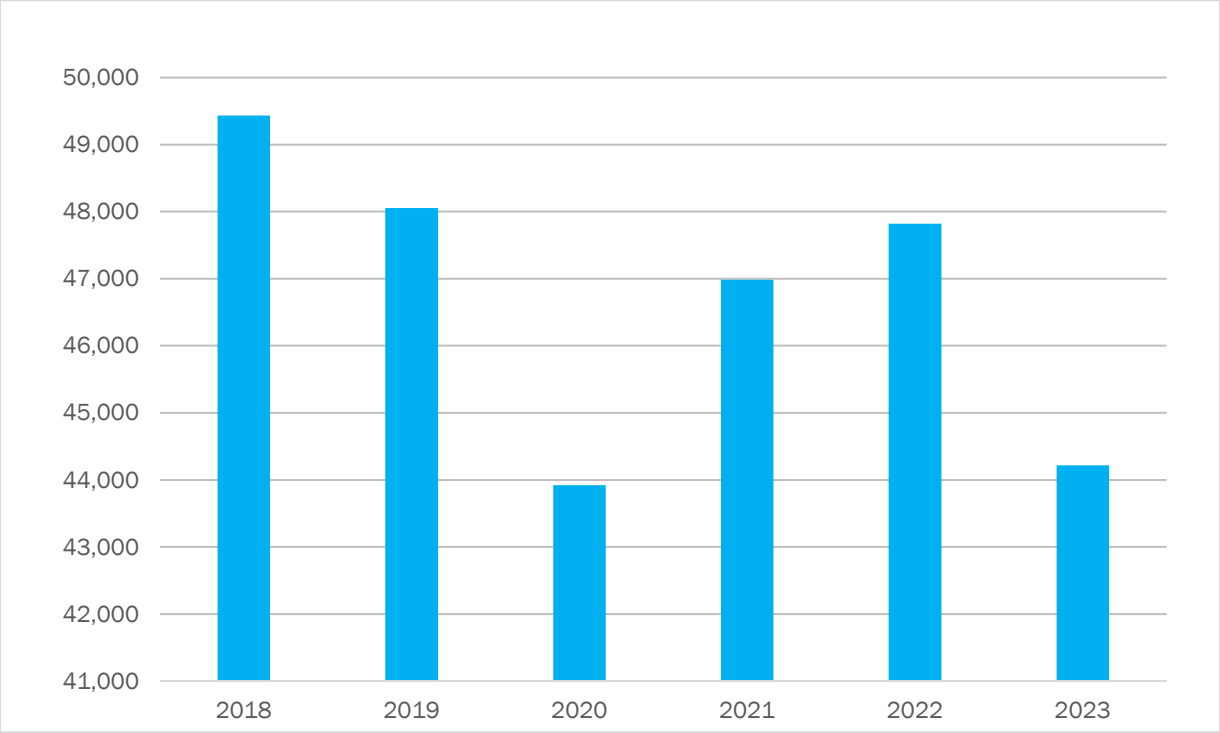
Figure 4.4-2. Public Schools in Kirkland

4.4.2 Existing Public Services

4.4.2.1 Police and Emergency Response

The Kirkland Police Department (KPD) provides law enforcement and public safety services throughout the City of Kirkland. The Kirkland Justice Center at 11750 NE 118th Street is the primary police facility within the City of Kirkland and also houses the Kirkland Municipal Court. As of 2019, KPD employed 153.5 full-time equivalent employees (109 commissioned officers and 44.5 noncommissioned support personnel). KPD service levels in 2019, based on resident and total population (residents and workers) that year, was 1.23 officers per 1,000 per resident or 0.82 per capita. An average of 10 patrol officers were staffed per 10-hour shift in 2019 (City of Kirkland Police Department 2019).

In 2023, KPD responded to 44,218 service calls. This is somewhat lower than previous years, as seen in Figure 4.4-3, with the exception of 2020, where service calls skewed lower during the height of the COVID-19 pandemic (City of Kirkland Police Department 2023).



Source: Kirkland Police Department, 2023

Figure 4.4-3. Annual Service Calls to the Kirkland Police Department

The Kirkland Fire Department (KFD) provides fire, rescue and emergency services throughout the City of Kirkland. As of 2022, KFD employed 110 emergency response personnel, with a minimum of 21 personnel on duty every day. KFD has six fire stations citywide. The newest, Fire Station 24, opened in January 2022. KFD is continuing capital improvements on other stations, including renovations to Station 22, which reopened in 2023, and replacement of Station 27, which is expected to be complete in 2024. Emergency response staffing is done on a three-shift platoon rotation. This schedule places emergency response personnel on duty for 48 hours, followed by 96 hours off duty. KFD received 8,645 calls for service in 2022 and engaged in a total of 10,879 emergency responses by unit (City of Kirkland Fire Department 2022).

KFD has service standards for fire and emergency medical services (EMS) for different components of overall response time. Fire department staff can influence turnout time and travel time, which are two key components of overall response time. Turnout time is the amount of time it takes firefighters/emergency medical technicians to put on protective equipment and leave the station. The goal turnout time is 60 seconds for EMS responses and 80 seconds for fire and rescue responses. Travel time is the amount of time it takes for responders to arrive at an emergency scene after leaving the station. KFD's target travel time is 4 minutes, and the department aims to meet that standard for 90% of responses within city limits. In 2022, 61% of fire response and 70% of EMS responses within the KFD response area were under the 4-minute standard (Table 4.4-2) (City of Kirkland Fire Department 2022).

Table 4.4-2. Emergency Medical Service and Fire Response Meeting Travel Standard

	EMS		Fire	
Year	All Calls	In Response Area	All Calls	In Response Area
2018	65%	74%	48%	65%
2019	71%	75%	66%	71%
2020	67%	70%	64%	69%
2021	65%	71%	58%	67%
2022	66%	70%	59%	61%

Source: Kirkland Fire Department, 2022 Annual Report, 2022

4.4.2.2 Public Schools

The Lake Washington School District has 33 elementary schools, 14 middle schools, and nine high schools in Kirkland, Redmond, and Sammamish. In fall 2022, the school district had a total of 29,714 students and a net available capacity of 34,290. Student enrollment has declined by 677 since 2019, with a majority of the decline at the elementary school level due to declining kindergarten enrollment. The 6-year enrollment projection predicts a modest decrease in enrollment to 29,431 by 2028 (LWSD 2023).

4.4.2.3 Parks and Open Space

Kirkland Parks and Community Services Department maintains approximately 641.2 acres of parks and open spaces, including cemeteries and school athletic facilities. According to the 2022 PROS Plan inventory of parks, open spaces, and recreational facilities, these include 11 waterfront parks, eight community parks, 28 neighborhood parks, six natural areas, three other sites, and over 420 other parks or recreational components in Kirkland. Currently, Kirkland has an estimated 6.9 acres of parks per 1,000 residents, which is below the national median of 7.9 acres estimated by the National Recreation and Park Association.

The City of Kirkland has a trail system with over 44 miles of trails, including the nearly 6-mile Cross Kirkland Corridor that runs north-south through the city. There are another 18 miles of trails within City parks that provide recreational access to parks and connect to the broader trail system (City of Kirkland 2022).

4.4.3 Existing Utilities Services

4.4.3.1 Water and Sewer

The City of Kirkland's water infrastructure for most of the City's water system, south of the South Juanita and Totem Lake neighborhoods, is maintained by the City's Water Division. Areas farther north are served by the Northshore Utility District and the Woodinville Water District. The Kirkland Water Utility provides potable water supplied by Seattle Public Utilities through the Cascade Water Alliance. The Cascade Water Alliance is an association of five cities and two water and sewer districts in the Seattle area that purchases wholesale water and supplies water for over 370,000 residences and 22,000 local businesses. The City of Kirkland Water Division also provides the water conveyance and storage capacity to meet fire flow needs (City of Kirkland Public Works Department, n.d.[a]).

The City of Kirkland's sewer service is provided by the City of Kirkland's Wastewater Division, which maintains and operates the City's 123 miles of sewer mains, over 3,600 maintenance holes, and six wastewater pump stations. The pump stations convey all the City's wastewater to King County's wastewater treatment plants. King County accepts up to 100 gallons of wastewater per capita daily from Kirkland under an intergovernmental agreement between the County and the City of Kirkland (City of Kirkland Public Works Department, n.d.[b]).

The Kirkland Public Works Department manages surface and stormwater infrastructure within the city. The City of Kirkland has a National Pollutant Discharge Elimination System (NPDES) Western Washington Phase II Municipal Stormwater permit effective August 1, 2019, through July 31, 2024. The aim of this permit is to reduce pollutants that affect water quality in Kirkland's surface water. The City has a Stormwater Management Program Plan, as required by the NPDES permit, which is updated annually. The KMC includes regulations on storm and surface water for development activities and includes provisions for drainage review and development requirements with requirements of the 2021 King County Surface Water Design Manual and the 2021 King County Stormwater Pollution Prevention Manual, as amended adopted by reference.

4.4.3.2 Electricity and Natural Gas

Electricity and natural gas in Kirkland are provided by PSE. PSE maintains power and natural gas infrastructure within its service area. PSE serves over 1.2 million electricity customers and 900,000 natural gas customers in a service area that includes portions of Whatcom, Skagit, Island, Snohomish, King, Kitsap, Kittitas, Pierce, Thurston, and Lewis Counties (PSE 2019).

4.4.4 Potential Impacts

The Existing Plan Alternative and Growth Alternative were evaluated for potential public services and utility impacts associated with housing and employment growth. The factors considered in the analysis of impacts to public facilities and utilities are as follows:

1. Estimated new students: Estimates of the number of new students by 2044, based on the district's existing student generation methodology, and can project future enrollment and identify whether the Lake Washington School District's plans would account for sufficient enrollment growth in new capacity.
2. Demand for public services: Potential demand for public services, including emergency services with growth.
3. Utility demands: Potential demand for utilities based on housing and jobs growth and whether existing utility service providers account for population growth and electrification in current utilities plans.

4.4.4.1 Public Services

Housing and employment growth in both the Existing Plan Alternative and Growth Alternative could lead to increased demand for public services beyond current service levels. Depending on where development occurs, the City may need to hire additional police, fire, and EMS staff or expand existing emergency services facilities to maintain Kirkland's current level of emergency services.

Based on the district's current student generation rates, the Existing Plan Alternative would add an estimated 1,805 new students to the Lake Washington School District, as shown in Table 4.4-3. More multi-unit residential growth would result in more modest new student enrollment in Growth Alternative, with 1,285 new students in the district, as shown in Table 4.4-4. The Lake Washington District has an overall capacity for students at all levels that is above the estimated total enrollment shown in Table 4.4-5, but middle and high school capacity is more limited. In both the Existing Plan Alternative and Growth Alternative, housing growth in Kirkland by 2044 may require expansion of existing schools serving Kirkland. A portion of this estimated enrollment may be accommodated with planned expansions to middle and high school facilities in Kirkland, Redmond, and the west side of the district, as outlined in the Lake Washington School District's 6-Year Capital Facilities Plan (LWSD 2023). Both the Existing Plan Alternative and the Growth Alternative include policies to coordinate with the district on siting new and expanded school facilities. For example, the City Council-adopted 2024–2026 Planning Work Program includes a project to consider increasing school capacity citywide, including capacity for classroom space and residential development. This plan and any resulting regulatory changes are expected to be in effect by 2044 under either alternative.

Table 4.4-3. Estimated New School Students by 2044 in the Existing Plan Alternative

Neighborhood	Existing Plan Additional Housing Units by 2044	Estimated New Elementary School Students by 2044	Estimated New Middle School Students by 2044	Estimated New High School Students by 2044	Estimated Total New Students by 2044
Bridle Trails	298	31	13	15	59
Central Houghton	602	47	20	24	91
Everest	25	5	2	2	10
Finn Hill	906	267	118	124	509
Highlands	59	17	8	8	33
Juanita	1,080	113	49	56	217
Kingsgate	664	98	43	47	188
Lakeview	350	21	9	11	42
Market	118	27	12	13	52
Moss Bay	714	29	12	16	56
Norkirk	72	17	8	8	33
North Rose Hill	1,314	91	39	47	177
South Rose Hill	788	52	22	27	101
Totem Lake	3,081	120	49	68	237
Citywide Total	**10,071**	**935**	**404**	**466**	**1,805**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Table 4.4-4. Estimated New School Students in Kirkland by 2044 under the Growth Alternative

Neighborhood	Growth Alternative Additional Housing Units by 2044	Estimated New Elementary School Students by 2044	Estimated New Middle School Students by 2044	Estimated New High School Students by 2044	Estimated Total New Students by 2044
Bridle Trails	464	25	11	13	50
Central Houghton	1322	59	25	33	116
Everest	135	7	3	4	13
Finn Hill	493	145	64	68	277
Highlands	43	10	4	5	19
Juanita	763	67	29	34	129
Kingsgate	362	53	23	26	102
Lakeview	439	19	8	10	37
Market	720	39	16	21	76
Moss Bay	513	20	8	11	39
Norkirk	543	28	12	15	55
North Rose Hill	1742	82	34	45	161
South Rose Hill	854	41	17	22	81
Totem Lake	1678	65	27	37	129
Citywide Total	**10,071**	**660**	**281**	**344**	**1,284**

Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis, 2024

Table 4.4-5. Estimated Current Lake Washington School District Enrollment and Capacity

	Elementary School	Middle School	High School
Current Enrollment	13,977	7,235	8,502
Overall Capacity (excluding special programs)	16,654	8,403	9,233

Source: Lake Washington School District, Six-Year Capital Facilities Plan 2023–2028, 2023

4.4.4.2 Utilities

Both the Existing Plan Alternative and the Growth Alternative would maintain current and planned levels of utility services. Kirkland's utilities providers, including PSE and the City of Kirkland Water and Wastewater divisions, would continue to accommodate growth in Kirkland. As overall growth citywide would be the same in both alternatives, Kirkland's utilities would need accommodate a similar amount of growth and demand for electricity, natural gas, and water.

EV adoption and electrification are expected to increase utility demands by 2044. New policies to support transportation electrification in the 2044 Comprehensive Plan are consistent with Washington State goals, strategies, and policies to electrify transportation and reduce emissions. State policies and emissions standards are expected to contribute to higher EV adoption and more EV infrastructure, which is an assumption in long-term utility planning for PSE's service area, including Kirkland.

PSE currently forecasts an increase in demand for electricity and load growth based on EV adoption and electrification. PSE is planning for an estimated increase of 1,147,000 EVs by 2045 and an increase in annual energy sales of 4,815,000 megawatt hours (PSE 2023b). PSE is also planning for a transition from natural gas to electric by 2044, as discussed in Section 4.4.1.1, with a zero-growth natural gas demand forecast included in PSE's Gas Integrated Resource Plan (PSE 2023a). Any increases in electricity demand as a result of the Growth Alternative to encourage transportation and energy electrification would represent a small portion of PSE's service area and would be consistent with the range of electrification scenarios (high, medium, and low) the utility provider is currently planning for by 2045.

4.4.4.3 Consistency with Countywide Planning Policies

Both the Existing Plan Alternative and the Growth Alternative are consistent with King County's 2021 Countywide Planning Policies. There are no notable differences between the two alternatives in terms of utility services, facilities, and demand and only small differences in demand for certain public services citywide. Both the Existing Plan Alternative and the Growth Alternative would provide for reliable and equitable access to public services throughout Kirkland and include strategies to promote the conservation and efficient use of water and energy.

4.4.4.4 Avoidance, Minimization, and Mitigation Measures

The Existing Plan Alternative and Growth Alternative are not anticipated to have any significant adverse environmental impacts to public services or utilities. Additional demand for utilities and public services in both alternatives would be addressed in current plans of utilities providers and the City and Lake Washington School District plans for improvements and expansions to local public and emergency services facilities. No avoidance, minimization, or mitigation measures would be necessary. Development under either alternative would be subject to the City's regulations and policies that minimize impacts to utilities and public services and would contribute impact fees for parks, schools, and other services to fund continued public service improvements.

4.5 Sustainability, Climate, and Environment

4.5.1 Air Quality

4.5.1.1 Plans and Regulations

Federal Regulations

The Clean Air Act, 42 United States Code Chapter 85, is a federal law passed in 1970 and amended in 1977 and 1990 to protect human health and the environment from air pollutants. The Clean Air Act defines the responsibilities of the Environmental Protection Agency (EPA) for protecting and improving the nation's air quality and establishes National Ambient Air Quality Standards (NAAQS) to limit common and widespread pollutants. The six criteria pollutants are included in federal standards: carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide, and particle pollution. Particle pollution is differentiated by the size of particulate matter, with standards for PM_{10} (particulate matter less than or equal to 10 microns in diameter) and $PM_{2.5}$ (particulate matter less than or equal to 2.5 microns in diameter). The Clean Air Act also requires the EPA to regulate 188 hazardous air pollutants, also known as air toxics (EPA 2023a).

The six criteria air pollutants regulated by the EPA and their common sources and effects are described in Table 4.5-1.

Table 4.5-1. Criteria Air Pollutants and Common Sources and Health Effects

Criteria Air Pollutant	Common Sources	Potential Health and Environmental Effects
Lead (Pb)	Ore/metal processing plants, piston-engine aircraft, waste incinerators, and utilities	Health: neurological effects in children and other serious health effects in adults, depending on exposure Environment: decreased growth and reproduction in plants and animals
Ground-Level Ozone (O_3)	Formed from the reaction of sunlight with chemicals from vehicle emissions, paints, and solvents such as nitrogen dioxide and volatile organic compounds	Health: respiratory problems, including increasing asthma symptoms Environment: harmful to sensitive vegetation and ecosystems
Carbon Monoxide (CO)	Fossil-fuel burning, including vehicle exhaust and other machinery	Health: dizziness, unconsciousness, and death when concentrations are high; particularly bad for people with heart conditions
Nitrogen Dioxide (NO_2)	Fossil-fuel burning, including vehicle exhaust, power plants, and off-road equipment	Health: damage to the human respiratory tract and increase of a person's vulnerability to, and the severity of, respiratory infections and asthma
Sulfur Dioxide (SO_2)	Fossil-fuel burning, including power plants, refineries, and other industrial facilities	Health: respiratory problems, including increasing asthma symptoms Environment: primary component in acid rain
Particulate Matter (PM)	Emitted directly from sources, such as vehicle exhaust, woodstoves, and wildfires, or formed from reactions of chemicals in the air, such as SO_2 and NO_2	Health: $PM_{2.5}$ poses the greatest risk to health because it can be inhaled deep into the lungs, causing severe and chronic respiratory and cardiovascular problems Environment: $PM_{2.5}$ and PM_{10} cause regional haze that can reduce visibility

Sources: EPA, 2022

The EPA standards in the NAAQS apply to all criteria air pollutants, except when local jurisdictions at the state, regional, or county level have adopted more stringent standards. Areas that do not meet the NAAQS for one of more criteria pollutants are designated nonattainment areas, while areas that meet the NAAQS are considered to be in attainment. Areas that were designated nonattainment areas and then met NAAQS standards are classified as maintenance areas and begin a 20-year maintenance period. State agencies develop plans to bring criteria pollutants in nonattainment areas into compliance with federal standards and maintain attainment of federal standards in maintenance areas (EPA 2023b).

State Regulations

The Washington Clean Air Act, Chapter 70.94 RCW, was intended to preserve, protect, and enhance air quality within Washington State and establishes county- and multicounty-level air pollution control authorities. Chapter 173-476 WAC, Ambient Air Quality Standards, contains the Washington State limits for the atmospheric concentration of the six criteria pollutants listed in the EPA NAAQS. Washington State Department of Ecology (Ecology) is responsible for monitoring statewide air quality and for enforcing federal standards though the State Implementation Plan.

Puget Sound Clean Air Agency

The Washington Clean Air Act formed the Puget Sound Clean Air Agency (PSCAA) in 1967. PSCAA has the authority to regulate pollutants from all emissions sources in King, Kitsap, Pierce, and Snohomish Counties and implements the requirements of the Washington Clean Air Act. PSCAA

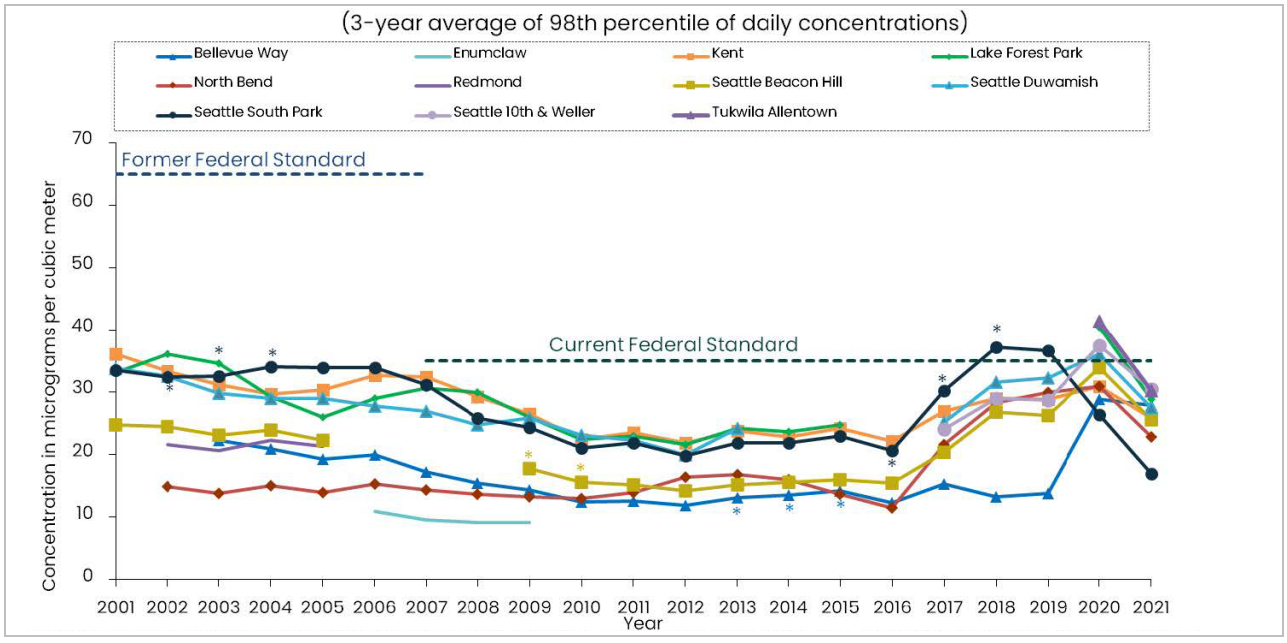
contributes to state implementation plans and operates 20 ambient air quality monitoring stations throughout its four-county jurisdiction and, while most standards follow state and federal standards for air pollutants, the PSCAA adopted a stricter goal for particulate matter.

4.5.1.2 Air Quality Monitoring Data

King County is currently in attainment for all six criteria pollutants, meaning that levels for these pollutants are below the maximum threshold set by the EPA. Portions of western King County within the contiguous urban area, including Kirkland, were in nonattainment for ozone, carbon monoxide, and particulate matter in the past. King County completed its 20-year attainment maintenance plan for carbon monoxide and ozone in 2016 and for PM_{10} in 2021. Levels of other criteria pollutants have consistently been below federal standards; however, ozone and particulate matter are still a regional concern due to the increased frequency of smoke events from North American wildfires.

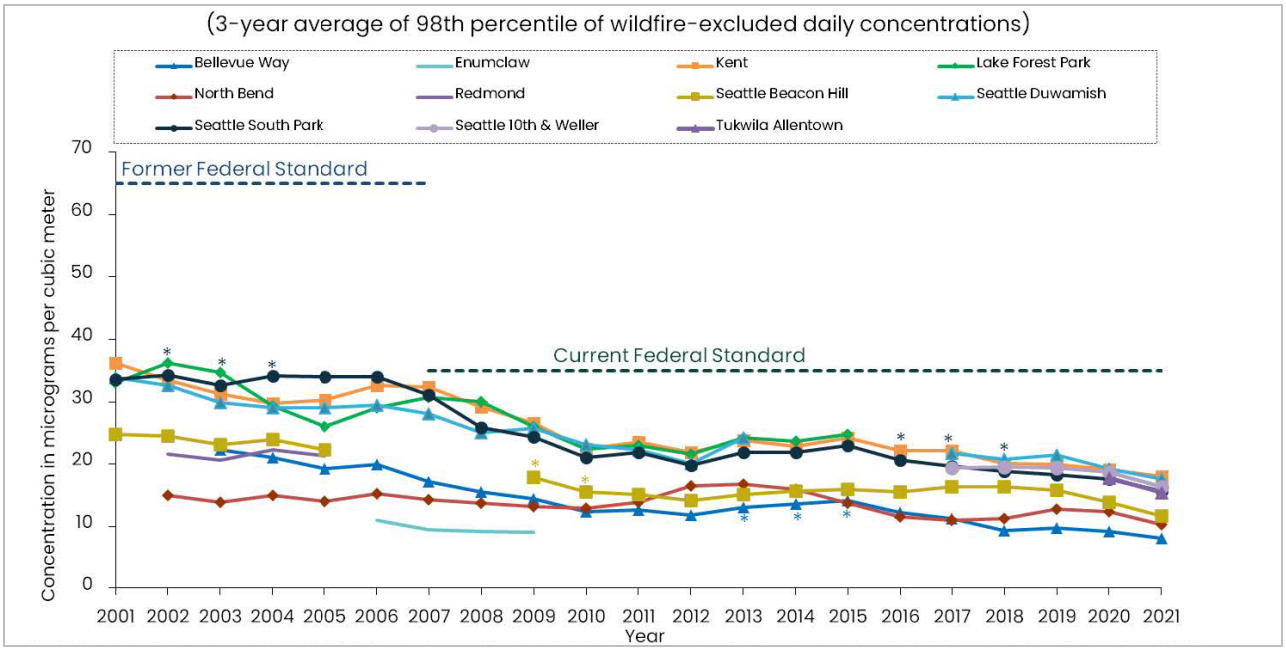
According to the PSCAA 2022 Air Quality data summary, air quality in King County was "good" on 256 days, or 70% of the year; "moderate" on 88 days, or 24% of the year; and "unhealthy for sensitive groups," "unhealthy," or "very unhealthy" on 21 days, or 6% of the year. According to PSCAA, the pollutants of greatest concern within the region are particulates from diesel and wood smoke. Diesel particulates primarily come from transportation sources in the region, including maritime and rail transportation, off-road equipment, and on-road vehicles.

PSCAA has established more stringent goal of 25 µg/m^3 (micrograms per cubic meter) for $PM_{2.5}$ in the Central Puget Sound Region. In 2022, air monitoring sites near Kirkland reported multiple days ways where particulate matter exceeded that goal, including 12 days at the 10th and Weller and Lake Forest Park stations, the two closest air monitoring stations to Kirkland that measure fine particles for which PSCAA published data in 2022. The 2021 Air Quality Data Summary shows the difference between daily $PM_{2.5}$ levels, including and excluding wildfire days from 2001 to 2021, and includes data from additional air monitoring stations, as shown in Figures 4.5-1 and 4.5-2.



Source: Puget Sound Clean Air Agency, 2021 Air Quality Data Summary, 2022. [LINK]
Note: Stations may only operate certain years or periods of the year; asterisks reflect incomplete data.

Figure 4.5-1. Daily $PM_{2.5}$ Levels for King County (including wildfire days)



Source: Puget Sound Clean Air Agency, 2021 Air Quality Data Summary, 2022. [LINK]
Note: Stations may only operate certain years or periods of the year; asterisks reflect incomplete data.

Figure 4.5-2. Daily $PM_{2.5}$ Levels for King County (excluding wildfire days)

4.5.2 Greenhouse Gas Emissions and Climate

4.5.2.1 Plans and Regulations

State Legislation

Climate Commitment Act

Washington State enacted the Climate Commitment Act in 2021, which sets a statewide goal of a 95% reduction in carbon emissions by 2050 compared to 1990 baseline GHG emissions. The Climate Commitment Act created a state cap-and-invest program to be administered by Ecology to allow emitters to trade offsets to encourage investment in projects that combat emissions and provide direct environmental benefits. When these allowances are sold, the profits will be reinvested into projects that address air quality issues.

Motor Vehicle Emissions Standards Law

Washington State's 2020 Motor Vehicle Emissions Standards Law directed Ecology to adopt vehicle emission standards set by the State of California. In November 2021, Ecology adopted the zero-emission vehicle standard. This requires that 100% of all new passenger vehicles and light-duty trucks sold be zero-emission starting in 2035.

Clean Fuel Standard Law

The Clean Fuel Standard law enacted in 2021 requires fuel suppliers to gradually reduce the carbon intensity of transportation to 20% below 2017 levels by 2034. This standard is projected to cut statewide GHG emissions by 4.3 million metric tons annually by 2038.

Local Plans and Initiatives

Sustainability Strategic Plan

Kirkland adopted the SSP in 2020 to set environmental goals and actions to help the community meet its sustainability goals in the future. One of the focus areas of the SSP is energy and emissions, with 29% of GHG emissions from electricity generation, 50% from mobile sources (transportation), and 21% from heating and other gas appliances. The plan includes a number of actions to achieve the City's 2050 goal of an 80% reduction in GHGs by 2050 compared to the 2005 baseline. Actions to meet this goal in the SSP include process changes and plan updates to emphasis GHG emissions reduction, green sources of electricity in collaboration with PSE, supporting a small community and individual solar power network, supporting vehicle electrification, supporting energy efficiency retrofits for all existing building types, reducing gas use, and supporting conversion from gas water and space heating to electric and more energy-efficient appliances.

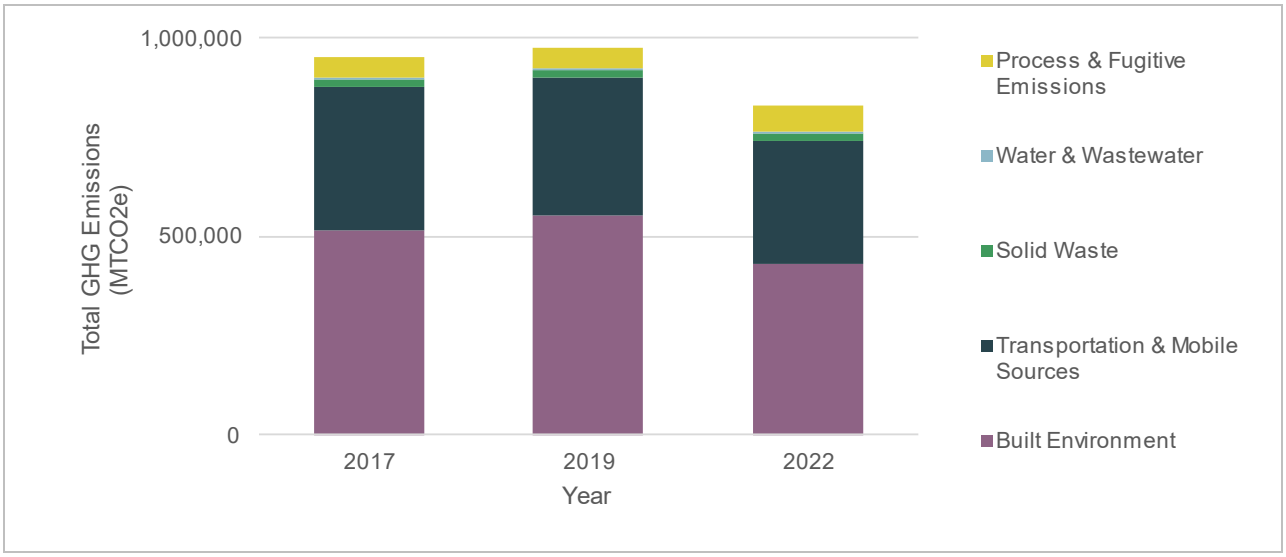
Strategies in other focus areas also indirectly affect GHG emissions, including net-zero energy and high-performing green building design in new development, monitoring energy use, and incentivizing energy conservation in existing buildings. Since transportation accounts for approximately half of GHG emissions in Kirkland, the SSP also includes strategies to help create more complete neighborhoods in Kirkland with smart, compact growth, incorporating smart growth principles of the KZC, expanding access to 10-minute neighborhoods, removing parking minimums in certain areas, creating a transit-supportive environment, incentivizing transit use, and investing in active transportation infrastructure. Many of these goals are also reflected in the land use and transportation aspects of the proposed 2044 Kirkland Comprehensive Plan Update.

King County Cities Climate Collaboration

King County Cities Climate Collaboration (K4C) is a local partnership between the County and cities, which began in 2012 and has since expanded to 23 partners that represent over 86% of the County's population. Membership in K4C is managed by interlocal agreements, and members are encouraged to sign joint commitments for actions and policies to meet the climate targets for the County and local communities. K4C also publishes a list of joint climate interests for the partnership each year to help guide advocacy for state actions. Part of the commitments the City of Kirkland has made to the partnership are the GHG reduction targets included in the SSP.

Greenhouse Gas Emissions Report and Trends

Kirkland's most recent GHG inventory for 2022 shows a 15% decrease in GHGs since 2019. This was primarily driven by a 22% decrease in energy consumption citywide and a 10% decrease in transportation emissions. Estimated GHG emissions for 2017, 2019, and 2022 are shown in Figure 4.5-3.



Source: Cascadia, 2022

Figure 4.5-3. Citywide GHG Emissions Estimates 2017–2022

4.5.3 Potential Impacts

The Existing Plan Alternative and Growth Alternative were evaluated for potential air quality, GHG, and climate impacts associated with housing and employment growth. The factors considered in the analysis of air quality and GHG emissions impacts include the following:

1. **Potential air quality impacts:** Potential impacts to air quality based on emissions from construction activities and transportation and the trajectory of trends based on PSCAA air quality monitoring data.
2. **GHG emissions:** Potential GHG emissions based on embodied carbon and energy required to power and heat buildings that would be part of new development. Forecasted GHGs from electricity generation was estimated based on the reported CO_2 emissions factor for PSE, with a linear decrease to zero emissions by 2045 based on state requirements in CETA. Embodied carbon from residential development was estimated using single- and multi-unit development benchmarks from the Vancouver, British Columbia, metropolitan area (RMI 2023). Transportation emissions from VMT used King County assumptions from the Puget Sound Regional Emissions Analysis Project (Cascadia Consulting 2022).

4.5.3.1 Air Quality

Air pollution in King County and the region has declined consistently since 2000, even with regional population and employment growth. Concentrations of most criteria pollutants have consistently remained below the federal standard in King County and at monitoring stations near Kirkland. Ozone and fine particulates are currently the greatest concern regionally and are likely to remain a challenge for air quality in the future due to wildfire smoke and residential wood burning.

Housing and employment growth in both the Existing Plan Alternative and the Growth Alternative would have impacts to air quality from construction activity related to new development and additional transportation activity. Emissions generated during construction activities would include exhaust from heavy duty construction equipment, trucks used to haul construction materials to and from sites, worker vehicle emissions, fugitive dust emissions from demolition and earth disturbance. Transportation emissions and emissions from heat and electricity demand for new buildings would increase with housing and job growth in Kirkland.

By 2044, regional job and housing growth under the Existing Plan Alternative would result in an estimated increase of 13,680,000 daily VMT over the 2019 figures. Future VMT in the Growth Alternative is expected to be similar since overall housing and job growth would be the same between both alternatives. As the State of Washington continues to implement the Motor Vehicle Emissions Standards Law (RCW 70A.03.010), adoption of zero-emissions vehicles in Washington are expected to increase and may reduce tailpipe emissions overall. Based on projected GHG emissions for Puget Sound Regional Emissions Analysis Project (Cascadia Consulting Group 2022), EV penetration in King County is expected to be 100%, meaning that VMT will not result in direct exhaust or tailpipe emissions locally. However, brake dust emissions would continue to increase with VMT.

4.5.3.2 Greenhouse Gas Emissions and Climate

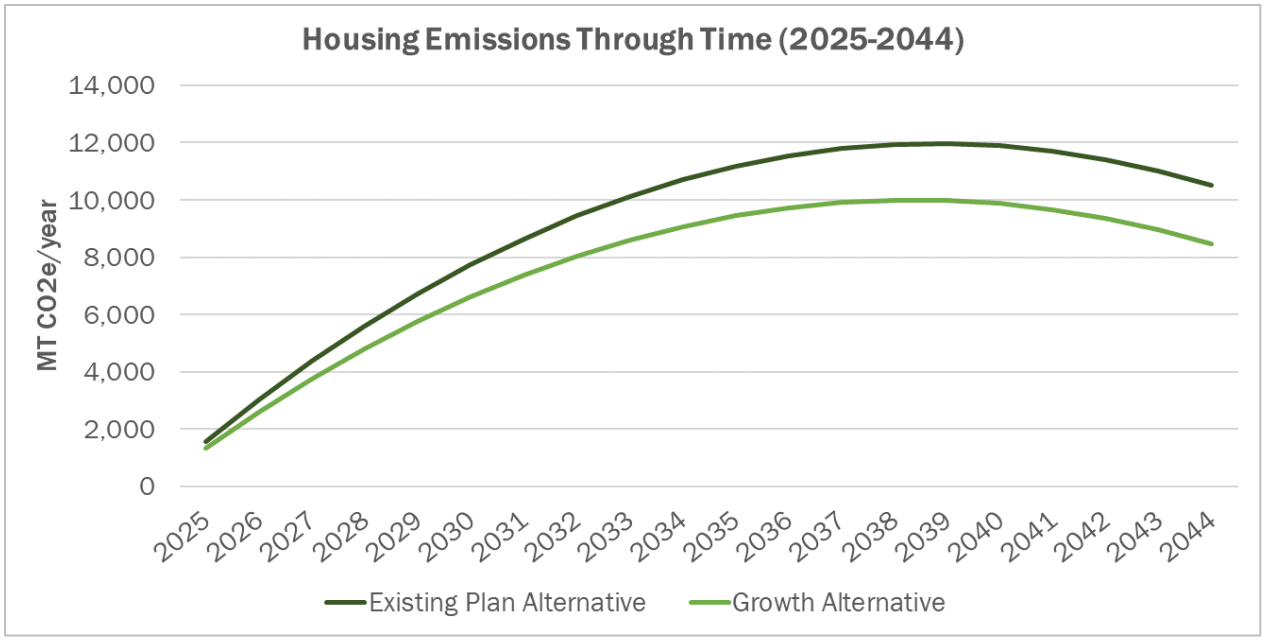
GHG emissions from construction of new homes and workspaces would result in somewhat different emissions between the Existing Plan and Growth Alternatives. Embodied carbon from the lifecycle of building materials, including manufacturing, transportation, construction, and disposal, would differ based on the form new development would take in each alternative, as would GHG emissions from heat and power for new buildings.

To calculate electricity emissions through time, this analysis assumes a linear decrease in PSE's emissions factor from the reported emissions factor in 2022 to 0 in 2045 to comply with state requirements for electric utilities in CETA. By 2045, PSE's portfolio is required to be 100% generated from renewable or zero emissions sources. Yearly emissions factors from 2025 through 2044 were used to estimate emissions from housing electricity usage for each year. Because housing is assumed to be built at a constant rate until 2044, only those houses built by a given year have energy usage—and thus emissions—in that year.

The Growth Alternative would include more multi-unit development and fewer single-unit development throughout Kirkland but would also generate more nonresidential space. Forecasted residential growth under the Existing Plan Alternative would generate an estimated additional 366,965 $MTCO_2e$ in total emissions from 2025 through 2044, assuming residential growth continues at a steady 5% annual rate through 2044. Forecasted growth under the Growth Alternative would generate an estimated additional 316,776 $MTCO_2e$ in total GHG emissions from 2025 through2044, assuming residential growth continues at a steady 5% annual rate through 2044.

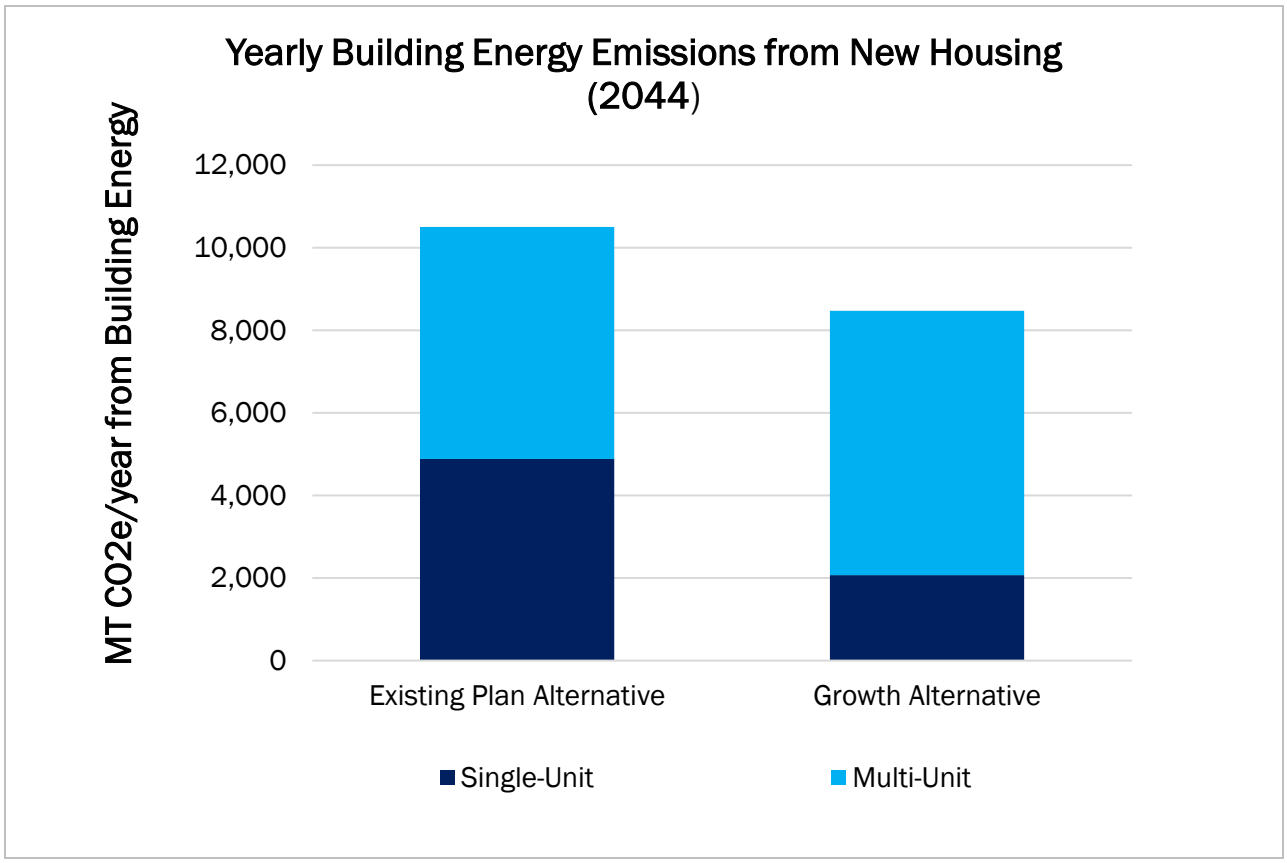
Roughly half of total GHG emissions from housing growth—50% in the Existing Plan Alternative and 52% in the Growth Alternative—would be from embodied carbon from the lifecycle of building materials used in residential construction. Estimates of embodied carbon emissions are based on average per unit embodied carbon from new construction in the Vancouver, British Columbia, metropolitan area (RMI 2023).[6] Other GHG emissions included in the estimate are energy emissions from powering, heating, and cooling new residential units. Total estimated annual GHGs from new residential units are shown in Figure 4.5-4. Based on cumulative energy usage and the embodied carbon of potential development under both alternatives, the Growth Alternative could result in a total GHG savings of 50,189 $MTCO_2e$. The difference in annual energy emissions with assumptions for the continued implementation of CETA through 2030 are shown in Figure 4.5-5. The Existing Plan Alternative would have somewhat higher total GHG emissions by 2044 and would result in higher annual GHG emissions in 2044.

[6] RMI, 2023. The Hidden Climate Impact of Residential Construction.



Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis

Figure 4.5-4. Total Estimated GHG Emissions per Year (5% annual residential growth rate)



Source: City of Kirkland, 2044 Comprehensive Plan Update and Transportation Strategic Plan: Development Capacity Analysis

Figure 4.5-5. Annual Energy Emissions for New Housing in the Existing Plan and Growth Alternatives

There is also a change in expected growth of nonresidential land uses, with an overall increase in employment in both alternatives. Emissions changes were not estimated for nonresidential square footage because the GHG intensity is highly dependent on the industry in question and the type of commercial enterprise. Nonresidential building activity categories for GHG emissions are defined by much more specific categories than are assumed in PSRC growth forecasts and the King County growth targets.

Annual emissions in the alternatives assume zero $MTCO_2e$ from transportation sources. These estimates are based EV penetration rates and estimated per household utilities GHGs from EVs in 2044. These projected per household estimates are included in King County's GHG wedge planning tool part of the Puget Sound Regional Emissions Analysis Project (Cascadia Consulting 2022).[7] Housing growth in both alternatives would result in an estimated 1.57 $MTCO_2e$ per household from electricity use (kilowatt hours) to power EVs, or 81,414 $MTCO_2e$ annually citywide for both alternatives in 2044 based on the methodology used in the study. Utilities GHG estimates from EVs are approximately the same for the Existing Plan Alternative and the Growth Alternative.

The Growth Alternative includes additional policies and regulatory changes for energy conservation and green building that may reduce the estimated future GHG emissions from this alternative. If implemented, these changes would incorporate green factor development standards and thresholds for high performance buildings currently in place in the NE 85th Street Station Area into citywide development regulations. These amendments of the KZC would reduce GHG and air pollution emissions from heating and powering new buildings that develop in this alternative.

4.5.3.3 Consistency with Countywide Planning Policies

Both the Existing Plan Alternative and the Growth Alternative are consistent with King County's 2021 Countywide Planning Policies. The Existing Plan Alternative, however, less directly addresses several elements of the County's policies for the natural environment. The differences in how the two alternatives would address countywide planning policies for development patterns is described in Table 4.5-2.

Table 4.5-2. Consistency with Comprehensive Planning Policies by Alternative

King County Countywide Planning Policy	Existing Plan Alternative	Growth Alternative
EN-3. Ensure public and private projects incorporate locally appropriate, low-impact development approaches developed using a watershed planning framework for managing stormwater, protecting water quality, minimizing flooding and erosion, protecting habitat, and reducing greenhouse gas emissions.	Low-impact development included in current natural environment policies and in sections of the KZC related to select low-density zoning districts and design requirements for subdivision plats.	Updated policies include more of the City's current sustainability efforts and tie this policy to local strategies, including building certification requirements, that would be reflected in the Kirkland 2044 Comprehensive Plan Update.
EN-4. Encourage the transition to a sustainable energy future by reducing demand through efficiency and conservation, supporting the development of energy management technology, and meeting reduced needs from sustainable sources.	The current Comprehensive Plan includes conservation policies related to energy and a goal of 100% renewable energy by 2050.	Updated policies include this King County Countywide Planning Policies in the Sustainability, Climate and Environment element.

[7] Cascadia Consulting 2022. Puget Sound Regional Emissions Analysis Project.

Table 4.5-2. Consistency with Comprehensive Planning Policies by Alternative (continued)

King County Countywide Planning Policy	Existing Plan Alternative	Growth Alternative
EN-6. Locate development and supportive infrastructure in a manner that minimizes impacts to natural features. Promote the use of traditional and innovative environmentally sensitive development practices, including design, materials, construction, and ongoing maintenance.	Development under the Existing Plan Alternative would be located primarily in Kirkland's Urban Centers, where it is less likely to impact natural features. Environmentally sensitive practices are incorporated into policies in the current Comprehensive Plan and SSP.	Development would be focused on key transit corridors and Urban Centers and would accommodate more growth as multi-unit development, which would require less land area per unit for development. In comparison, the Existing Plan Alternative would include more than twice the amount of single-unit development.
EN-11. Enhance the urban tree canopy to provide wildlife habitat, support community resilience, mitigate urban heat, manage stormwater, conserve energy, protect and improve mental and physical health, and strengthen economic prosperity. Prioritize places where Black, Indigenous, and other People of Color communities; low-income populations; and other frontline community members live, work, and play.	The current Comprehensive Plan includes conservation policies related to energy, preservation of the canopy, and stormwater management but does not directly address heat events or urban heat island effect.	Updated policies would include expanded policy support for preservation and restoration of habitat, mitigation of heat, stormwater management, and policies that prioritize underserved communities.
EN-28. Plan for development patterns that minimize air pollution and greenhouse gas emissions, including: a. Directing growth to Urban Centers and other mixed-use or high-density locations that support mass transit, encourage nonmotorized modes of travel, and reduce trip lengths; b. Facilitating modes of travel other than single-occupancy vehicles including transit, walking, bicycling, and carpooling; c. Incorporating energy-saving strategies in infrastructure planning and design; d. Encouraging interjurisdictional planning to ensure efficient use of transportation infrastructure and modes of travel; e. Encouraging new development to use low emission construction practices, low or zero net lifetime energy requirements, and green building techniques; and f. Reducing building energy use through green building methods in the retrofit of existing buildings.	Growth is primarily directed to Urban Centers with transit access and multimodal improvements that currently exist or are expected to be implemented. Over 80% of forecasted housing growth would be in in the form of multi-unit residential development, which is more efficient in terms of energy emissions and embodied carbon. Policies in the current Comprehensive Plan and SSP include sustainable building strategies and policies to retrofit buildings for more sustainable utilities use in the future.	Growth is directed not only to Urban Centers, but also to key transit corridors with access to frequent transit. Over 90% of forecasted housing growth would be multi-unit residential development and would result in a GHG savings compared to the Existing Plan Alternative in both embodied carbon and energy emissions. Updated policies would include more expansive policies that support green building and tie the Comprehensive Plan policies to initiatives that the City is working on through the SSP and other efforts.
EN-30. Promote energy efficiency, conservation methods, sustainable energy sources, electrifying the transportation system, and limiting vehicle miles traveled to reduce air pollution, greenhouse gas emissions, and consumption of fossil fuels to support state, regional, and local climate change goals.	Current Comprehensive Plan policies support conservation and sustainable energy sources, but electrification policies are primarily in the SSP.	Updated policies would include energy efficiency and sustainable energy sources and tie electrification efforts from the SSP into Comprehensive Plan policies.

Source: 2021 King County Countywide Planning Policies, amended August 15, 2023

4.5.3.4 Avoidance, Minimization, and Mitigation Measures

No probable significant adverse environmental impacts to GHG emissions and climate are anticipated under either the Existing Plan Alternative or the Growth Alternative. In both alternatives, Kirkland would continue implementation of the SSP and advance the City's 2050 goal of an 80% reduction in GHGs by 2050. Although no avoidance, minimization, and mitigation measures would be required, the City could consider further measures to reduce GHG emissions.

4.6 Elements Considered But Not Evaluated in Detail

The elements discussed in the following subsections were considered but did not require additional analysis in this Draft SEIS.

4.6.1 Environmental Health

The Existing Plan Alternative and Growth Alternative would not result in changes to environmental hazards or contamination. Noise associated with new construction and traffic is regulated in KMC 115.95 and was not evaluated in detail.

4.6.2 Aesthetics

New development in both the Existing Plan Alternative and Growth Alternative would be required to comply with Kirkland's design regulations in Chapter 92 of the KZC or design guidelines adopted in KMC 3.30.040. New development as part of both alternatives would be subject to development standards to identify and mitigate aesthetic impacts at the project level.

4.6.3 Earth

Sensitive environmental features, including steep and hazardous slopes, shorelines, and wetland areas, are regulated in KZC Chapter 90 – Critical Areas and KZC Chapter 85 – Geologically Hazardous Areas. All new development in Kirkland under the Existing Plan Alternative and Growth Alternative would be subject to the regulations in these chapters of the KZC. New development projects that include more than 20 housing units or 12,000 square feet of nonresidential space and major road work and public improvements would be subject to project level environmental review.

4.6.4 Water

Waterbodies, shorelines and wetland areas are regulated in KZC Chapter 90 – Critical Areas and KZC 83 – Shoreline Management. All new development in Kirkland under the Existing Plan Alternative and Growth Alternative would be required to comply with the regulations in these chapters. New development projects that include more than 20 housing units or 12,000 square feet of nonresidential space and major road work and public improvements would be subject to project level environmental review.

4.6.5 Plants and Animals

Potential impacts to vegetation and wildlife habitat is regulated in KZC Chapter 90 – Critical Areas, which includes fish and wildlife conservation areas and in KZC Chapter 95 – Tree Management and Required Landscaping. All new development in Kirkland under the Existing Plan Alternative and Growth Alternative would be required to comply with the regulations in these chapters. New development projects that include more than 20 housing units or 12,000 square feet of

nonresidential space and major road work and public improvements would be subject to project level environmental review.

4.6.6 Energy and Natural Resources

Energy and natural resources have been considered in the Public Services and Utilities and Air Quality and GHGs analysis in this Draft SEIS, including analysis of conservation features included in the 2044 Comprehensive Plan policies. New development projects that include more than 20 housing units or 12,000 square feet of nonresidential space would be subject to project -level environmental review that would identify impacts and mitigation related to energy and natural resources.

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6. Distribution List

The Draft SEIS has been issued with a notice of availability, consistent with WAC 197-11-510, including distribution to the following:

Tribal and Federal Agencies

Muckleshoot Indian Tribe

Duwamish Tribe

U.S. Army Corps of Engineers

State Agencies

Department of Archaeology and Historic Preservation

Washington State Trust for Historic Preservation

Department of Commerce

Department of Ecology

Department of Fish and Wildlife

Department of Health

Department of Natural Resources

Department of Social and Health Services

Department of Transportation

Parks and Recreation Commission

Regional and County Agencies

A Regional Coalition for Housing (ARCH)

King County

King County Metro

Northwest University

Puget Sound Clean Air Agency

Puget Sound Partnership

Puget Sound Regional Council

Sound Transit

King County Conservation District

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Seattle and King County Public Health

King County Historic Preservation Program

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City of Bellevue

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