CITY OF BELLEVUE

2024–2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation

Draft Environmental Impact Statement

April 2023

Americans with Disabilities Act (ADA) Language and Title VI Language

ENGLISH

ADA Language

For alternate formats, interpreters, or reasonable accommodation requests please phone at least 48 hours in advance 425.452.6930 (voice) or email bbrod@bellevuewa.gov. For complaints regarding accommodations, contact City of Bellevue ADA/Title VI Administrator at 425.452.6168 (voice). If you are deaf or hard of hearing dial 711. All meetings are wheelchair accessible.

If you have any questions regarding the ADA statement above or need help, please reach out to ADA Coordinator Blayne Amson, bamson@bellevuewa.gov or 425.452.6168.

Title VI Language

The City of Bellevue assures that no person shall on the grounds of race, color, national origin, or sex as provided by Title VI of the Civil Rights Act of 1964, and related statutes, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any City of Bellevue program or activity. Any person who believes his/her Title VI protection has been violated may file a complaint with the ADA/Title VI Administrator. For Title VI complaint forms and advice, please contact the ADA/Title VI Administrator at 425.452.6168.

SPANISH

ADA Language

Para obtener formatos alternativos, intérpretes o solicitudes de acomodación razonable, por favor llame por lo menos 48 horas antes al 425.452.2064 (voz) o envíe un correo electrónico a bbrod@bellevuewa.gov Para quejas relacionadas con las acomodaciones, comuníquese con el administrador de la ADA/ Título VI de la ciudad de Bellevue al 425.452.6168 (voz) o envíe un correo electrónico a ADATitleVI@bellevuewa.gov. Si usted es una persona sorda o tiene problemas de audición marque al 711.

Title VI Language

La Ciudad de Bellevue garantiza que ninguna persona será excluida de participar, no se le denegarán beneficios, ni estará de otra manera sujeta a discriminación en cualquier programa o actividad de la Ciudad de Bellevue, por motivos de raza, color, origen nacional o sexo, según lo previsto en el Artículo VI de la Ley de Derechos Civiles de 1964 y los estatutos relacionados. Para más información, por favor comuníquese con Service First llamando al 425.452.6800.

VIETNAMESE

ADA Language

Để yêu cầu định dạng thay thế, thông dịch viên, hoặc hỗ trợ hợp lý cho người có nhu cầu đặc biệt, vui lòng gọi trước ít nhất 48 giờ theo số 425.452.2064 (cuộc gọi thoại) hoặc gởi email về bbrod@bellevuewa.gov. Để khiếu nại về hình thức hỗ trợ cho người có nhu cầu đặc biệt, xin liên hệ với City of Bellevue ADA/Title VI Administrator theo số 425.452.6168 (cuộc gọi thoại) hoặc gởi email về ADATitleVI@bellevuewa.gov. Nếu quý vị bị điếc hoặc khó nghe, xin bấm số 711. Có thể sử dụng xe lăn trong tất cả các cuộc họp.

Title VI Language

Thành Phố Bellevue cam đoan không một người nào bị loại không được tham gia, bị từ chối các phúc lợi, hay nói cách khác là bị kỳ thị trong bất cứ chương trình hoặc hoạt động nào của Thành Phố Bellevue vì lý do chủng tộc, màu da, nguồn gốc quốc gia hoặc giới tính như đã quy định trong Tiêu Đề VI Đạo Luật Dân Quyền năm 1964 và các luật lệ liên quan.

Để biết thêm tin tức, xin liên lạc Service First ở số 425.452.6800.

RUSSIAN

ADA Language

Чтобы подать запрос на изменение формата, предоставление переводчика или разумное приспособление, не менее чем за 48 часов позвоните по телефону 425.452.2064 либо напишите по адресу электронной почты bbrod@bellevuewa.gov. С жалобами по поводу приспособлений обратитесь к администратору города Bellevue по вопросам статьи VI и правам граждан с ограниченными возможностями по телефону 425.452.6168 или адресу электронной почты ADATitleVI@bellevuewa.gov. Если вы страдаете от глухоты или испытываете трудности, связанные со слухом, позвоните по телефону 711.

Title VI Language

Администрация города Беллевью гарантирует, что в рамках ее любой программы или деятельности никому не будет отказано в участии, никто не будет лишен доступа ко льготам или подвергнут какой-либо дискриминации по признаку расы, цвета кожи, страны происхождения или пола, как предусмотрено в разделе VI Закона о гражданских правах 1964 года и сопутствующих законодательных актах.Для получения дополнительной информации обращайтесь в Service First по телефону 425.452.6800.

KOREAN

ADA Language

기타 양식, 통역 또는 편의 제공 요청이 있으면 최소 48시간 전에 425.452.2064 번으로 전화(음성)하거나 bbrod@bellevuewa.gov 로 이메일을 보내주세요. 편의 관련 불만 사항의 경우, Bellevue 시 미국 장애인법(Americans with Disabilities Act, ADA)/Title VI 관리자에게 425.452.6168번으로 전화(음성)하시기 바랍니다. 청각 장애가 있는 분은 711번으로 연락해 주시기 바랍니다. 모든 방문 시 휠체어 이용이 가능합니다.

Title VI Language

벨뷰 시는 1964년 시민권법 타이틀 VI 또는 관련 법규에서 정하는 바와 같이 어떠한 사람도 인종, 피부색, 출신국 또는 성별을 근거로 벨뷰 시의 프로그램이나 활동에서 참여할 수 없도록 제외되거나, 관련 혜택을 받지 못하거나 차별받는 일이 없도록 하고 있습니다. 보다 자세한 정보는 Service First에 425.452.6800번으로 문의해 주십시오.

JAPANESE

ADA Language

代替形式、通訳者、または合理的な宿泊施設のリクエストについては、425.452.2064 (音声)または電子メール bbrod@bellevuewa.gov 48時間前までに電話してください。宿泊施設に関する苦情については、425.452.6168(音声)または電子メール ADATitleVI@bellevuewa.gov のベルビューADA/タイトルVI管理者にお問い合わせください。あなたが聴覚障害や難聴ダイヤル711の場合。すべての会議は車椅子でアクセス可能です。

Title VI Language

ベルビュー市は、1964年の公民権法第 VI編、ならびにこれに関連する法律規則に定める通り、何人に対しても人種、皮膚の色、出身国、または性別を理由にベルビュー市の施策または活動への参加を排斥したり、それによりもたらされる恩恵を否定したり、あるいは他の差別行為を行うことを禁じています。

詳細については、サービス・ファースト部門に電話（425.452.6800）にてお問い合わせください。

CHINESE – SIMPLIFIED

ADA Language

如需要其他形式、口译人员或合理的住宿环境，请至少提前 48 小时致电 425.452.2064（语音）或 发送电子邮件至 bbrod@bellevuewa.gov。关于住宿方面的投诉，请联系 Bellevue 市的 ADA/第六章管理员，电话：425.452.6168（语音）或发送电子邮件至 ADATitleVI@bellevuewa.gov。如果您为失聪或听力障碍人士，请拨打 711。

Title VI Language

Bellevue 市政府根据《1964 年民权法案》第六章及相关法令的规定，确保任何人不会因为种族、肤色、国籍或性别而被排除参加或被拒绝享受 Bellevue 市政府任何计划或活动中的各种福利，或因其他原因而在这些计划或活动中受到歧视。 欲了解更多信息，请联系 Service First 部门，电话 425.452.6800。

CHINESE – TRADITIONAL

ADA Language

如需其他格式表單、口譯員或合理便利措施，請至少提前 48 小時致電 425.452.2064（語音）或 發送電郵至 bbrod@bellevuewa.gov 便利措施相關投訴，請致電 425.452.6168（語音）或發送電郵至 ADATitleVI@bellevuewa.gov, 聯絡 Bellevue市 ADA/第六章管理員。如果您是聽障人士，請撥打 711。

Title VI Language

Bellevue 市政府根據《1964 年民權法案》第六章及相關法令的規定，確保任何人不會因爲種族、膚色、國籍或性別而被排除參加或被拒絕享受 Bellevue 市政府任何計劃或活動中的各種福利，或因其他原因而在這些計劃或活動中受到歧視。

欲瞭解更多資訊，請聯繫 Service First 部門，電話 **425.452.6800**。

INTENTIONALLY BLANK

City of Bellevue
Community Development Department
450 110th Avenue NE
Bellevue, WA 98004

April 27, 2023

Subject: City of Bellevue 2024–2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation Environmental Impact Statement

Dear Community Members:

The City of Bellevue is updating its Comprehensive Plan and planning for growth to the year 2044.

The Comprehensive Plan captures the city's vision for the future of Bellevue, sets policy that directs city actions and decisions, and guides capital investments. The objective of the update to this plan is to continue Bellevue's legacy of well-managed growth that prioritizes a high quality of life and community building. The update will integrate state, regional, and county requirements with the City Council's updated vision for the city, community feedback, and guidance from city studies and plans.

The update plans for growth of at least an additional 35,000 housing units and 70,000 jobs by the year 2044. The update includes an Environmental Impact Statement (EIS) consistent with the requirements of the State Environmental Policy Act (SEPA) in Washington State.

The EIS considers a range of approaches to distributing the growth that aligns with regional requirements for equity, climate change, and housing, as well as recently adopted vision and priorities by the City Council. The EIS also includes a subarea-specific analysis for future land use and associated environmental impacts for the Wilburton study area (which consists of portions of the Wilburton/NE 8th Street and BelRed Subareas).

The SEPA process identifies and analyzes environmental impacts to help agency decision-makers, applicants, and the public understand how the proposal will affect the environment. The EIS process is a tool for identifying and analyzing probable adverse environmental impacts, reasonable alternatives, and potential mitigation. An EIS must inform decision-makers and the public of reasonable alternatives, including mitigation measures that would avoid or minimize adverse impacts or enhance environmental quality.

The SEPA EIS process provides an opportunity for the public to comment on the potential environmental impacts of the alternatives.

Alternatives are different ways of achieving the proposal's purpose and need and serve as the basis for environmental analysis relative to elements of the environment. Alternatives under consideration in the Draft EIS provide a range of capacities to accommodate housing and job growth, housing types, and investments in infrastructure citywide and in the Wilburton study area.

The following three Action Alternatives are analyzed in the Draft EIS as well as a No Action Alternative:

1. **Alternative 0 (No Action):** Continues the current plan with growth focused in Downtown, East Main, and BelRed and includes capacity for 41,000 housing units and 124,000 jobs.

2. **Alternative 1** – **Providing options for families of all kinds**: Focuses growth in Mixed Use Centers (Downtown, East Main, BelRed, Wilburton, Crossroads, Factoria, and Eastgate). Gentle density added across the city and analyzes capacity for 59,000 housing units and 179,000 jobs.
3. **Alternative 2** – **Unlocking access for all residents:** Focuses growth in Mixed Use Centers and Neighborhood Centers and analyzes capacity for 77,000 housing units and 177,000 jobs.
4. **Alternative 3** – **Providing options throughout the city:** Focuses growth in Mixed Use Centers, in areas of high opportunity (good access to transit/jobs or near Neighborhood Centers) and analyzes capacity for 95,000 housing units and 200,000 jobs.

The EIS analyzes the impacts of the alternatives on elements of the environment such as Land Use and Urban Form, Aesthetics, Air Quality & Greenhouse Gas Emissions, Noise, and Transportation. A separate analysis is prepared for each alternative. The purpose of the analysis is to estimate the nature, severity, and duration of impacts that might occur and to compare the impacts of the alternatives. The Draft EIS is made available to the public for review and comment. Comments will be received on the analysis of the affected environment, the impact analysis for each of the alternatives included in the Draft EIS, and potential mitigation measures for each of the alternatives.

Please see the Draft EIS Fact Sheet for the comment period and ways to provide your comments. The release of this Draft EIS is an opportunity for the public to review work undertaken so far and suggest improvements to the analysis or things that may have been missed.

Analyzing different alternatives, and especially the differences between them, allows decision-makers and the public to compare the effects of different options and ultimately to select a Preferred Alternative.

If you have questions, please contact:

- Reilly Pittman, Environmental Planning Manager, 425.452.4350 or rpittman@bellevuewa.gov

For more information, please see the project website:

- https://bellevuewa.gov/2044-environmental-review

Thank you for your interest in the future of Bellevue.

Sincerely,

Elizabeth Stead
Land Use Director and SEPA Responsible Official
estead@bellevuewa.gov

FACT SHEET Draft Environmental Impact Statement

PROJECT NAME

City of Bellevue 2024–2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation Environmental Impact Statement (EIS) – File Number: 22-116423 LE

DATE OF ISSUE OF DRAFT EIS

April 27, 2023

PROPOSED ACTION

The City of Bellevue is updating its Comprehensive Plan in accordance with the requirements of the state Growth Management Act (GMA).

PERMITS, LICENSES, AND APPROVALS LIKELY REQUIRED FOR PROPOSAL

Comprehensive Plans must be considered and approved by the City Council after Planning Commission recommendations are made. The Washington Department of Commerce coordinates state agency review during a required 60-day review period. The Puget Sound Regional Council certifies Transportation Elements of Comprehensive Plans.

Project Proponent and State Environmental Policy Act (SEPA) Lead Agency

City of Bellevue Community Development Department

SEPA Responsible Official

Elizabeth Stead, Land Use Director

Authors and Contributors

A list of authors and contributors is provided in this Fact Sheet.

Location of Background Materials

Background materials used in the preparation of this Draft EIS are listed in Chapter 14, *References*.

PUBLIC COMMENTS ON THE DRAFT EIS

INFORMATION ON PROVIDING COMMENTS ON THE DRAFT EIS		INFORMATION ON ATTENDING ONE OF THE THREE DRAFT EIS PUBLIC MEETINGS	
Public Comment	Comments may be submitted in writing or verbally at the Draft EIS public meetings. A valid physical mailing address is required to establish status as an official party of record. This Draft Environmental Impact Statement (Draft EIS) will be available for a 45-day public comment period.	Public Meetings	**Three public meetings**, including one virtual meeting and two in-person meetings, will include information about the proposed Comprehensive Plan Periodic Update, the State Environmental Policy Act (SEPA) process, and provide community members a verbal comment opportunity on the Draft EIS. A court reporter will be available to receive oral testimony.
Date Written Comments Are Due	**Comment Deadline:** The extended Draft EIS public comment period begins 8 a.m. Pacific Standard Time (PST) on Thursday April 27, 2023, and ends at 4:30 p.m. PST on Monday June 12, 2023. All comments related to the Draft EIS must be submitted by this date.	Virtual Public Meeting Date and Time	**A Virtual Draft EIS Public Meeting** is scheduled from 6 to 8 p.m. PST on Thursday May 18, 2023. Attendees are requested to register in advance and may sign up to provide an official comment using the following meeting link: bit.ly/bellevuedeis. Attendees may sign up in advance or at the meeting to provide verbal comments during the meeting. A court reporter will be in attendance to transcribe the comments.
Written Comment Submittal and Contact Information	**Written comments** may be submitted online at https://comment-tracker.esassoc.com/bellevue/index.html or via email to CompPlan2044EIS@bellevuewa.gov. Mailed comments can be sent to: City of Bellevue Development Services Department Attn: Reilly Pittman 450 110th Avenue NE Bellevue, WA 98004	In-Person Public Meeting Times and Locations	**Two In-Person Draft EIS Public Meetings** are scheduled from 6 to 8 p.m. PST on Tuesday May 23, 2023, at the Crossroads Community Center 16000 NE 10th Street, Bellevue, WA, and from 6 to 8 p.m. PST on Thursday June 1, 2023, at Bellevue City Hall at 450 110th Avenue NE, Bellevue, WA 98004. There will be an opportunity to provide public comment and a court reporter will be in attendance to transcribe comments.

DOCUMENT AVAILABILITY

Project-related information can be reviewed on the project website at Bellevue 2044 Environmental Review. For more information on this process, and to submit comments directly to the Comprehensive Plan Periodic Update team, please consider attending upcoming public meetings listed in this notice.

LIST OF PREPARERS

Environmental Science Associates
2801 Alaskan Way, Suite 200, Seattle, WA 98121
Telephone: 206.789.9658
(Prime Consultant, Air Quality and GHG, Noise, Plants and Animals, Water, Public Services and Utilities, Historic Resources, Climate Vulnerability Assessment, Economic Analysis, Public Outreach)

BERK Consulting
2200 6th Avenue, Suite 1000, Seattle, WA 98121
Telephone: 206.324.8760
(Land Use and Urban Form, Plans and Policies, Population and Employment, Aesthetics, Housing, Climate Vulnerability Assessment, Economic Analysis)

Fehr & Peers
601 Union Street, Suite 3525, Seattle, WA 98101
Telephone: 206.576.4220
(Transportation)

Stepherson & Associates
2815 2nd Avenue, Suite 555, Seattle, WA 98121
Telephone: 206.508.1461
(Public Outreach)

The Vida Agency
1411 3rd Avenue N, Suite 101, Edmonds, WA 98020
(Equity, Translation)

Seva Workshop
3204 NE 86th Street, Seattle, WA 98115
(Housing, Equity, Displacement)

PRIOR ENVIRONMENTAL REVIEW

Prior SEPA documents considered in this EIS and incorporated by reference are listed below:

- Wilburton Commercial Area Land Use and Transportation Project Draft EIS (February 2018), incorporated for background information and data; and
- VISION 2050 Draft and Final Supplemental EIS (February 2019 and March 2020).

TIMING OF ADDITIONAL ENVIRONMENTAL REVIEW

After the Draft EIS comment period concludes, the city's Environmental Coordinator and Environmental Planning Staff in the City of Bellevue Development Services Department will review and respond to comments. A Final EIS will be prepared that contains the responses to the comments and potential updates to the environmental document. The Department anticipates releasing the Final EIS in late summer 2023.

INTENTIONALLY BLANK

CITY OF BELLEVUE

2024–2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation

Draft Environmental Impact Statement

City of Bellevue
Community Development Department
450 110th Avenue NE
Bellevue, WA 98004

April 2023

Contents

APPENDICES

FIGURES

TABLES

Abbreviations and Acronyms

Abbreviation/Acronym	Definition
µg/m^3	micrograms per cubic meter
AADT	average annual daily traffic
ACS	American Community Survey
ADU	accessory dwelling unit
AHS	Affordable Housing Strategy
AMI	Area Median Income
ARCH	A Regional Coalition for Housing
ASIL	acceptable source impact level
BCC	Bellevue City Code
BIPOC	black, indigenous, people of color
BR-CR	BelRed Commercial Residential
BR-GC	BelRed General Commercial
BR-MO-1	BelRed Medical Office
BRT	bus rapid transit
BTC	Bellevue Technology Center
CAC	Citizen Advisory Committee
CAPCOA	California Air Pollution Control Officers Association
CB	Community Business
CBA	community benefit agreement
CEQ	Council on Environmental Quality
CETA	Clean Energy Transformation Act
CHAS	Consolidated Housing Affordability Strategy
CIP	Capital Investment Plan/Program
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CPPs	King County Countywide Planning Policies
CTR	Commute Trip Reduction
CVI	Climate Vulnerability Index
dB	decibel(s)
dBA	A-weighted decibel(s)

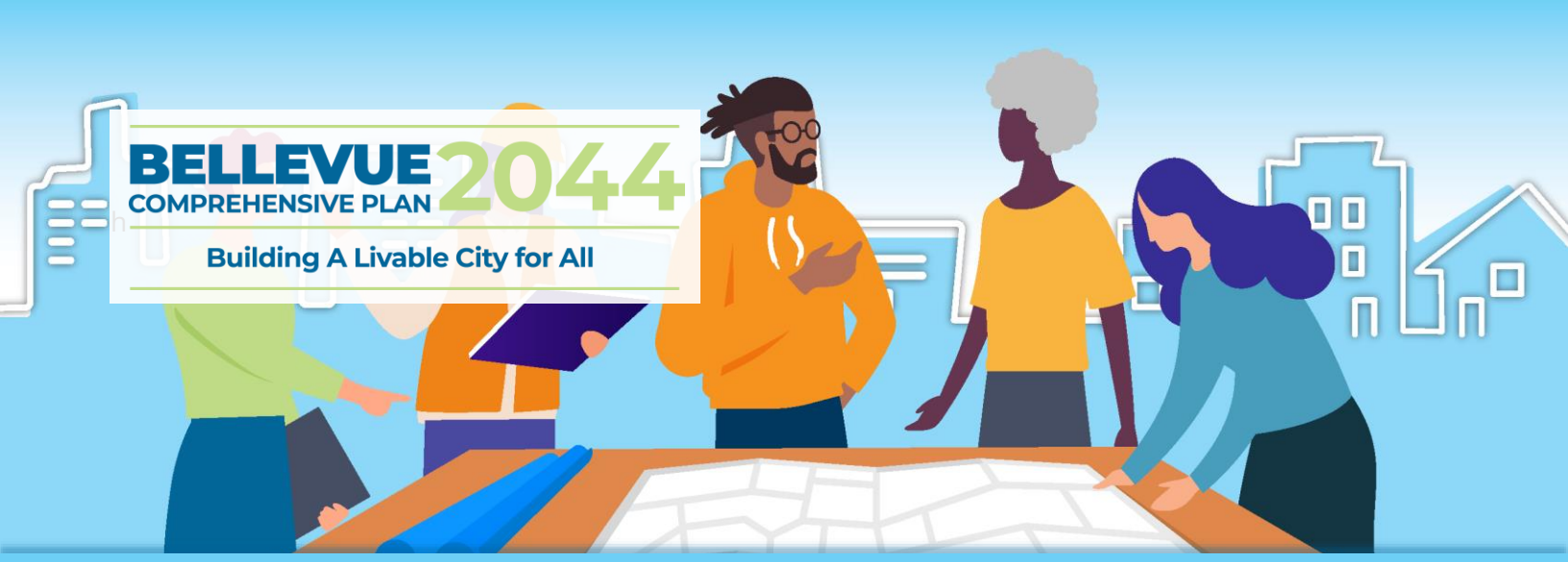
Abbreviation/Acronym	Definition
DNL	day-night average noise level
DS	Determination of Significance
EDNA	Environmental Designation for Noise Abatement
EIS	Environmental Impact Statement
EMFAC	Emission Factor (model)
EMS	emergency medical services
EMT	emergency medical technician
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
FAR	floor area ratio
FHWA	Federal Highway Administration
FIRE	finance, insurance, and real estate
FMR	Fair Market Rent
FTE	full-time equivalent
FTN	Frequent Transit Network
GC	General Commercial
GHG	greenhouse gas
GMA	Growth Management Act
GMPC	Growth Management Planning Council
HB	House Bill
HIN	High Injury Network
HOV	high-occupant vehicle
HUD	U.S. Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
I-405	Interstate 405
I-90	Interstate 90
IOC	interim official control
ITS	intelligent transportation systems
KCHA	King County Housing Authority
KSI	killed or seriously injured
LEED	Leadership in Energy & Environmental Design
L_{eq}	equivalent sound level

Abbreviation/Acronym	Definition
L_{max}	maximum, instantaneous noise level
LOS	level of service
LTS	level of traffic stress
LUC	Land Use Code
LWSD	Lake Washington School District
MF	Multi Family
MFTE	Multi-family Tax Exemption
MI	Medical Institution
MIP	Mobility Implementation Plan
MPH	miles per hour
MPPs	Multi-County Planning Policies
MTCO2e	metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NB	Neighborhood Business
NEPA	National Environmental Policy Act
NMU	Neighborhood Mixed Use
NO2	nitrogen dioxide
NOAH	naturally occurring affordable housing
NOx	oxides of nitrogen
NTSS	Neighborhood Traffic Safety Services
O	Office
OFM	Washington State Office of Financial Management
OLB	Office Limited Business
OSS	on-site sewage
P&R	Park & Ride
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PMA	Performance Management Area
PO	Professional Office
ppm	parts per million

Abbreviation/Acronym	Definition
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
PSRC	Puget Sound Regional Council
Q1	first quarter
R-20 and R-30	Multifamily Residential
RCW	Revised Code of Washington
RGC	Regional Growth Center
RMP	Risk Management Plan
ROW	right-of-way
RRFB	rectangular rapid flashing beacon
RSA	Road Safety Assessment
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SCADA	Supervisory Control and Data Acquisition
SCAP	Strategic Climate Action Plan
SEPA	State Environmental Policy Act
SF	Single Family
SMP	Shoreline Master Program
SO2	sulfur dioxide
SOV	single-occupant vehicle
SPU	Seattle Public Utilities
SQER	Small Quantity Emission Rate
SR 520	State Route 520
SRC	Shoreline Residential Canal
STC	Sound Transmission Class
TDM	transportation demand management
TFP	Transportation Facilities Plan
TMA	Transportation Management Association
TMP	Transportation Management Program
TNM	Traffic Noise Model
TOD	transit-oriented development
TRAP	traffic-related air pollution

Abbreviation/Acronym	Definition
TSMO	transportation systems management and operations
TSP	transit signal priority
UGA	urban growth area
UGC	King County Urban Growth Capacity
V/C	volume-to-capacity
VMT	vehicle miles traveled
VOC	volatile organic compound
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
YTD	year to date

INTENTIONALLY BLANK



CHAPTER 1 Summary

1.1 Introduction

The City of Bellevue is updating its Comprehensive Plan in accordance with the requirements of the state Growth Management Act (GMA) and preparing the City of Bellevue 2024–2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation Environmental Impact Statement (EIS). The growth strategy established in the prior periodic update in 2015 focused on concentrating most new growth in the city in the Downtown neighborhood, designated a Regional Growth Center, and the BelRed neighborhood. Additional, although less, growth was planned for other mixed use areas of Eastgate and Factoria. This growth strategy supported investments in transportation with planning around new Sound Transit light rail stations as well as other infrastructure and capital facilities.

The proposed update to the city's Comprehensive Plan will plan for growth of at least an additional 35,000 housing units and 70,000 jobs by 2044. The EIS considers a range of approaches to distributing growth that aligns with regional requirements for equity, climate change, and housing, as well as recently adopted City Council vision and priorities. Amendments to the Comprehensive Plan could include changes, such as those defined in the City Council directed scope.

The non-project EIS includes the development of plan alternatives, environmental analysis of those alternatives, and identification of impacts and mitigation measures. The EIS includes a subarea-specific analysis for future land use and associated environmental impacts

for the Wilburton study area (which consists of portions of the Wilburton/NE 8th Street and BelRed Subareas).

A Draft Environmental Impact Statement (Draft EIS) was prepared for the Wilburton study area, which at the time was referred to as the Wilburton Commercial Area, in February 2018. The Draft EIS was followed by the Wilburton Commercial Area Study Citizen Advisory Committee report in July 2018. The study identified a "preferred alternative" for the future state of the Wilburton study area. Because of changed circumstances and the city's desire to incorporate the Wilburton-specific environmental analysis within the citywide Comprehensive Plan Periodic Update analysis to ensure a cumulative evaluation of potential environmental impacts, the EIS for the Comprehensive Plan Periodic Update includes the updated environmental review for the Wilburton study area.

The city is also soliciting feedback from the public relating to Comprehensive Plan amendment requests associated with specific properties, which may include desired changes to the plans, policies, or land use map for specific properties. Formal Community Initiated Amendment Requests for changes to the city's Comprehensive Plan Land Use Map, plans, or policies related to a particular property will be considered as part of the Comprehensive Plan Periodic Update but changes in the land use designations that apply to individual properties will be considered in the context of the community's vision for the Comprehensive Plan.

Bellevue's Comprehensive Plan provides goals, policies, and strategies to ensure the city is a livable, welcoming, and vibrant place that maintains the high quality of life as the community grows over the next 20 years. The Comprehensive Plan looks ahead to the challenges Bellevue needs to address and the opportunities to ensure that all people can thrive.

The Comprehensive Plan provides a framework to ensure that people who live, work, learn, and play in Bellevue:

- Can find a variety of housing options.
- Have access to education, jobs, and economic opportunity.
- Enjoy parks and green space.
- Are able to get around using a range of transportation options.
- Have a resilient built and natural environment.
- Receive equitable and quality public services and capital facilities that support their daily needs.

The proposal evaluated in this EIS includes Bellevue's Comprehensive Plan Periodic Update for the period 2024–2044, a land use plan and implementing regulations for the Wilburton study area, and other coordinated updates to development regulations to meet state and regional goals and requirements.

1.2 Project Purpose, Desired Outcomes, and Exclusions

This Draft EIS is a disclosure document that provides a qualitative and quantitative analysis of environmental impacts associated with the City of Bellevue 2024–2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation proposal and alternatives. The purpose of this EIS is to inform and assist the public and City of Bellevue decision-makers in considering future growth, multimodal transportation improvements, and policy/code proposals appropriate throughout the city and within the Wilburton study area.

The update to the city's Comprehensive Plan will meet state and regional requirements, the City Council's 2021 Vision, and other topics of importance to the community and City Council.

In particular, the update will include changes to Elements in Volume 1 of the Comprehensive Plan and Land Use Map Amendments. Volume 2 of the Comprehensive Plan (subarea plans) will only be updated as they relate to map amendments and policies that would conflict with either those map amendments or other updates to Volume 1 policies.

A Bellevue Housing Needs Assessment was completed in December 2022. The results have informed the housing analysis. Associated updates to the city's 2017 Affordable Housing Strategy will work in tandem with this update but are outside of its direct scope.

The following list identifies the primary requirements:

- Identify overarching growth target distribution approaches (housing + jobs).
- Evaluate impacts of growth distribution through an EIS.
- Recommend specific map amendments to achieve growth targets and other goals.
- Explore amending the land use classifications used in the Comprehensive Plan map to reference zones more broadly.

- Incorporate changes required within the Housing Element, particularly related to housing choices, affordability levels, and distribution.
- Consider incorporating a new Climate and Resiliency Element and required related additions.
- Address equity throughout all Elements of the Comprehensive Plan, including addressing historic inequities and evaluating the impacts of current trends and planned amendments.
- Update the Comprehensive Plan to set the stage for future functional plans. The update will strive to make the Comprehensive Plan as clear and concise as possible while serving as the guiding policy document for the city.

1.3 Study Area

The study area is the Bellevue planning area, the city limits (see **Figure 1-1**). Within the city, this EIS will inform potential policy changes affecting the Wilburton study area as an area of focus—the Wilburton study area refers to the area bounded by NE 12th Street in the north, the Lake Hills Connector in the south, Interstate 405 (I-405) in the west, and an eastern boundary that varies from 124th Avenue NE by the Spring District to 118th Avenue SE by the Bellevue Botanical Garden (see **Figure 1-2**).

SOURCE: City of Bellevue 2023; Figure created by ESA 2023 and BERK 2023

FIGURE 1-1 **City and Neighborhood Boundaries**

SOURCE: City of Bellevue 2023; figure created by ESA 2023 and BERK 2023

FIGURE 1-2 **Wilburton Study Area**

1.4 SEPA Process and Public Involvement

1.4.1 Environmental Review Process

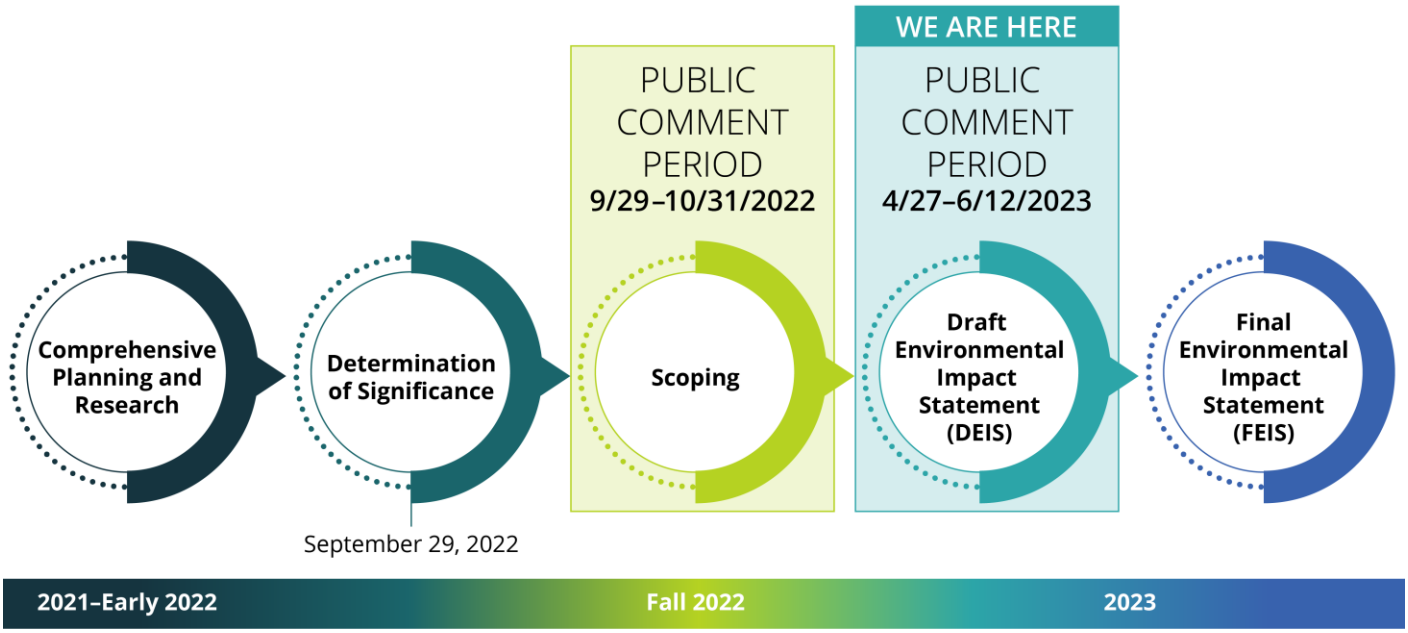
PROCESS

The State Environmental Policy Act (SEPA) is in the Revised Code of Washington (RCW) Chapter 43.21C and is a Washington State law that helps agency decision-makers, applicants, and the public understand how a proposal would affect the environment. The EIS process is a tool for identifying and analyzing probable adverse environmental impacts, reasonable alternatives, and potential mitigation. An EIS must inform decision-makers and the public of reasonable alternatives, as well as mitigation measures that would avoid or minimize adverse impacts or enhance environmental quality.

Preparation of an EIS is required for actions that have the potential for significant impacts. This document is a non-project EIS that analyzes the proposals and alternatives broadly across the study area (Washington Administrative Code [WAC] 197-11-442). The City of Bellevue has determined this periodic update to the Comprehensive Plan would likely have a significant adverse impact on the environment and is required under RCW Section 43.21C.030 to prepare an EIS. For this update, the EIS describes:

- Existing conditions in the city.
- Proposed alternatives (e.g., new policies and growth strategies).
- Potential significant, unavoidable, and adverse impacts.
- Mitigation measures to reduce or eliminate adverse impacts.

The EIS process involves the following steps: (1) initial research, issuing a determination of significance, and scoping the contents of the EIS with agencies, tribes, and the public; (2) preparing a Draft EIS with a comment period; (3) responding to comments and developing a Preferred Alternative; and (4) issuing the Final EIS to inform development of legislation. See **Figure 1-3** for the EIS process timeline.



SOURCE: City of Bellevue 2023

FIGURE 1-3 **EIS Process**

Community members have the opportunity to comment during two stages of the EIS process:

- **Scoping Stage:** Scoping is the first step in the EIS process; scoping for this EIS was held in September and October 2022 and is described in more detail in Section 1.4.2. During scoping, members of the public learned more about the Comprehensive Plan Periodic Update and Wilburton Vision Implementation process and the draft growth alternatives. The scoping stage for this proposal is complete, and a scoping summary report is found in Appendix A to this Draft EIS.
- **Draft Environmental Impact Statement (Draft EIS) Stage:** The EIS analyzes the particular environmental concerns that were identified during scoping. A separate analysis is prepared for each alternative. The purpose of the analysis is to estimate the nature, severity, and duration of impacts that might occur and to compare the impacts of the alternatives. The Draft EIS is available to the public for review and comment. Comments will be received on the analysis of the affected environment, the impact analysis for each of the alternatives included in the Draft EIS, and potential mitigation measures for each of the alternatives.

The city is due to complete the Final EIS in late summer 2023. Comprehensive Plan amendments for the Wilburton study area will be completed by the end of 2023, followed by Land Use Code

amendments in 2024. The Comprehensive Plan Periodic Update process will be completed in 2024. The timeline for the EIS process is provided in Figure 1-3.

NON-PROJECT EIS

This document is a non-project EIS that analyzes the proposals and alternatives broadly across the study area. See **Table 1-1** for features of a non-project EIS. SEPA identifies that a non-project EIS is more flexible and studies a range of alternatives comparatively to support the consideration of plans, policies, or programs (WAC 197-11-442). A non-project EIS does not provide site-specific detailed analysis. Additional environmental review will occur as other project or non-project actions are proposed in the city in the future. Future review could occur in the form of supplemental EISs, SEPA addenda, or determinations of non-significance.

TABLE 1-1 **Comparison of Project and Non-Project Environmental Review**

Feature	Project Environmental Review	Non-Project Environmental Review (WAC 197-11-442, -774)
Location	Site-specific	Areawide
Analysis Level of Detail	Detailed	Broad / order-of-magnitude
Alternatives	Specific construction proposals	Conceptual based on vision
Mitigation	Specific, alters project, project proponent responsibility	Broader; changes policies, plans, or code. City or future developer responsibility.
Future Environmental Review	No additional SEPA review	Subject to additional SEPA Review

SOURCE: WAC 197-11-060, 197-11-440, 197-11-442, and 197-11-774, 2023; BERK 2023

PRIOR ENVIRONMENTAL REVIEW

Prior SEPA documents considered in this EIS and incorporated by reference are listed below:

- Wilburton Commercial Area Land Use and Transportation Project Draft EIS (February 2018), incorporation for background information and data.
- VISION 2050 Draft and Final Supplemental EIS (February 2019 and March 2020).

1.4.2 Scoping

The scoping process is intended to identify the range of potential significant impacts on the built and natural environment that should be considered and evaluated in an EIS. The city published a scoping notice and handout on September 29, 2022, with a 30-day public comment period that ran through October 31, 2022. The scoping notice was translated from English into seven other languages used in the city: traditional Chinese, simplified Chinese, Japanese, Korean, Russian, Spanish, and Vietnamese. Details of the scoping process for this EIS are available in the scoping summary report found in Appendix A.

One virtual and one in-person scoping meeting were held during the comment period from 6 to 8 p.m. on October 13, 2022, and from 6 to 8 p.m. on October 18, 2022, respectively. Each meeting had the same general format and content including an overview presentation, an opportunity to ask questions, and an opportunity to provide public comment. The virtual meeting was recorded, and a court reporter attended both the virtual and in-person meetings to transcribe comments. The in-person meeting included an informal open house at the beginning for community members to review display boards, ask clarifying questions, and sign up to provide written public comments.

The city accepted public comments through the following means: an online portal linked to the website; mailed through the postal service; emailed comments addressed to city staff or the city's Comprehensive Plan 2044 or Comprehensive Plan 2044 EIS email addresses; hand-delivered comments; comments submitted via laptop computer stations provided at the in-person public meeting; verbal comments in person at the public meeting; and via Zoom at the virtual public meeting (transcribed by a court reporter). Input received during the scoping period included:

- A total of 163 individual comments (excluding duplicates of the same comment from the same person submitted via different channels). In addition to individuals submitting comments on their own behalf, many submitted comments on behalf of organized groups.
- One virtual meeting with 12 attendees and one in-person meeting with 15 attendees. Four verbal comments were given during the virtual public meeting and seven were given at the in-person public meeting.

Land use was the theme with the most comments submitted during scoping. Topics included exploring expanding high-rise zoning areas and requests to consider potential displacement risks and the impacts of various zoning or density changes on existing neighborhoods. Other comments expressed a desire to increase density in areas with access to transit and jobs and maximize capacity in Mixed Use Centers, Neighborhood Centers, and light rail stations. Housing affordability was another common theme, with requests to explore "missing middle" options, consider mandates on affordable units for new development, and find ways to spread affordable units throughout the city (not just in the densest areas).

Transportation, especially transit and multimodal options, also emerged as a significant theme in the scoping comments. Commenters requested increased density at transit hubs to maximize ridership and reduce greenhouse gas (GHG) emissions and studying the impact of reduced parking ratios to encourage transit use. Other comments requested expanded multimodal transportation options and requested the alternatives evaluation assess options through a "15-minute city" lens. Excessive noise, especially related to traffic, was another common concern.

Several comments requested integration with ongoing climate planning efforts, such as the state's Clean Energy Transformation Act (CETA), the King County-Cities Climate Collaboration, and the city's implementation of transportation and building electrification. Comments spanned across several elements of the natural environment including impacts on air quality and GHG emissions, water quality, and plants and animals from increased density as well as single-family zoning.

Some commenters also requested analysis of development costs and incentives.

There were several comments that the city should reduce the scope of the analysis.

Based on the results of the comments received during the scoping process, the city made changes to the alternatives, and those changes are detailed in Chapter 2, Section 2.3.3.

The city is moving forward with the analysis of the following elements of the environment for the alternatives in the Draft EIS:

- Land use patterns and urban form
- Plans and policies

- Population and employment
- Aesthetics
- Housing
- Air quality and GHG emissions
- Noise
- Public services and utilities
- Transportation

1.5 Summary of Description of Alternatives

Alternatives are different ways of achieving a project's purpose and need and serve as the basis for environmental analysis relative to elements of the environment. They are described in greater detail in Chapter 2 of this Draft EIS.

Environmental analysis is the process of studying each alternative and forecasting impacts on different elements of the environment such as air quality, noise, or transportation.

Environmental Impact Statements must include an alternative that represents "no action" and one or more alternatives that includes changes to land use or policies, called the "Action Alternatives." Action Alternatives allow the city to understand the impacts of a range of growth scenarios and test ideas, implications, benefits, and impacts and compare them to the impacts of the No Action Alternative. The alternatives analyzed in this Draft EIS are based on the following:

- **City and regional policy guidance.** The King County Countywide Planning Policies (or CPPs) include growth targets for jobs and housing units across cities in King County, including Bellevue. The 2019–2044 Bellevue job target is **70,000 new jobs**. This anticipates business cycles that include patterns of layoffs and hiring in different industries over the 20-year planning period. The 2019–2044 Bellevue housing target is **35,000 new units**. Target setting occurred in coordination with other cities and the county using guidance from the Bellevue City Council Vision, VISION 2050, Bellevue's calculated capacity for new development, and the Puget Sound Regional Council (PSRC) and council vision and guidance.

- **Desire for flexibility in meeting the housing target.** The city is analyzing the impacts of development capacity that would occur beyond the 2044 growth targets (i.e., +70,000 additional jobs and +35,000 housing units). The Draft EIS analyzes an "informed build-out" scenario under each of the alternatives. In the alternatives studied in the Draft EIS, the city assumes that all developable or redevelopable parcels are built to a range of expected densities in each of the alternatives. It is very common for cities to have more capacity for development than their growth targets. The additional development capacity beyond the 2044 job and housing targets allows the city to meet its growth targets in different ways, letting potential developers respond to the market demands relating to the type of housing and commercial space and also provide flexibility for market demands. The analysis in the Draft EIS will help the Planning Commission, City Council, and full range of stakeholders understand the potential impacts of development and identify mitigation measures that can be implemented to respond to those impacts when and if the development occurs.
- **Additional housing capacity in the Wilburton study area.** Many changes within and surrounding the Wilburton study area make it challenging to pick up directly from the Wilburton Commercial Area Land Use and Transportation Project Draft EIS issued in 2018. This current Draft EIS considers additional housing capacity compared to what was analyzed in the 2018 Draft EIS. In addition, including the Wilburton study area in the Comprehensive Plan Periodic Update EIS enables the city to assess and communicate the impacts of the proposed Wilburton study area growth alternatives within the context of citywide growth.
- **Additional input from stakeholders on the Wilburton study area.** The Wilburton study area alternatives build off the vision and recommendations from the 2018 Wilburton Commercial Area Study while considering updates to housing policy, affordable housing, growth targets, sustainability, equitable access, multimodal transportation, Grand Connection and Eastrail integration and impacts, and universal design. Alternatives also incorporate the input of stakeholders and community members who were re-engaged as part of the Wilburton Vision Implementation launch, as well as stakeholders and community members who were not engaged previously in 2017–2018.

This EIS analyzes four alternatives, including a No Action Alternative and three Action Alternatives. The alternatives include ideas to be analyzed that would lead to development of a Preferred Alternative. The three Action Alternatives are measured against the baseline assumptions in the No Action Alternative.

For purposes of the No Action Alternative, it is assumed that development would occur within the City of Bellevue based on the current Comprehensive Plan land use, zoning, and development standards. The Action Alternatives are based on variations of components such as the amount and distribution of growth, and the implementation of new policies.

Analyzing different alternatives, and especially the differences between them, allows decision-makers and the public to compare the effects of different options and ultimately to select a Preferred Alternative.

1.6 Additional Analysis

The city conducted additional studies and analysis that will be helpful in their decision-making process during the Comprehensive Plan Periodic Update process. The following studies and reports are included as appendices to this Draft EIS document:

- **Appendix A: Scoping Summary.** This summary provides information on the comments received and does not indicate any position by the city regarding the stated information. Many of the comments address topics for the general Comprehensive Plan Periodic Update or the Wilburton Vision Implementation as opposed to comments on the environmental elements or alternatives.
- **Appendix B: Land Use Patterns and Urban Form Appendix.** This document is an appendix that relates to Chapter 3. It provides additional information on zoning designations and overlay districts. Current land uses and diverse use categories and sources are also provided. In addition, land use category maps are provided for each alternative at the end of Appendix B.
- **Appendix C: Traffic Data.** This appendix relates to Chapter 11, *Transportation*. It provides the source material used to analyze and model the data used in the impact and mitigation sections of Chapter 11 of the Draft EIS.

- **Appendix D: Historic Resources Survey.** As a part of the Comprehensive Plan Periodic Update, the city identified the need to meet the requirements of VISION 2050, including multicounty planning policy (MPP) Development Pattern-6: "preserve significant regional historic, visual, and cultural resources, including public views, landmarks, archaeological sites, historic and cultural landscapes, and areas of special character" (PSRC 2020:76). A best practice for historic preservation and alignment with VISION 2050 MPP DP-6 would be to establish a baseline historic preservation inventory and undertake a survey of the entire city that includes resources that are 50 years old or older. The survey provided here is a step toward providing an inventory to the entire city in the future. It includes 121 resources that were constructed in or prior to 1994 (50 years old or older as of 2044) in four select areas of the city: Eastgate, Lake Hills, Lake Heights, and Sherwood Forest.
- **Appendix E: Plants and Animals Memo.** The city requested a memo from subject matter experts to determine potentially significant adverse impacts that the Comprehensive Plan Periodic Update may have on plants and animals. The preliminary review determined that there would not likely be any significant adverse impacts on plants and animals. Because the Comprehensive Plan Periodic Update is a non-project action that does not include a physical project proposal, it is not expected to generate adverse impacts on vegetation and wildlife habitat, threatened and endangered species, and aquatic resources and wetlands. Thus, adoption of the Comprehensive Plan Periodic Update, regardless of the alternative selected, is not expected to have a significant adverse impact on plants and animals. Future site-specific development projects under the Comprehensive Plan Periodic Update could result in adverse impacts on vegetation and wildlife habitat, threatened and endangered species, and aquatic resources and wetlands. However, those projects will be subject to existing regulations that protect vegetation and wildlife habitat, threatened and endangered species, and aquatic resources and wetlands.
- **Appendix F: Water Resources Memo.** The city requested a memo from subject matter experts to determine potential significant adverse impacts that the Comprehensive Plan Periodic Update may have on water resources. The preliminary review determined that there would not likely be any significant adverse impacts on water resources. Because the Comprehensive Plan Periodic Update is a non-project action that does not include a

physical project proposal, it is not expected to generate adverse impacts on water including drainage basins, water quality, groundwater, and flooding. Thus, adoption of the Comprehensive Plan Periodic Update, regardless of the alternative selected, is not expected to have a significant adverse impact on water resources. Future site-specific development projects under the Comprehensive Plan Periodic Update could result in adverse impacts on water resources. However, those projects will be subject to existing regulations that protect drainage basins, water quality, groundwater, and flooding impacts.

- **Appendix G: Relationship of Climate Change Vulnerability to the Alternatives.** The city is conducting a Climate Vulnerability Assessment to determine the extent to which climate change is likely to affect residents, the built environment, and natural systems. Climate projections for the assessment were obtained from the University of Washington's Climate Impacts Group. The Bellevue Climate Vulnerability Index (CVI) is being developed as part of the Bellevue Climate Vulnerability Assessment. The CVI includes 30+ indicators and combines them to form an index that supports a planning-level view of climate vulnerability in Bellevue to identify areas of the city that may be more or less vulnerable to the impacts of climate change. The indicators include metrics for climate stressors, demographics, community health, critical areas, and others relevant to the spatial variability of climate vulnerability.
- **Appendix H: Equity and Environmental Sustainability Performance Metrics.** This document includes performance metrics that allow current conditions and future alternatives to be screened for their environmental impacts and advancement of, or hurdles to, racial equity and displacement. Using the performance metrics described in the document, the consultant team considered how each alternative affects the elements of the environment and equitable outcomes across all EIS topics. This effort will provide a cohesive evaluation framework for equity while advancing EIS topics in the context of SEPA requirements.
- **Appendix J: Air Quality and Land Use Planning Report.** This report provides environmental health information for the city to consider, along with other factors, when making long-range planning decisions to increase development capacity. Specifically, this report focuses on air pollution that exists around high-volume roadways at concentrations that can be harmful, with analysis informed by studies that have shown that health impacts

associated with traffic-related air pollution (TRAP) can be minimized by reducing exposure to high pollutant concentrations.

1.6.1 Commenting on the Draft EIS

This Draft EIS identifies environmental conditions, potential impacts, and measures to reduce or mitigate any unavoidable adverse impacts that could result from the City of Bellevue 2024–2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation.

Public and agency comments are invited on this Draft EIS. Written and verbal comments are invited during the 45-day public comment period following issuance of this Draft EIS. The city will hold public engagement events during the 45-day comment period to help inform the identification of the Preferred Alternative. Public comments will be considered and addressed in the Final EIS. See the Fact Sheet at the beginning of this Draft EIS for the dates of the public comment period and public meetings. Meetings and comment periods regarding the proposals are described on the city's project webpage: https://bellevuewa.gov/2044-environmental-review.

1.6.2 Final EIS

A Final EIS will be issued in 2023 and will include responses to public comments received during the Draft EIS comment period. The Final EIS will study a Preferred Alternative that is within the range of the growth studied in the Draft EIS alternatives. Following the EIS process, the city will develop specific edits to the Comprehensive Plan Land Use Map and Comprehensive Plan that will be the subject of public meetings and public hearings by the Planning Commission and City Council.

1.7 Summary of Key Findings, Impacts, and Potential Mitigation Measures

One of the most important functions of an EIS is to identify potential impacts associated with a proposal and identify appropriate mitigation measures. The following sections describe how the EIS analyzed each element of the environment, what impacts have been identified, how the alternatives differ from one another, and what measures are proposed to mitigate impacts. The analysis contained

in the EIS will be used to guide city decision-makers in selecting the appropriate the Preferred Alternative.

Table 1-2 summarizes the results of the environmental evaluation of alternatives further detailed in Chapter 2, *Alternatives*, and Chapters 3 through 12. Where impacts are identified, mitigation is provided in the form of incorporated plan features (e.g., components of the alternatives that self-mitigate, such as design standards addressing height and bulk); regulations and commitments (e.g., critical areas regulations); and other potential mitigation measures that the city may consider applying through policies or other strategies to address potential impacts. The potential residual impacts, if any, following mitigation are also described. The reader is encouraged to review this summary section to find areas of interest, and to read the more-detailed analysis in the following chapters to have the full context of the affected environment, impact analysis, detailed mitigation measures, and overall findings.

TABLE 1-2 **Summary of Impacts and Mitigation Measures**

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	Capacity to add 41,000 housing units and 124,000 jobs	**Capacity to add 59,000 housing units and 179,000 jobs**	**Capacity to add 77,000 housing units and 177,000 jobs**	**Capacity to add 95,000 housing units and 200,000 jobs**
3. Land Use Patterns and Urban Form	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	Growth Targets: A **moderately adverse impact related to other citywide housing growth requirements is expected under the No Action Alternative** as it does not meet new planning requirements for affordable housing across income bands or a range of housing types.	***Growth Targets:*** Citywide housing and job capacity are above the adopted target under all the alternatives. **No adverse land use impacts are identified related to the growth targets under the Action Alternatives** with the application of additional measures to improve housing affordability and choice. Therefore, impacts would be less-than-significant.	***Growth Targets:*** Same as Alternative 1.	***Growth Targets:*** Same as Alternative 1.
	Land Use Compatibility: All alternatives include some amount of redevelopment with corresponding potential for land use compatibility impacts. **Citywide, adverse land use compatibility impacts are expected under any of the alternatives** but would be reduced to less-than-significant levels with the application of existing and proposed mitigation.	***Land Use Compatibility:*** Same as Alternative 0 (No Action).	***Land Use Compatibility:*** Same as Alternative 1.	***Land Use Compatibility:*** **Citywide, adverse land use compatibility impacts are expected to be greatest under Alternative 3** but would be reduced to less-than-significant levels with proposed mitigation.
	Displacement: As future development occurs, some residents and businesses may be displaced through redevelopment or priced out as land prices and rents increase. **Adverse residential and commercial displacement impacts are expected under all of the alternatives**; potential displacement could occur under all alternatives but may be lower in the No Action Alternative as a result of its lower overall capacity for growth.	***Displacement:*** **Adverse residential and commercial displacement impacts are expected under all of the alternatives**; potential displacement could occur under all alternatives. Affordability and choice throughout the city would be greater under the Action Alternatives than the No Action, thus reducing the risk of involuntary residential displacement. In addition, the Action Alternatives include policies to support more affordable	***Displacement:*** Same as Alternative 1, but Alternative 2 also increases densities and opportunities for mixed use development that could support additional commercial space affordable to small business and entrepreneurs.	***Displacement:*** Same as Alternative 1, but Alternative 3 also increases densities and opportunities for mixed use development that could support additional commercial space affordable to small business and entrepreneurs (with the distribution of such spaces wider under Alternative 3 than Alternative 2). Housing affordability and choice throughout the city would have the widest variety of options under Alternative 3.

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
		housing, and higher density housing in various parts of the city would make it easier and more economically feasible for private developers to incorporate affordable housing as part of market-rate development projects.		
	Access to Community Assets: All alternatives would focus most future growth into the existing Mixed Use Centers, which have the highest concentration of amenities, diverse uses, and community gathering spaces. **No adverse impacts regarding access to community assets are expected.**	***Access to Community Assets:*** Same as Alternative 0 (No Action).	***Access to Community Assets:*** Same as Alternative 0 (No Action).	***Access to Community Assets:*** Same as Alternative 0 (No Action).
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	Future land use patterns under the No Action Alternative would not support the incoming light rail station or planned investments in Eastrail, the Grand Connection, or 116th Avenue NE, and so **a moderately adverse land use compatibility impact in** the Wilburton study area is expected under the No Action Alternative. Adverse residential and commercial displacement impacts in the Wilburton study area are expected under all alternatives. No adverse impacts regarding access to community assets are expected in the Wilburton study area.	The Action Alternatives add significant capacity in the **Wilburton study area**. The Action Alternatives would support these investments within the Wilburton study area, but potential **adverse compatibility impacts to the east and southeast are expected**.	Same as Alternative 1.	Within the study area, temporary land use conflicts are more likely under Alternative 3 than under the other alternatives. Like Alternatives 1 and 2, **these impacts would be most pronounced in early redevelopment phases** where new areas of greater height and intensity abut areas of existing development. **Moderately adverse residential and adverse commercial displacement impacts in the Wilburton study area are expected under Alternative 3.** Impacts would be similar to those described under Alternative 1 and Section 3.3.2, *Impacts Common to All Alternatives*.
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	<u>Citywide and Wilburton Study Area</u> 1. **The city could pursue the following types of actions for addressing possible future conditions, particularly related to commercial displacement impacts:** • Consider amendments to zoning regulations in existing and future Mixed Use and Neighborhood Centers to address transitions more directly. See also Chapter 6, *Aesthetics*. • Consider addressing transitions between Mixed Use and Neighborhood Centers and surrounding areas as part of ongoing neighborhood planning efforts. • Consider selling or leasing city-owned property for projects that support affordable residential to reduce displacement impacts. • Consider providing technical assistance to small businesses and entrepreneurs who are looking for affordable commercial space. This could include assistance with site selection, leasing negotiations, and financing.	<u>Citywide</u> 1. Same as Alternative 0 (No Action). <u>Wilburton Study Area</u> 2. Each Action Alternative would **require the development of new or revised zoning and development regulations for the city and Wilburton study area.** New regulations would need to address permitted uses, dimensional	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1.	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1.

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	• Consider incentives that encourage affordable commercial space for small businesses, especially in areas at high risk of displacement. For example, the city could reduce parking requirements in certain locations. Reducing parking standards for small businesses can also reduce the construction costs for new development. Also, consider setting average or maximum sizes for new ground floor spaces that result in space sizes that are more affordable for small businesses, which can facilitate small-business relocation and attraction. • Ensure anti-displacement measures prior to designating new Neighborhood Centers in areas that currently lack access to essential services within a short distance that are also at high risk of displacement. Anti-displacement measures could include: o Potential "right to return" policies that give preference to residential or small business uses that face displacement in redeveloping areas. o Potential tenant relocation assistance: Demolition of existing housing to make way for new development may displace existing tenants who then incur moving costs. Local governments—authorized by WAC 365-196-835 and detailed in RCW 59.18.440—can pass an ordinance that requires developers, public funds, or a combination of the two to provide relocation funds for these displaced tenants. Tenants at or below 50 percent of the county median income, adjusted for family size, qualify for available funds. Resident relocation assistance as a result of public action is required, with details outlined in RCW 8.26. o Potential community benefit agreements: Development agreements or community benefit agreements. These are voluntary, negotiated contracts between developers and municipalities or between developers and a community-based organization representing the interests of the community. They can support affordable housing, affordable commercial space, community gathering spaces, and other public amenities. • Consider partnering with existing organizations or facilities to improve equitable availability of community gathering spaces across the Mixed Use and Neighborhood Centers and in transit-proximate areas outside of the centers.	requirements, a floor area ratio (FAR) amenity incentive system, the conversion of non-conforming uses and properties, parking and circulation, landscaping, and the development of streets and sidewalks. **These regulations would need to be crafted with the intent of creating land use compatibility within and adjacent to the study area**.		
4. Plans and Policies	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	Alternative 0 (No Action) would not include changes to Comprehensive Plan policies or regulations, so inconsistencies with state and regional goals and requirements to support affordable housing and a wider range of housing typologies would occur would result in a **significant adverse impact.**	Under Alternative 1, conflicts with plans and policies would be avoided by amending the Comprehensive Plan, as proposed under any of the three Action Alternatives. **No significant adverse impact.**	Same as Alternative 1.	Same as Alternative 1.
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	Same as above.	Same as above.	Same as Alternative 1	Same as Alternative 1

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	None proposed.	<u>Citywide and Wilburton Study Area</u> **No mitigation is required, however:** 1. The Comprehensive Plan may need to consider additional guidance for each of the Mixed Use Centers to support additional development for additional development in those areas. **Related system plans—such as the Land Use Code, Transit Master Plan, and the Storm and Surface Water System Plan—would need to be updated to ensure full consistency**. 2. The Action Alternatives would require the **development of new or revised zoning and development regulations for the city and Wilburton study area.** Revisions may be considered in a phased approach as infrastructure and other services become available, and new zoning and development standards in the Wilburton study area would likely be informed by development standards established for other subareas. The Action Alternatives also **consider revisions to**	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
		the Wilburton study area for consistency. 3. When the Preferred Alternative is selected for the Final EIS, it should be **evaluated for alignment with the GMA, VISION 2050, and King County CPPs**.		
5. Population and Employment	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	Under all alternatives, additional population and job growth would occur citywide and in the Wilburton study area. All the alternatives align to some extent with the city's Economic Development Plan, and no unavoidable conflicts are expected. **Significant unavoidable adverse impacts on population and employment are not expected under any alternative.**	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	Same as above.	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	<u>Citywide and Wilburton Study Area</u> 1. **No mitigation is required.** However, same as for Alternative 0 (No Action) under Element 3 (*Land Use Patterns and Urban Form*) and Element 8 (*Air Quality and Greenhouse Gas Emissions*), the city could consider the following: • **Mitigate displacement of existing small businesses.** The city could explore creating a program to ensure that affordable office and retail spaces are available. The programs could consider financial incentives (such as tax abatements similar to an office/retail equivalent of the Multi-family Tax Exemption, technical assistance and outreach, or the integration of office/retail affordability with livability initiatives. • **Reduce Exposure to Contaminated Sites and Traffic.** implement mitigation strategies, including reducing vehicle miles traveled (VMT), retrofitting diesel vehicles, electrifying the city's fleet, transit-oriented development, land use buffers, improved urban design, roadside barriers, decking or lids over highways, and building design strategies. Land use buffers could include designating areas near high-impact areas as industrial or other nonresidential zones to ensure distance between these areas and residences. Bellevue could also limit residential uses within a certain distance of contaminated sites and freeways.	<u>Citywide</u> 1. Same as Alternative 0 (No Action). <u>Wilburton Study Area</u> 2. **No mitigation is required.** However, same as for Alternative 0 (No Action) under Element 3 (*Land Use Patterns and Urban Form*) and Element 8 (*Air Quality and Greenhouse Gas Emissions*), the city could consider the following: • **Wilburton Study Area: Zoning and Development Regulations.** The Action Alternatives would require	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1.	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1.

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
		changes in zoning and development regulations in the Wilburton study area. This would be an opportunity for Bellevue to specify allowed uses in the Wilburton study area to best align with the city's Economic Development Plan.		
6. Aesthetics	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	In all alternatives, additional growth would result in impacts on the built form citywide, particularly in Mixed Use Centers, and, under the Action Alternatives, in Neighborhood Centers and near transit**. This growth will, in turn, have significant adverse impacts from shadows, views, and light and glare.** These impacts are to be expected as Bellevue continues to grow, especially in the context of regional transit investments and development interests. **With the application of mitigation measures, no significant unavoidable adverse impacts on views or from shadows, light, and glare are expected.**	In all alternatives, additional growth would result in **impacts on the built form citywide**, particularly in Mixed Use Centers and under the Action Alternatives.	Same as Alternative 1.	Same as Alternative 1.
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	The character of the Wilburton study area, especially under the Action Alternatives, would change to a much denser area with much taller buildings. **With the application of mitigation measures, no significant unavoidable adverse impacts on views or from shadows, light, and glare are expected.**	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	<u>Citywide and Wilburton Study Area</u> **Mitigation measures could include:** • **Regulations around Public Spaces.** Bellevue could add requirements for shadow studies, height limits, maximum floorplate size, separation of high-rise building massing, floorplate reductions, and modification of high-rise tower location and orientation for development adjacent to some key parks and public spaces. • **Ground-Level and Upper-Story Setbacks.** Bellevue could require all areas with higher heights to have ground-level or upper-story setbacks, which would preserve access to light, limit shading, and limit height and bulk. • **Building Form Requirements.** Bellevue could add requirements for roof articulation, modulation of façades, layering of materials and massing, and tower separation. • **Streetscape Vegetation.** The city could require vegetation on major streets to screen development and enhance the pedestrian experience.	<u>Citywide and Wilburton Study Area:</u> Same as Alternative 0 (No Action) with the following additions: • **Low-Density Residential Development Regulations.** The Action Alternatives would allow gentle density increases across the city. As new residential uses are added to the zoning code, Bellevue would	<u>Citywide and Wilburton Study Area:</u> Same as Alternative 1.	<u>Citywide and Wilburton Study Area:</u> Same as Alternative 1.

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	• **Viewshed Regulations.** Bellevue could consider adding regulations to the development code to protect certain public views. • **Transparent Façade Requirements.** In areas with bulk and scale concerns that do not have existing requirements for transparent façades, the city could add such requirements to enhance the pedestrian environment.	have an opportunity to regulate scale and form. • **Wilburton Study Area: Zoning and Development Regulations.** The Action Alternatives in the Wilburton study area would require changes to the zoning and development regulations. These regulations would address permitted uses, dimensional requirements, a FAR amenity incentive system, conversion of non-conforming uses and properties, pedestrian comfort, parking and circulation, landscaping, and the development of streets and sidewalks. • **Wilburton Study Area: Design Guidelines** The Action Alternatives would include design guidelines specific to the Wilburton study area. These would likely include standards related to building design, pedestrian experience and streetscapes, public spaces, and mixed use building features, in addition to other standards. These could include standards for towers, such as locating them farther from the street, making podiums shorter, or orienting towers to maximize solar access.		

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
7. Housing	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	The No Action Alternative continues existing regulations, incentives, and programs targeted at affordability. Recent development trends have shown decreases in affordability despite these existing tools. Without additional strategies for affordability, **the No Action Alternative will likely have a significant adverse impact on housing affordability** compared to Action Alternatives. **Significant adverse impacts** related to an increased risk for involuntary residential displacement are expected under the No Action Alternative.	The Action Alternatives integrate additional anti-displacement strategies like inclusionary housing to mitigate the impacts of displacement and supply more affordable housing overall. The city could also consider additional strategies to avoid or mitigate displacement including neighborhood stabilization efforts such as rental assistance programs, foreclosure assistance programs, as well as tenant protection policies. With the application of these mitigation measures, **no significant adverse impacts** are expected for the Action Alternatives.	Same as Alternative 1.	Same as Alternative 1.
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	Same as above.	Same as above.	Same as Alternative 1.	Same as Alternative 1.
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	<u>Citywide and Wilburton Study Area</u> **1. No other mitigation measures are required, but the city could pursue the following actions to address affordability and displacement risk:** ***ADU Reform:*** The city can remove barriers and encourage the construction of attached Accessory Dwelling Units (ADUs) in Bellevue and create a pathway for separate ownership of ADUs. Identified barriers to ADU construction, include: • Owner-occupancy requirement. • Condominium prohibition. • Off-street parking requirement. • Design controls, such as the entry door location restriction. • Process requirements. The city can also consider allowing detached ADUs, which are currently not allowed in Bellevue.	<u>Citywide</u> 1. Same as Alternative 0 (No Action). <u>Wilburton Study Area</u> 2. The Action Alternatives would also require the development of new or revised zoning and development regulations for the Wilburton study area. New zoning associated with these alternatives is expected to be similar to rules established for the	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1.	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1.

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	Anti-Displacement Strategies: • Neighborhood stabilization efforts such as rental assistance programs, foreclosure assistance programs, as well as tenant protection policies, especially in areas at high risk for displacement. • Selling or leasing city-owned property to support affordable residential projects. • Private or private-public partnerships for affordable housing. An example is the city's partnership with major employers such as Amazon, Microsoft, and Sound Transit in their efforts to create and preserve affordable housing. • Targeted homeownership assistance to residents of neighborhoods that are at high risk of displacement. Fair Housing Laws will need to be considered and complied with for such assistance programs.	BelRed area in part 20.25D of the Land Use Code. New regulations will need to address the provision of affordable housing and the potential for residential displacement. **These regulations will need to be crafted with the intent of creating affordable housing and to avoid or mitigate residential displacement.**		
8. Air Quality	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	The impacts from construction with the No Action Alternative will result in a **less-than-significant impact** on air quality and GHGs.	The Action Alternatives would result in **potentially significant unavoidable adverse impacts** on air quality.	Same as Alternative 1.	Same as Alternative 1.
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	Same as above.	Same as above.	Same as Alternative 1.	Same as Alternative 1.
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	<u>Citywide and Wilburton Study Area</u> ***Construction:*** 1. For temporary impacts during construction, construction site owners and/or operators are required to take reasonable precautions to prevent fugitive dust from becoming airborne. Fugitive dust may become airborne during demolition, material transport, grading, driving of vehicles and machinery on and off the site, and from wind. Controlling fugitive dust emissions may require some of the following actions: • Spray exposed soil with water or other suppressant to reduce emissions and deposition of particulate matter. • Use phased development to keep disturbed areas to a minimum. • Use wind fencing to reduce disturbance to soils. • Minimize dust emissions during transport of fill material or soil by wetting down the load, covering the load, or by ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks. • Promptly clean up spills of transported material on public roads.	<u>Citywide and Wilburton Study Area</u> Same as Alternative 0 (No Action).	<u>Citywide and Wilburton Study Area</u> Same as Alternative 0 (No Action).	<u>Citywide and Wilburton Study Area</u> Same as Alternative 0 (No Action).

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	• Schedule work to minimize disruption of the existing vehicle traffic on streets. • Restrict traffic on-site to reduce soil upheaval and the transport of material to roadways. • Locate construction equipment and truck staging areas away from sensitive receptors as practical and in consideration of potential impacts on other resources. • Provide wheel washers to remove particulate matter that would otherwise be carried off-site by vehicles to decrease deposition of particulate matter on area roadways. • Cover dirt, gravel, and debris piles to reduce dust and wind-blown debris. 2. Emissions of particulate matter, ozone precursors (e.g., volatile organic compounds and nitrogen oxides), sulfur oxides, and carbon monoxide would be minimized whenever reasonable and possible. Since these emissions primarily result from construction equipment, machinery engines would be kept in good mechanical condition to minimize exhaust emissions. Additionally, contractors would be encouraged to reduce idling time of equipment and vehicles and to use newer construction equipment or equipment with add-on emissions controls. ***Long-Term:*** 1. A variety of air and GHG mitigation measures can be implemented to reduce the exposure of residents. The following measures could be applied to any of the alternatives to reduce air exposures: • Land use buffers and project-specific mitigation measures to help limit exposures to emission sources such as high-capacity roadways. • Implement mitigation strategies, including reducing VMT, retrofitting diesel vehicles, electrifying the city's fleet, transit-oriented development, land use buffers, improved urban design, roadside barriers, decking or lids over highways, and building design strategies. Land use buffers could include designating areas near high-impact areas as industrial or other nonresidential zones to ensure distance between these areas and residences. Bellevue could also limit residential uses within a certain distance of freeways. • Promote the use of high-efficiency ventilation on residential facilities that are within 1,500 feet of major roadways. Limit sensitive uses in multi-story buildings for the floors that are at or near roadway level. • Enhance the air monitoring network in Bellevue to enable the community to characterize their exposures more accurately. Prioritize highly burdened regions such as the Wilburton study area. • Continue to prioritize low emissions transportation modes through the development of additional bike/walk pathways, rideshare programs, and other travel demand strategies. • Identify opportunities to use roadside barriers to reduce exposure to air pollution and to provide the related benefit of reduced noise. • Decking and lids over highways may also reduce exposures by consolidating emissions releases to certain locations or limiting releases in certain areas. • Produce air quality-specific policies that promote a uniform approach to reducing exposures in Bellevue's future developments.			

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
9. Noise	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	Under all alternatives, noise would occur citywide and in the Wilburton study area. Transportation **noise impacts would be less-than-significant** and noise from stationary sources and loading docks associated with commercial uses **would be less-than-significant with mitigation. Therefore, there would be no significant and unavoidable noise impacts.**	Same as Alternative 0 (No Action). Also, under all Action Alternatives, development of new noise-sensitive uses in proximity to freeways could expose people to noise levels in excess of the 67 dBA residential NAC and be **less-than-significant with mitigation**.	Same as Alternative 1.	Same as Alternative 1.
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	Same as above.	Same as above.	Same as Alternative 1.	Same as Alternative 1.
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	<u>Citywide and Wilburton Study Area</u> ***Stationary:*** 1. **Compliance with the Class B Commercial Maximum Permissible Noise Levels of Bellevue City Code (BCC) 9.18.030.** Methods of achieving these standards include using low-noise-emitting heating, ventilation, and air conditioning (HVAC) equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels to adjacent land uses. For commercial loading docks, specific design measures could be implemented that may include but are not limited to shielding from features integrated into site design, and/or restrictions on hours for commercial deliveries within commercial and mixed use areas.	<u>Citywide and Wilburton Study Area</u> 1. Same as Alternative 0 (No Action). ***Siting Noise-Sensitive Uses:*** 2. Construction of new noise-sensitive land uses should either **provide a buffer distance commensurate with the distances provided in Table 9-4, or project plans should be reviewed by a qualified acoustical consultant** to ensure that appropriate construction upgrades (typically higher-rated Sound Transmission Class values for windows) are specified **to ensure compliance with the interior noise criterion of 45 dBA, Ldn**.	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1.	<u>Citywide and Wilburton Study Area</u> Same as Alternative 1.

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
10. Public Services and Utilities	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	Under all alternatives, additional population and job growth would occur citywide and in the Wilburton study area. Effects on population growth on public services and utilities could be mitigated through the strategies in Section 10.4.1. **Therefore, significant unavoidable adverse impacts on public services and utilities are not expected under any alternative.** The growth planned for the area would be incremental. Through the capital facilities planning process, the City of Bellevue would continue to address changes in public services and utilities. The school districts would continue to address changes in student enrollment.	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	Same as above.	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	<u>Citywide and Wilburton Study Area</u> 1. **No other mitigation measures are required**, but the city could: • Look for opportunities to develop new parks, open space, and recreation facilities, especially in the northern portion of the study area, to address the 1/3-mile gap in access. • Concentrate on growth in areas with adequate water and sewer infrastructure. • Build in additional population density into upcoming plan or service updates such as the Bellevue Fire Department Standards of Response Coverage, Capital Investment Program, and Police Initiatives. • Investment to build new facilities for water, wastewater, and stormwater services. Non-city utility providers will also experience increased demand for services and will need to plan for new or improved facilities. • Extend water and wastewater utility service to unserved areas of the utility service area. • Require wastewater connections for all new development, including single-family plats, unless otherwise allowed by state or county regulations. • Encourage the use of low-impact development and stormwater best management practices to manage stormwater runoff, which may result in smaller facilities constructed on- and off-site for flow control, conveyance, and water quality. • Reduce vulnerability to surcharging during rainstorms by running the sewer model using forecast climate change rainfall amounts, expected to increase at highest percentages. The results will identify where retrofits may be required, but also where new development and redevelopment can mitigate for the future by installing pipes that carry a larger capacity.	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	• Update the Wastewater Management Plan to identify projects in the Capital Improvement Program or other studies that address known deficiencies for on-site disposal systems. Several areas have existing deficiencies that could be addressed as capital projects. • Consider including the equity issues of provision of utilities in future updates to their Wastewater Management Plan to ensure all members of the community are provided safe means of handling wastewater.			
11. Transportation	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**	**CITYWIDE IMPACTS**
	All alternatives **are expected to have significant impacts** on System Intersection volume-to-capacity (V/C), Primary Vehicle Corridor travel speed, and state facilities (with other potential impacts expected to be at a less-than-significant level). While incremental improvements in performance to some impacted facilities could be achieved, it is expected **that some of the significant impacts on System Intersection V/C, Primary Vehicle Corridor travel speed, and state facilities would remain [and be significant and unavoidable]**. Alternative 0 (No Action) impacts 13 of 134 System Intersections, 14 of 95 Primary Vehicle Corridors and 3 of 7 state facility study segments.	Same as Alternative 0 (No Action), but Alternative 1 impacts 18 of 134 System Intersections, 2 of 95 Primary Vehicle Corridors and 3 of 7 state facility study segments.	Same as Alternative 0 (No Action), but Alternative 2 impacts 26 of 134 System Intersections, 5 of 95 Primary Vehicle Corridors and 4 of 7 state facility study segments.	Same as Alternative 0 (No Action), but Alternative 3 impacts 33 of 134 System Intersections, 7 of 95 Primary Vehicle Corridors and 4 of 7 state facility study segments.
	WILBURTON STUDY AREA IMPACTS	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**	**WILBURTON STUDY AREA IMPACTS**
	Alternative 0 impacts two System Intersections and one Primary Vehicle Corridor.	Alternative 1 impacts 5 System Intersections	Alternative 2 impacts 7 System Intersections	Alternative 3 impacts 7 System Intersections
	MITIGATION MEASURES	**MITIGATION MEASURES**	**MITIGATION MEASURES**	**MITIGATION MEASURES**
	To successfully accommodate the planned growth included in each of the alternatives and mitigate transportation impacts, Bellevue, in partnership with developers and other agencies, will need to implement a broad spectrum of the improvements and strategies: *Mobility Implementation Plan; Transportation Demand Management, Smart Mobility, Agency Partnerships, Parking strategies; and Safety strategies.* Mitigation measures are informed by the context of Performance Management Areas (PMAs). **Mitigation Measure M-TR-1:** **Performance target gaps to transit travel time ratios, System Intersection V/C ratios, Primary Vehicle Corridor speed, safety, and parking in Type 1 PMAs**. Key mitigation measures Bellevue should consider in Type 1 PMAs include: • To address transit travel time performance target gaps, Bellevue should continue to partner with King County Metro and Sound Transit. Improvements could include transit only/high-occupant vehicle (HOV) lanes on city streets, transit signal priority, and strong coordination to plan for the Link light-rail 4 Line between South Kirkland and Issaquah, which will serve BelRed, Wilburton, Downtown, East Main, Factoria, and Eastgate.	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).	Same as Alternative 0 (No Action).

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	• To address performance target gaps for System Intersection V/C ratios and Primary Vehicle Corridor speed, Bellevue should focus primarily on building out the pedestrian and bicycle network to ensure there are multiple mobility options for people to get to their destinations, "exceptional TDM" (transportation demand management) requirements beyond what is required by Bellevue City Code to further reduce single-occupant driver (SOV) driving demand, Smart Mobility solutions on arterials and state highways, and parking code reforms to eliminate parking minimums near Link light rail stations, and potentially add further maximum parking limits to shift driving from the default mode of travel to a mode of necessity. Roadway or intersection capacity expansion should be a mitigation measure of "last resort" in PMA 1 given the secondary impacts on pedestrian and bicyclist comfort and safety and the very limited available space to expand the roadway network. • To address safety impacts, Bellevue should continue to implement countermeasures and strategies consistent with its Vision Zero Action Plan and Safe Systems approach with a particular focus on reducing risks to vulnerable pedestrians and bicyclists. Priority should be placed on improving the safety of people walking or bicycling along the road through closing sidewalk gaps, installing mid-block crossings, providing low-stress bicycle facilities, and reducing crossing distances and creating high-visibility crosswalks at intersections. • As PMA 1 redevelops with greater intensity and mix of land uses, on-street parking demand may exceed supply during peak periods, which can be mitigated through Bellevue's existing curbspace programs and with additional interventions identified in the Curb Management Plan. • Review development projects in conjunction with the Mobility Implementation Plan (MIP) and use the MIP to inform the development and administration of the city's codes, standards, regulations, the Multimodal Concurrency Code (Chapter 14.10 BCC), Transportation Design Manual requirements, the Transportation Facilities Plan (TFP), and Transportation Impact Fee Program (Chapter 22.16 BCC). Ensure that codes, standards, and regulations, as well as Transportation Plans and Programs adopted by the city, are administered, and adopted to address transportation system impacts and to accommodate actual and anticipated growth throughout the city, including but not limited to in PMA 1. **Mitigation Measure M-TR-2:** **Performance target gaps to transit travel time ratios, System Intersection V/C ratios, Primary Vehicle Corridor speed, safety, and parking in Type 2 PMAs.** Key mitigation measures Bellevue should consider in Type 2 PMAs include: • To address transit travel time performance target gaps, Bellevue should continue to partner with King County Metro and Sound Transit. Improvements could include transit only/HOV lanes on city streets, transit signal priority, and strong coordination to plan for the Link light rail 4 Line between South Kirkland and Issaquah that will serve BelRed, Wilburton, Downtown, East Main, Factoria, and Eastgate. An innovative project like the Bellevue College Connector in Eastgate is a good example of this multi-agency collaboration. • To address performance target gaps for System Intersection V/C ratios and Primary Vehicle Corridor speed, Bellevue should focus primarily on building out the pedestrian and bicycle network to ensure there are multiple mobility options for people to get to			

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	their destinations, and "exceptional TDM" requirements beyond what is required by Bellevue City Code to further reduce SOV driving demand. Smart Mobility solutions for city arterials are of key importance in Type 2 PMAs given busy arterials like Factoria Boulevard and 148th/150th Avenue. Further refinements in traffic signal timing could address Primary Vehicle Corridor performance target gaps even if there are still intersection V/C performance target gaps. Given the close proximity of the Factoria and Eastgate areas to major Washington State Department of Transportation facilities, Smart Mobility solutions on state routes are also important. Vehicle capacity expansions may be warranted in limited and strategic areas if the other project concepts or strategies do not adequately address vehicle performance target gaps. However, any capacity expansion should be weighed against safety and multimodal access impacts. • To address safety impacts, Bellevue should continue to implement countermeasures and strategies consistent with its Vision Zero Action Plan and Safe Systems approach with a particular focus on reducing risks to vulnerable pedestrians and bicyclists. Managing vehicle speeds on arterials will be a key element of improving safety overall. • Type 2 PMAs, with less intensity and mix of land uses than in Type 1 PMAs, may experience parking impacts around its fringes and along smaller streets within the PMA. As noted earlier, Bellevue has robust parking and curbspace management programs that that can mitigate parking spillover impacts. • Review development projects in conjunction with the MIP and use the MIP to inform the development and administration of the city's codes, standards, regulations, the Multimodal Concurrency Code, Transportation Design Manual requirements, the TFP, and Transportation Impact Fee Program. Ensure that codes, standards, and regulations, as well as Transportation Plans and Programs adopted by the city, are administered, and adopted to address transportation system impacts and to accommodate actual and anticipated growth throughout the city, including but not limited to in PMA 2. **Mitigation Measure M-TR-3:** **Performance target gaps to transit travel time ratios, System Intersection V/C ratios, Primary Vehicle Corridor speed, safety, and parking in Type 3 PMAs.** Key mitigation measures Bellevue should consider in Type 3 PMAs include: • Transit travel time performance target gaps affect frequent transit network routes that traverse Type 3 PMAs, but there are no major transit nodes in the PMA. However, Bellevue should continue to work with partner transit agencies to implement strategic transit speed and reliability improvements within the Type 3 PMA to benefit service within the area and to enhance the performance of the overall transit system. Transit riders from the Type 3 PMA can benefit from these improvements both on routes that they are able to access by walking or bicycling, and also from major park-and-ride and transit centers across the city. • To address performance target gaps for System Intersection V/C ratios and Primary Vehicle Corridor speed, Bellevue should continue to build out the pedestrian and bicycle network per the MIP within the Type 3 PMA as this large area of the city contains performance target gaps. Smart Mobility solutions for city arterials are of major importance for arterials like 148th Avenue and Coal Creek Parkway, for example. Further refinements in traffic signal timing could address primary vehicle corridor			

Element of the Environment	Alternative 0 (No Action): Continues the current Comprehensive Plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers	Alternative 1: Providing options for families of all kinds	Alternative 2: Unlocking access for more residents	Alternative 3: Providing options throughout the city
	performance target gaps even if there are still intersection V/C performance target gaps. Vehicle capacity expansions may be warranted in strategic areas if the other project concepts and strategies do not adequately address vehicle performance target gaps. • To address safety impacts, Bellevue should continue to implement countermeasures and strategies consistent with its Vision Zero Action Plan and Safe Systems approach with a particular focus on reducing risks to vulnerable pedestrians and bicyclists. Managing vehicle speed on arterials will be a key element of improving safety overall. • As the city redevelops with a greater intensity and mix of land uses, particularly in Type 1 and 2 PMAs, there could be parking impacts on city streets within the Type 3 PMA. The city has robust parking and curbspace programs in place that can mitigate parking impacts. • Review development projects in conjunction with the MIP and use the MIP to inform the development and administration of the city's codes, standards, regulations, the Multimodal Concurrency Code, Transportation Design Manual requirements, the TFP, and Transportation Impact Fee Program. Ensure that codes, standards, and regulations, as well as Transportation Plans and Programs adopted by the city, are administered, and adopted to address transportation system impacts and to accommodate actual and anticipated growth throughout the city, including but not limited to in PMA 3. **Mitigation Measure M-TR-4:** **Impacts on state facility level of service (LOS).** Key mitigation measures Bellevue should consider include: • To address impacts on state facility LOS, Bellevue should continue to coordinate and partner with WSDOT on state transportation investments to improve regional mobility. Specific examples could be continued collaboration on implementing elements of the I-405 Master Plan, including the South Downtown I-405 Access Study. Bellevue and WSDOT have a long history of implementing improvements to state routes through the city. Bellevue can also facilitate the implementation of Smart Mobility strategies on state facilities through sharing of travel data and using Bellevue's communications channels to convey information to travelers. Smart Mobility on state facilities is an important strategy to move more people and address regional travel needs. • Consider "exceptional TDM" requirements beyond what is required by Bellevue City Code to further reduce SOV driving demand, which will reduce overall traffic demand on state facilities. Similarly, considering parking code reforms to eliminate parking minimums near Link light rail stations and potentially adding further maximum parking limits to shift driving from the default mode of travel to a mode of necessity would benefit state facilities. As development occurs, Bellevue will determine the capital and programmatic improvements best suited to address the conditions that materialize. Capital projects will be identified in the Transportation Facilities Plan; the Transportation Facilities Plan is updated every two to three years.			

1.8 Significant Unavoidable Adverse Impacts

Based on the full analysis presented in Chapters 3 through 11 of the Draft EIS, implementation of the alternatives would result in the following significant unavoidable adverse impacts for the following elements of the environment:

- **Housing:** The No Action Alternative continues existing regulations, incentives, and programs targeted at housing affordability. Recent development trends have shown decreases in affordability despite these existing tools. Without additional strategies for affordability, **the No Action Alternative will likely have a significant adverse impact on housing affordability** compared to the Action Alternatives.
- **Housing:** Economic displacement will be higher in the No Action Alternative. Given this, **significant adverse impacts** related to an increased risk for involuntary residential displacement are expected under the No Action Alternative.
- **Air Quality:** The Action Alternatives would result in **potentially significant unavoidable adverse impacts** on air quality.
- **Transportation:** While incremental improvements in performance to some impacted facilities could be achieved, it is expected that some of the impacts on V/C, Primary Vehicle Corridor travel speed, and state facilities would remain and be **significant and unavoidable adverse impacts**. This is true for the No Action Alternative and the Action Alternatives.
- **All Other Elements of the Environment:** With respect to the other elements of the environment analyzed in this Draft EIS, with the implementation of mitigation measures, **no other significant unavoidable adverse impacts are expected** with respect to future plan consistency under any of the alternatives.

1.9 Significant Areas of Controversy and Uncertainty, and Issues to Be Resolved

Key environmental issues and options facing decision-makers include:

- Alternative land use patterns in relation to growth estimates and community vision.

- Relationship of land use patterns to the natural environment and land use compatibility.
- Effect of growth on demand for public services, utilities, and parks and transportation capital improvements.

All alternatives would allow for population, housing, and employment growth and increased urbanization.

Prior to preparation of the Final EIS, the following issues are anticipated to be resolved:

- Selection and refinement of future land use studied in the range of alternatives.
- Refinement of goals, objectives, and policies.

Issues yet to be resolved include guidance related to the development regulations for specific zones to accommodate the changes proposed in the alternatives. The precise nature of these necessary amendments will be described in the Final EIS, after a Preferred Alternative has been identified.

1.10 Benefits and Disadvantages of Delaying the Proposed Action

If the proposed action is delayed, growth in Bellevue would be guided by the current Comprehensive Plan and zoning. It would allow for growth but not coordinate with regional growth strategies and targets or the investment to the same degree as the Action Alternatives. The investments in infrastructure would follow existing plans and not prepare the city for their expected share of growth. Retention of the No Action Alternative would also not provide a full range of housing types.

Retaining Alternative 0 (No Action) would result in inconsistencies with transportation metrics and disperse growth in a pattern that could result in more adverse impacts on water and natural resources. Delaying the Proposed Action would also not align with the Growth Management Act, VISION 2050, or Countywide Planning Policies. This could hinder the city's success in attaining state and federal grants and loans for infrastructure.

CHAPTER 2 Alternatives

2.1 Description of Alternatives

Alternatives are different ways of achieving a proposal's purpose and need and serve as the basis for environmental analysis relative to elements of the environment.

Alternatives under consideration in this EIS provide a range of capacities to accommodate housing and job growth, housing types, and investments in infrastructure citywide and in the Wilburton study area. Each alternative is briefly described below and in greater detail later in this chapter.

- **Alternative 0 (No Action): Continues the current plan with growth focused in Downtown, BelRed, and East Main Mixed Use Centers.** Alternative 0 (No Action) has capacity for adding 41,000 new housing units over the 2024–2044 planning horizon. This is above the regional growth target for Bellevue, which is 35,000 new units, but does not meet other new planning requirements, including affordable housing across income bands and a range of housing types. There would be capacity for 124,000 new jobs under this alternative, which is above the regional growth target of 70,000 jobs.[1] Housing capacity within the Wilburton study area would be small (less than 1 percent of the citywide total), and the Wilburton study area would have a

[1] Housing and job capacity used in this EIS analysis are higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report. See Section 2.3.2 below for additional discussion.

modest share of citywide job capacity (5 percent) with no changes to allowed uses or building intensities.

- **Alternative 1: Providing options for families of all kinds.** Alternative 1 allows for apartment and condominium buildings as well as gentle density increases across the city, resulting in capacity for an additional 59,000 housing units (which is 18,000 more units of housing capacity than the No Action Alternative). Mandatory inclusionary affordable housing would be required in the growth corridor with incentives for affordable housing in other locations. Job capacity would increase, adding space for an additional 179,000 jobs (which is space for 55,000 more jobs than the No Action Alternative). The Wilburton study area would increase its share of total citywide housing capacity to about 8 percent and job capacity to about 17 percent.
- **Alternative 2: Unlocking access for more residents.** Alternative 2 focuses capacity in more Mixed Use Centers as well as in areas with good access to transit and jobs. It allows for high-rise residential buildings in Mixed Use Centers as well as townhouses and small residential buildings in Neighborhood Centers and along transit corridors; duplex and other lower-density housing types would be allowed across the city. Existing multi-family areas would allow a broader array of housing typologies at higher densities. There would be capacity for an additional 77,000 housing units (which is 36,000 more units of housing capacity than the No Action Alternative). Voluntary inclusionary affordability would be offered in Mixed Use and Neighborhood Centers. Similar to Alternative 1, job capacity would increase, adding space for an additional 177,000 jobs (which is space for 53,000 more jobs than the No Action Alternative). The Wilburton study area would have 10 percent of total citywide housing capacity, and it would have a 15 percent share of total citywide job capacity.
- **Alternative 3: Providing options throughout the city.** Alternative 3 would allow a greater diversity of housing types in all centers and along transit corridors, combining the areas of focus in Alternatives 1 and 2. There would be capacity for an additional 95,000 housing units (which is 54,000 more units of housing capacity than the No Action Alternative). Mandatory or inclusionary affordable housing would be required in Mixed Use Centers, with incentives for affordable housing in other locations. Similar to Alternative 2, existing multi-family areas would allow a broader array of housing typologies at higher densities. Additional density would also be allowed within the city's existing

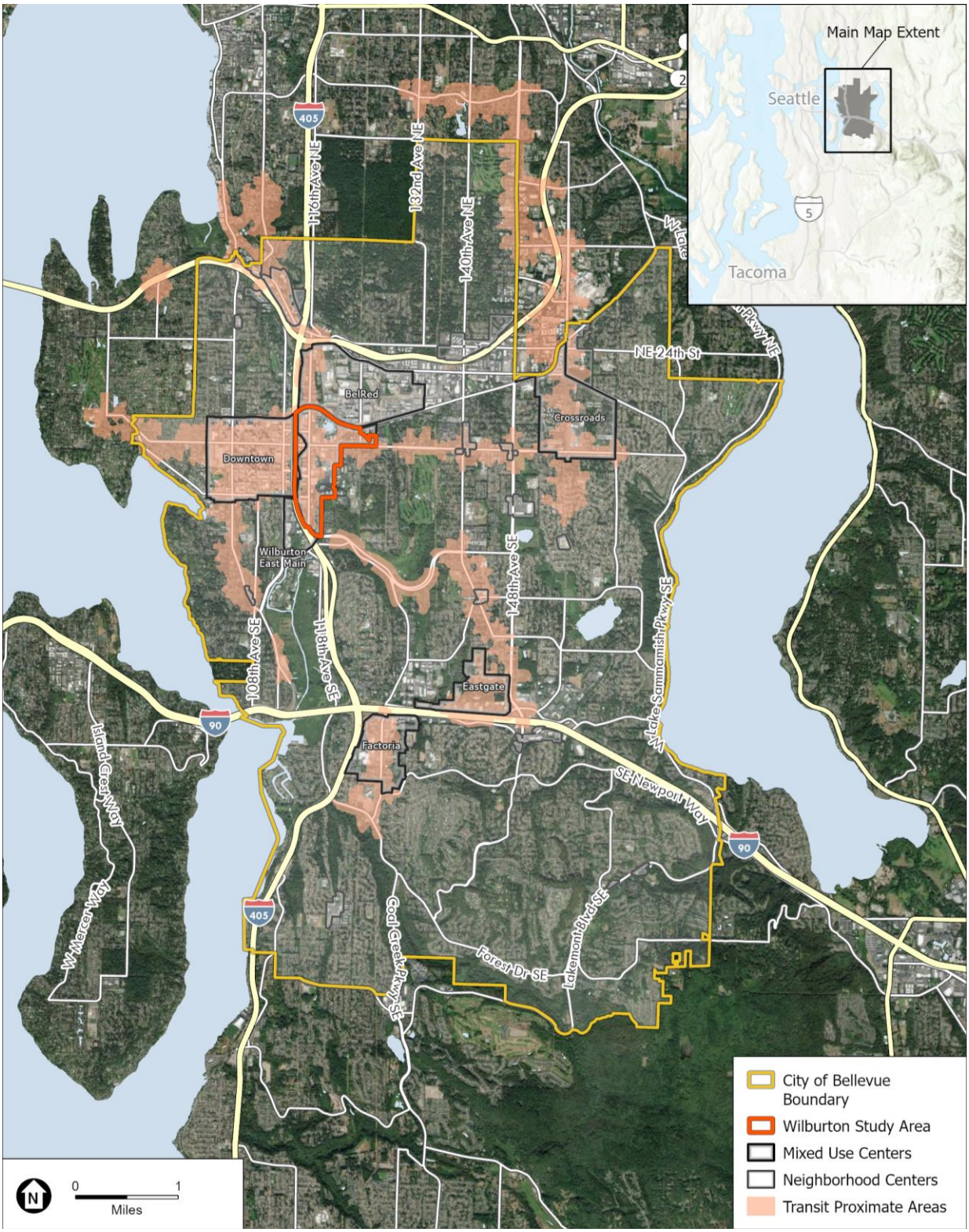
lowest density areas. Job capacity would increase, adding space for an additional 200,000 jobs (which is space for 76,000 more jobs than the No Action Alternative). The Wilburton study area would have 9 percent of total citywide housing unit capacity and would have capacity for 16 percent of total citywide job capacity.

2.2 Description of the Study Area

The study area is the Bellevue planning area, within the city limits (see Chapter 1, Figure 1-1). Within the city, this Draft EIS also identifies potential policy and code changes affecting the Wilburton study area as an area of focus (see Chapter 1, Figure 1-2)—the Wilburton study area refers to the area bounded by NE 12th Street in the north, the Lake Hills Connector in the south, I-405 in the west and an eastern boundary that varies from 124th Avenue NE by the Spring District to 118th Avenue SE by the Bellevue Botanical Garden. This Draft EIS also considers impacts specific to the city's six Mixed Use Centers, 13 Neighborhood Centers, and transit-proximate areas (see **Figure 2-1**). Note that the Mixed Use and Neighborhood Centers are mutually exclusive geographic areas, while the transit-proximate areas and Wilburton study area overlap with the boundaries of the Mixed Use Centers and Neighborhood Centers.

Transit-Proximate Areas

Transit-proximate areas include those areas of the city within ¼ mile of the city's frequent transit network (defined as frequent bus or train service at least every 15 minutes during the daytime and early evening)



SOURCE: City of Bellevue 2023; ESA 2023; BERK 2023

NOTE: Transit-proximate areas are based on the 2021 Bus Rapid Transit (BRT) network (does not include future bus or light rail).

FIGURE 2-1 **Mixed Use Centers, Neighborhood Centers, and Transit-Proximate Areas**

2.3 Objectives and Alternatives

2.3.1 Objectives

In accordance with the State Environmental Policy Act (SEPA), this section states the proposal's objectives, specifying the purpose and needs to which the proposal is responding. For a non-project action, such as plan changes or regulatory amendments, objectives can be expressed in terms of a vision and principles.

Each objective has been defined with equity performance measures or metrics as presented in Appendix H.

CITYWIDE

Housing: Diversity and Choice

- Plan for a range of housing types and densities that support efficient capital facility investments.
- Prioritize affordable housing for very low-income families.
- Address past inequities that have shaped the city.
- Plan for residential neighborhoods that protect and promote the health and well-being of residents by supporting equitable access to parks, a clean environment, educational and economic opportunities, and transportation options.

Connection: Places and Spaces

- Support small, locally owned businesses.
- Increase the ability to walk and bike to places close to home.
- Create more community gathering spaces.

Environment: Sustainability and Climate

- Provide access to open space.
- Reduce environmental impacts.
- Support health, well-being, and resilience.
- Reduce greenhouse gas (GHG) emissions.

Access: Transportation and Land Use

- Focus housing and job growth in places with good access to a variety of transportation options.
- Use a variety of approaches to manage traffic and provide people multiple options for getting around the city and the region.
- Enhance people's ability to access stores, cafes, services, parks, and other amenities close to home.

WILBURTON STUDY AREA

The following Bellevue City Council Principles were established in 2015 for the Wilburton study area to provide consistent direction over the course of the project:

- **Grand Vision.** Ensure that the vision for the Wilburton project study area is extraordinary and fully capitalizes on the special opportunities created by the area's outstanding location and access.
- **Special Niche.** Create alternatives and explore innovations that will provide Wilburton an economic niche that complements and adds to the vitality of Bellevue and the Eastside.
- **Grand Connection.** Ensure that the vision for the Grand Connection encompasses the entire corridor from the Meydenbauer Bay waterfront to the Eastside Rail Corridor, and that it positions the corridor to serve as both a memorable and transformative public space as well as a means of non-motorized transportation.
- **Neighborhood Identity.** Develop placemaking and urban design strategies that create a strong and unique neighborhood identity for Wilburton.
- **Emerging Opportunities.** Address changes and opportunities that have emerged since the last major update of the land use plan for Wilburton.
- **Integrated Station Area Planning.** Integrate station area planning for the Wilburton light rail station with the balance of the Wilburton subarea, while utilizing this station as an opportunity to establish connectivity between the two areas bisected by NE 8th Street.
- **Community Benefit.** Create community benefit and value for the surrounding neighborhoods of Downtown, BelRed, and the greater subarea of Wilburton. Benefit and value should be

derived from connectivity, access to services, and improved urban amenities that serve all residents and businesses.

- **Affordable Housing Opportunities.** Consider opportunities for land use changes in the area to provide for affordable housing.
- **Impact Mitigation.** Ensure sensitivity to potential adverse impacts of change on nearby residential neighborhoods and provide for a graceful transition between new development and established neighborhoods.
- **Economic Vitality.** Enhance economic vitality and advance the goals of the city's Economic Development Action Plan.
- **Timing.** Explore means by which key elements of the vision can be in place by the 2023 initiation of light rail service. This includes pedestrian connectivity across I-405 and NE 8th Street, as well as catalyst land use elements.
- **Public Engagement.** Utilize effective public engagement strategies to involve diverse stakeholders in conversation about the project.

The planning process was guided by a 15-member Citizen Advisory Committee (CAC), appointed by the City Council to develop a vision for the Wilburton study area. The CAC developed a range of alternatives including a Preferred Alternative that would achieve the following vision:

> Our vision is that the Wilburton Commercial Area become Bellevue's next urban mixed use community that enhances livability, promotes healthy living, supports economic vitality, and serves the needs of a diverse and growing population. As Bellevue's cultural and innovative hub, it serves as a regional and international destination that connects people and fosters community by leveraging its existing assets to define a distinctive sense of place and character.

Upon initiation of the Wilburton Vision Implementation April 25, 2022, the City Council directed staff to use the 2018 CAC Preferred Alternative as the baseline when determining updates in areas of housing policy, affordable housing, growth targets, Grand Connection impacts and integration, sustainability, equitable access, multimodal transportation, and universal design.

2.3.2 Regulatory Framework

The Growth Management Act (GMA) was adopted in 1990 to manage growth to support a high quality of life, sustainability, economic development, and environmental conservation. It provides a framework for land use planning and the regulation of development in Washington State.

The GMA also requires coordination and consistency between jurisdictions that share common borders or related regional issues, and the adoption of multicounty planning policies (MPPs) on a regional scale to govern regional planning. VISION 2050 is the regional plan for the Central Puget Sound, and it supports growth of housing and jobs particularly in Mixed Use Centers and in high capacity transit areas. Bellevue is the employment center of the Eastside. It is considered a Metropolitan City and is expected to accommodate a large share of King County's growth. Downtown Bellevue, a designated Regional Growth Center, is expected to be an area of focused growth. The 216 MPPs in VISION 2050 are organized by topic area to provide direction for more efficient use of public and private investments and inform updates to countywide planning policies and local comprehensive plan.

Other regional policy guidance comes from the King County Countywide Planning Policies [CPPs] (2021). They include policies guiding growth in cities and the county that address equity, environment/climate, housing, affordable housing needs, economic development, transportation, open space, rural and resource lands, and other elements. The CPPs set housing and job growth targets for each jurisdiction to plan for within the county for the planning period between 2019 and 2044. Policies related to expanding housing options and neighborhood choice may result in cities needing to have more capacity for housing and jobs than the growth targets to have the ability to achieve other requirements in the CPPs such as encouraging a variety of housing typologies. Bellevue's growth targets as set in the CPPs are for 35,000 new housing units and 70,000 new jobs between 2019 and 2044. Similar to VISION 2050, the CPPs guide growth toward centers and station areas and provide minimum size and density criteria for designating centers. Mixed Use Centers concentrate housing and job growth to achieve greater efficiencies and benefit from transportation capital funding. The alternatives described in the sections below explore a range of housing capacities to achieve the city's livability goals.

The county's 2021 Urban Growth Capacity (UGC) Report, prepared in conjunction with the CPPs, compared estimated housing and employment growth from 2006 to 2018 relative to 2006–2035 growth targets and remaining capacity for each jurisdiction. Growth targets are based on actual growth projections prepared by the State of Washington Office of Financial Management whereas development capacity is based on assumptions about how much land is redevelopable and the type of projects that could be developed under existing zoning. Housing and job capacity used in this EIS analysis are higher under the No Action Alternative than the capacity that was reported in the 2021 UGC Report. This is because:

- The city's calculation of capacity does not include the market factor used in the UGC Report that reduced total capacity by about 15 percent overall.
- Since the publishing of the UGC Report, the city has added capacity in East Main and on faith-owned properties.
- Permits have been issued for projects that are developing at a higher density than what was assumed in the UGC Report.
- Some properties that were not considered redevelopable in the UGC Report have since redeveloped.
- The city's threshold for classifying a property as "redevelopable" is slightly more generous than what was used in the UGC Report to try to capture all potential development in the city.

With the Comprehensive Plan Periodic Update, Bellevue must meet all its responsibilities under the GMA and the CPPs.

2.3.3 Alternative Changes During Scoping

Several changes were made to the alternatives in response to comments received during the scoping period. The Detailed Scoping Comment Summary posted on the city's website describes all comments received in more detail. **Table 2-1** summarizes the comment themes received and the resulting changes made to the alternatives. See Appendix A or the city's website for the full scoping comment summary report.

TABLE 2-1 **Changes to Alternatives as a Result of Scoping Comments**

Comment Theme Summary	Resulting Change
CITYWIDE ALTERNATIVES	
Expand the BR-MO-1 node designation north of NE 12th Street and increase height and floor area ratio (FAR)	Expansion of the node in all three alternatives reflecting similar changes to BelRed Medical Office (BR-MO-1) density south of NE 12th Street.
Increase densities and height in BelRed	Further expansion of high-density node designations, primarily in Alternative 3.
Increase amount of residential allowed in the BR-MO area	Increased allowance for residential within ½ mile of light rail in Alternative 3.
Expand low-density zoning	Increased density both in Neighborhood Centers and in multi-family areas to allow more mid-scale housing options
Add density in areas with good transit access, as well as more housing options	The density assumed in Alternatives 2 and 3 for changes in areas with good access to transit, Neighborhood Centers, or major employment centers was increased to a low multi-family level.
Allow additional density in the lowest density areas of the city, such as Bridle Trails	Alternative 3 now allows increased dwelling units per acre to match other low-density areas of the city. This could allow large parcels within low-density areas to create additional housing while maintaining open space and natural areas.
Increase affordable housing incentives or requirements	Both approaches are being analyzed, but Alternative 3, which had previously matched Alternative 2's approach, was adjusted to reflect a stronger approach to a mandatory program and to analyze a wider variety of affordable housing approaches. Additional assumptions around affordable housing, such as continuation of existing programs, will be utilized in the economic analysis as well.
Maintain affordable housing incentives rather than requirements	
WILBURTON ALTERNATIVES	
Study additional housing capacity, especially in Alternative 3.	Updates to land use types and building heights were made in all Action Alternatives to increase housing capacity.
Increase the areas in which 450-foot building heights apply between 116th Avenue NE and Eastrail in Alternative 3	Alternative 3 was updated to allow for buildings up to 45 stories for parcels within the area bounded by 116th Avenue NE to the west, NE 4th Street to the north, Eastrail to the east, and SE 1st Street to the south.
Retain medical focus in area across from Kaiser/Overlake Medical Centers, reflecting concerns that introducing residential in this area would preclude or disincentivize medical uses locating in this area	All alternatives were updated to analyze predominantly medical uses in this area.
Terminate the extension of NE 6th Street at 120th Ave NE	The No Action Alternative was updated to analyze NE 6th Street extending to 116th Avenue NE while Alternative 3 was updated to

Comment Theme Summary	Resulting Change
	analyze NE 6th Street extending to both 116th Avenue NE and 120th Avenue NE.
Increase density along 120th Ave NE heading toward Spring District to the north	Alternative 3 was updated to increase building heights along both sides of 120th Avenue NE and to include redevelopment on Lake Bellevue parcels as part of the analysis.

SOURCE: City of Bellevue Scoping Report, January 2023

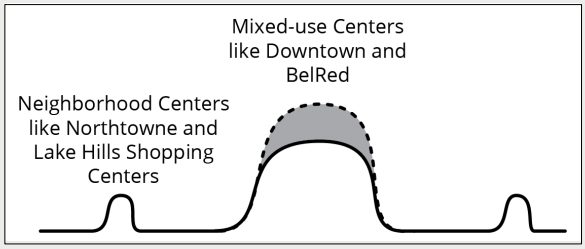
Each of the Alternatives analyzed in this Draft EIS are described in detail in the section below.

2.3.4 Alternative 0 (No Action)

Alternative 0 (No Action Alternative): Citywide, this alternative continues the current Comprehensive Plan last updated in 2015. The current plan's growth strategy focuses the majority of new capacity in both Bellevue's Downtown, a designated Regional Growth Center, and BelRed and East Main, which are areas where new light rail investments have been made. Less growth is planned for other mixed use areas in the city. Under Alternative 0 (No Action), the city would have capacity for 41,000 new housing units, which is 6,000 above the 35,000 housing target established in the King County Countywide Planning Policies (2021). The current plan and regulations would have capacity for 124,000 new jobs, which is 54,000 above the 70,000 target in the King County CPPs. As mentioned above, housing and job capacity used in this EIS analysis are higher under the No Action Alternative than the capacity that was reported in King County's 2021 UGC Report. However, while net housing and job capacity are above the adopted growth targets, the No Action Alternative does not meet other new planning requirements, including affordable housing across income bands and a range of housing types. See **Table 2-2** and **Figure 2-2** and **Figure 2-3** for the density of citywide net housing and job capacity under the No Action Alternative.

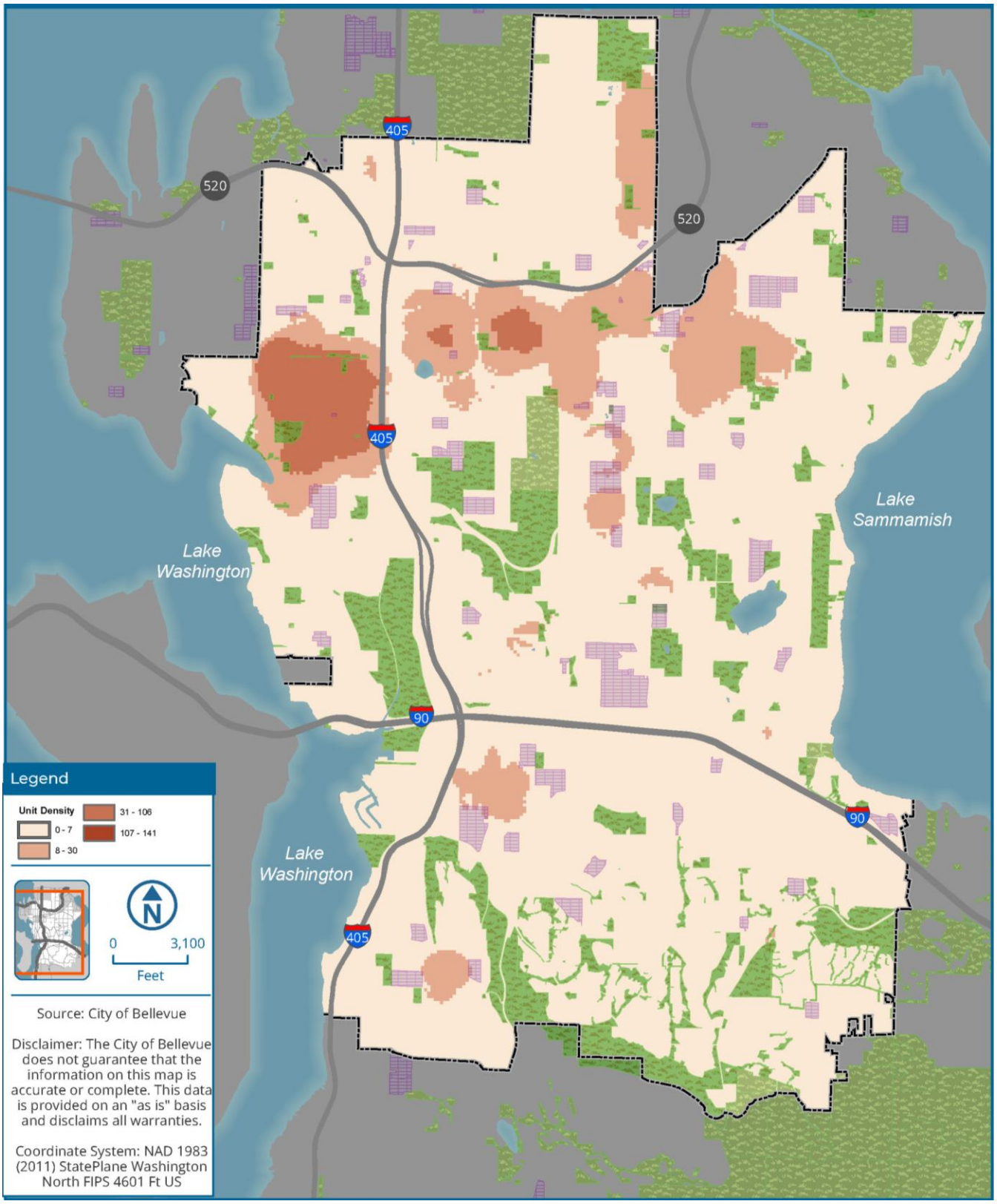
Under the No Action Alternative, the **Wilburton study area** would also retain current policies and codes that provide minimal housing capacity (less than 1 percent of the gross citywide total) and modest employment capacity (5 percent of the gross citywide total). See **Table 2-3**.

TABLE 2-2 **Alternative 0 (No Action) Distribution of Growth and Summary of Housing Strategy**

Growth Level and Pattern	Housing
• Capacity for an additional 41,000 housing units. • Capacity for an additional 124,000 jobs. • Capacity for an additional 40.0 million square feet of commercial development. **FOCUS OF GROWTH:** Primarily within Downtown, BelRed, and East Main. No changes to city's existing growth framework.  	**HOUSING TYPOLOGIES:** Primarily residential buildings with studios and one-bedroom units, not meeting planning requirements for housing. **HOUSING AFFORDABILITY:** Voluntary inclusionary affordability incentives allow extra density to market-rate projects in exchange for affordable units, generally 5%–10% of projects. **HOUSING STRATEGY:** This alternative is required under SEPA as a baseline for analyzing Action Alternatives 1–3. It meets the adopted housing and job targets but does not meet the city's new planning requirements, including affordable housing across income bands, or a range of housing types. This alternative is based on current capacity for housing and jobs. The city's existing plans, policies, and regulations would continue without changes. This alternative serves as a baseline against which the other alternatives can be measured. There would be no changes to the designations on the Land Use Map and no policy, zoning, or regulation changes.

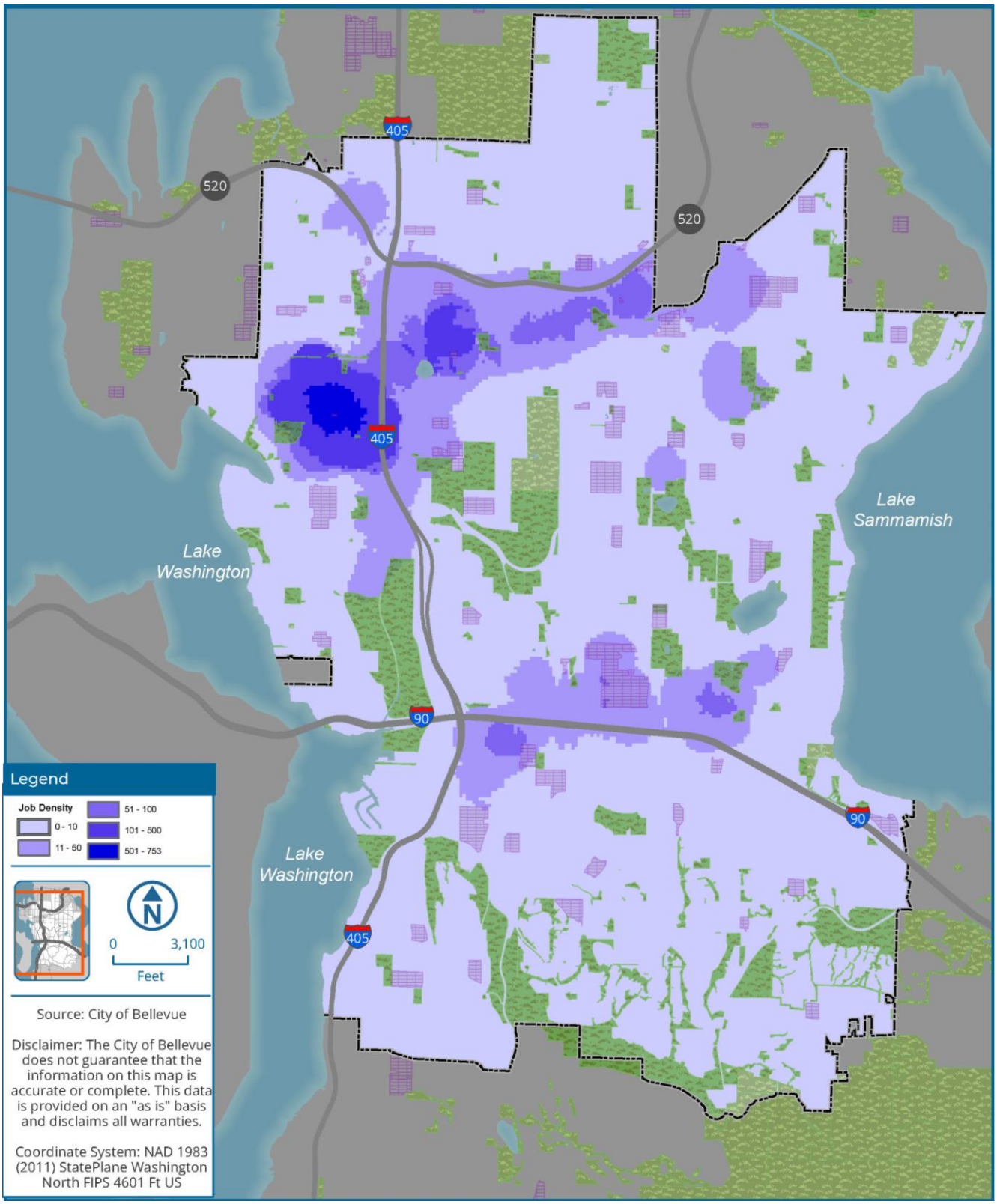
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Housing and job capacity estimates are rounded to the nearest 1,000. Commercial square footage capacity is rounded to the nearest 100,000. The actual pace of growth could differ and be more or be less than what is shown.



SOURCE: City of Bellevue 2023

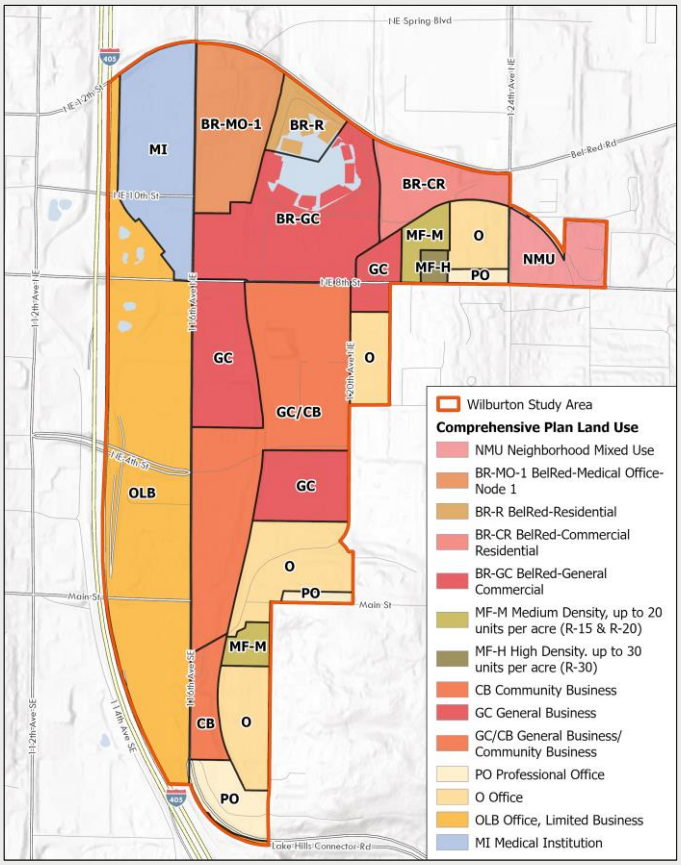
FIGURE 2-2 **Alternative 0 (No Action) Density of Net Housing Capacity**



SOURCE: City of Bellevue 2023

FIGURE 2-3 **Alternative 0 (No Action) Density of Net Job Capacity**

TABLE 2-3 **Alternative 0 (No Action) – Wilburton Study Area**

Growth Level and Pattern	Transportation and Building Form
• Capacity for an additional 300 housing units. • Capacity for an additional 3,900 jobs. • Capacity for an additional 1.4 million square feet of commercial development. Focus of Growth: No changes to the designations on the Land Use Map, and there would be no policy, zoning, or regulation changes. Housing and employment growth occurs within current capacity. 	**TRANSPORTATION:** • No changes to planned transportation investments; includes NE 6th St extended between I-405 and 116th Ave NE. **LAND USE MIX:** • Primarily commercial, office, and medical uses with limited residential. **DEVELOPMENT INTENSITY:** • Assumes maximum building heights based on the current Comprehensive Plan Land Use Map and zoning. • Building heights between 7 and 15 stories in the BR-CR, NMU, and BR-MO-1 districts and heights up to 4 to 5 stories in the other districts. **HOUSING TYPOLOGIES AND LOCATIONS:** • Combination of low- and mid-rise residential buildings in limited areas ranging from 3 to 6 stories.

SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Housing and job capacity estimates are rounded to the nearest 100. Commercial square footage capacity is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown. See Chapter 3, *Land Use Patterns and Urban Form*, for a full description of existing zoning.

2.3.5 Alternative 1: Providing Options for Families of All Kinds

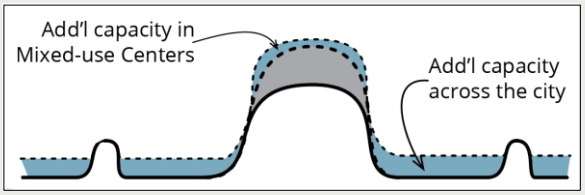
Alternative 1 Providing Options for Families of all Kinds: Under Alternative 1, more housing types would be offered **citywide** through incentives for larger multi-family units and mandatory inclusionary housing in the growth corridor (Downtown, East Main, Wilburton, and BelRed). Duplexes, triplexes, cottage housing, or other low-density typologies would be allowed across the city. In BelRed, each node with its allowance of higher intensity development would be expanded to include most areas within walking distance of the light rail stations.

Alternative 1 would have capacity for 59,000 additional housing units (18,000 above the No Action Alternative and 24,000 above the CPP housing target) and space for an additional 179,000 jobs (55,000 above the No Action Alternative and 109,000 above the CPP job target). See **Table 2-4** and **Figure 2-4** and **Figure 2-5** for the density of citywide net housing and job capacity under Alternative 1.

Under Alternative 1, the **Wilburton study area** would focus capacity in the core of the study area, around the intersection of the Eastrail and Grand Connection south of the Wilburton Light Rail Station. Alternative 1 would allow for high-rise residential, office, and other commercial uses in a mixed use node within the core, with primarily high-rise office uses around the mixed use node and 116th Avenue NE. It would allow primarily mid-rise residential development in areas east and west of 124th Avenue NE, and in the area south of NE 4th Street and east of Eastrail. It would allow primarily medical uses in the area north of NE 8th Street and east of 116th Avenue NE.

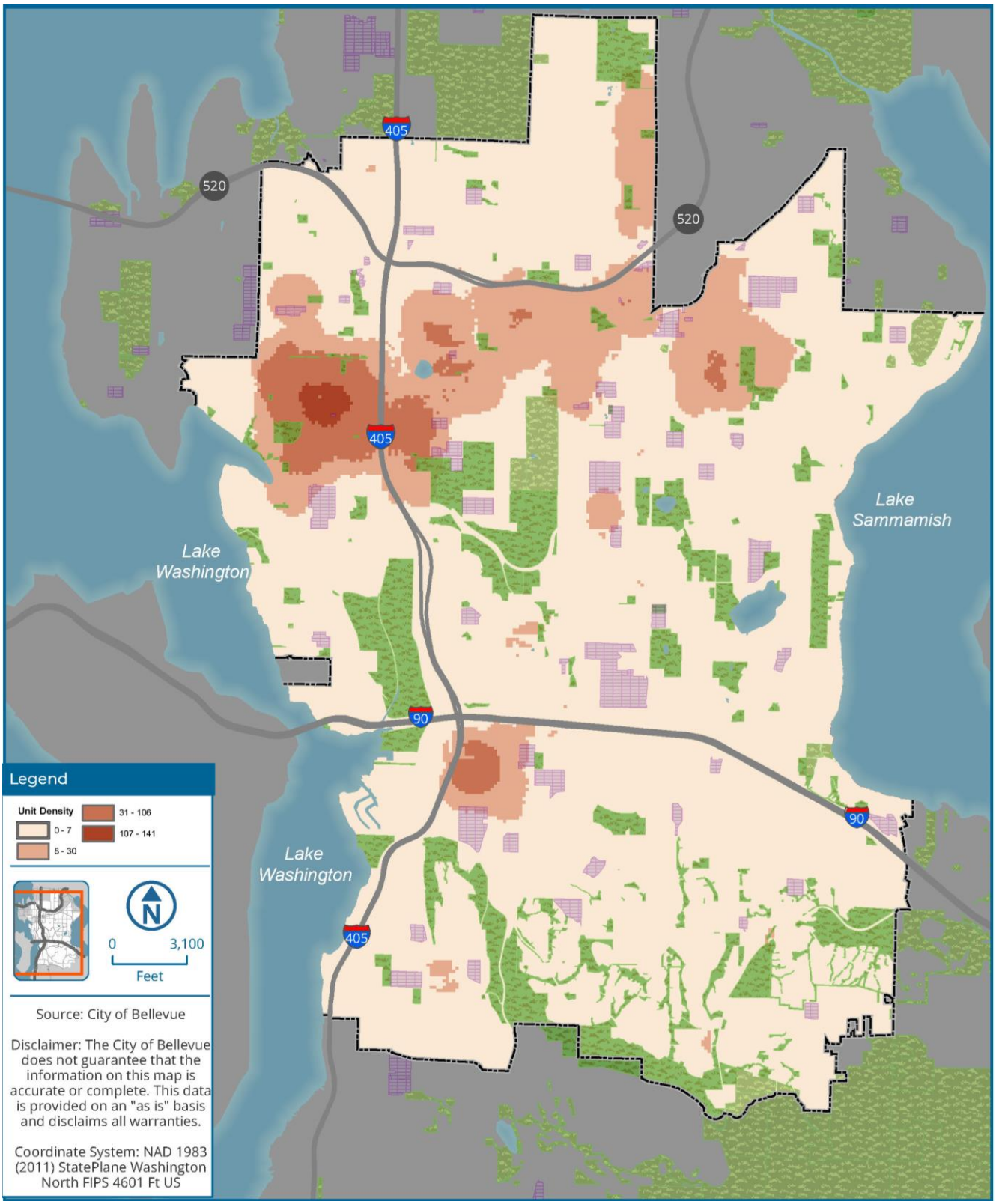
Alternative 1 would have capacity for an additional 15.0 million square feet of commercial development in the Wilburton study area and would include an additional 9,200 housing units and space for an additional 44,800 jobs. This represents 8 percent of the gross citywide housing capacity and 17 percent of the gross citywide job capacity. Transportation investments would include an extension of NE 6th Street from I-405 to 116th Avenue NE as well as new multimodal connections and walkable blocks throughout the Wilburton study area. See **Table 2-5**.

TABLE 2-4 **Alternative 1 Distribution of Growth and Summary of Housing Strategy**

Growth Level and Pattern	Housing
• Capacity for an additional 59,000 housing units (18,000 above No Action). • Capacity for an additional 179,000 jobs (55,000 above No Action). • Capacity for an additional 58.5 million square feet of commercial development. **FOCUS OF GROWTH:** Primarily in Mixed Use Centers (Downtown, East Main, BelRed, Wilburton, Crossroads, Factoria, Eastgate). Gentle density added across the city.  	**HOUSING TYPOLOGIES:** Incentives for larger units in mixed use areas provide additional two-bedroom and larger units. Duplexes, cottage housing, and other low-density typologies permitted across the city. **HOUSING AFFORDABILITY:** Mandatory inclusionary affordability alongside additional capacity in growth corridor (Downtown, East Main, Wilburton, and BelRed); increased incentives elsewhere to meet affordability targets. **HOUSING STRATEGY:** Focus additional residential density including mixed use growth on **Mixed Use Centers**, including the areas of existing capacity in Downtown, East Main and BelRed and with a renewed focus on Wilburton, Crossroads, Eastgate, and Factoria. Because only focusing on the existing denser mixed use areas does not provide a variety of housing types and affordability levels, additional policies would be adopted to support housing choice and diversity. Policies encouraging **more family-sized housing** in these mixed use areas would be paired with policies allowing a greater diversity of **low-density housing types throughout the city**. This approach includes the smallest number of new housing units of the Action Alternatives and the least diversity of housing types produced, so it is paired with **strong affordable housing policies** to meet state/county requirements. These include a mandatory inclusionary affordability program in the growth corridor and the expansion of affordability incentives throughout the city. This alternative would modestly expand the extent of multimodal transportation investments to accommodate new growth, particularly within the Mixed Use Centers.

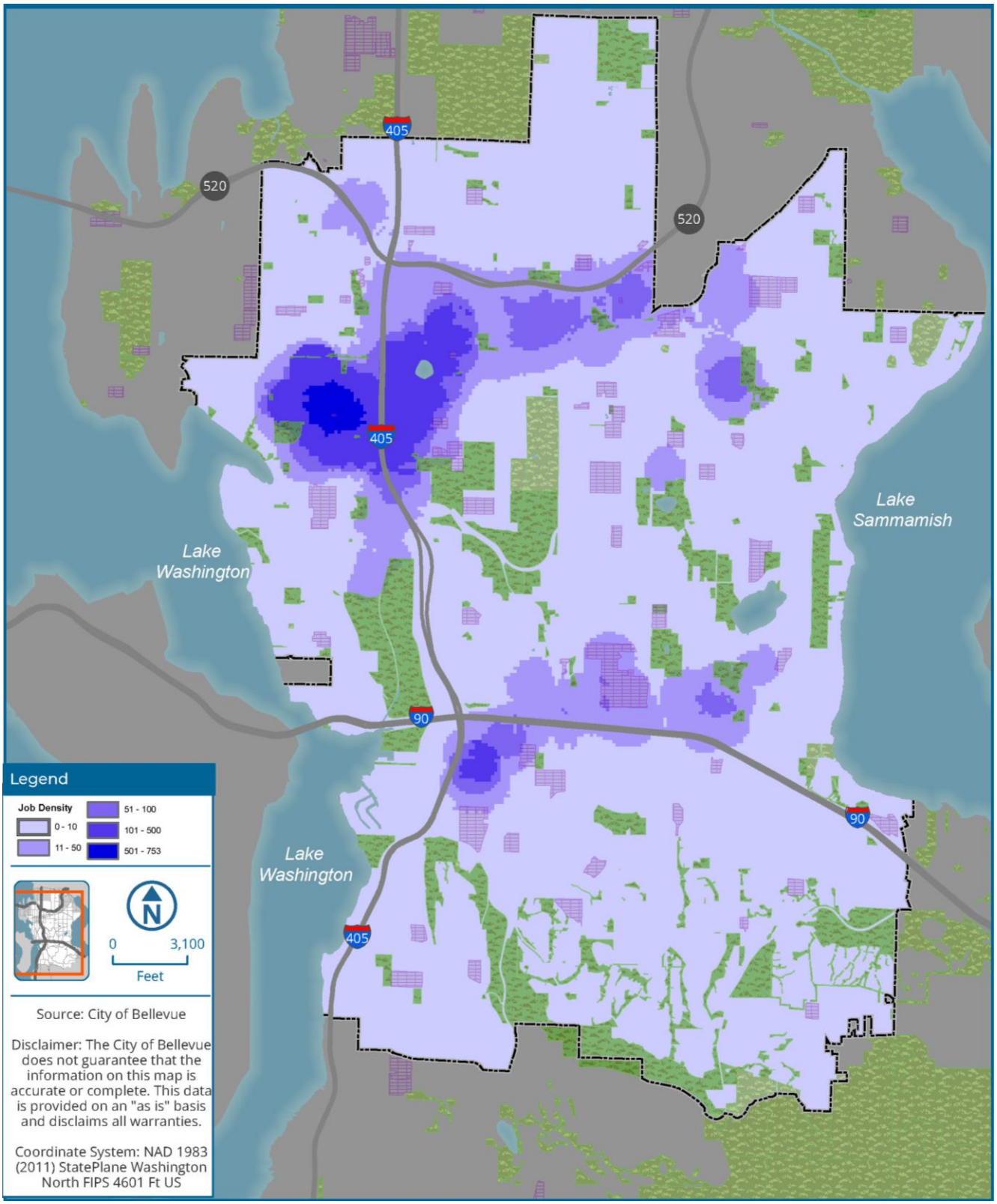
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Housing and job capacity estimates are rounded to the nearest 1,000. Commercial square footage capacity is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown.



SOURCE: City of Bellevue 2023

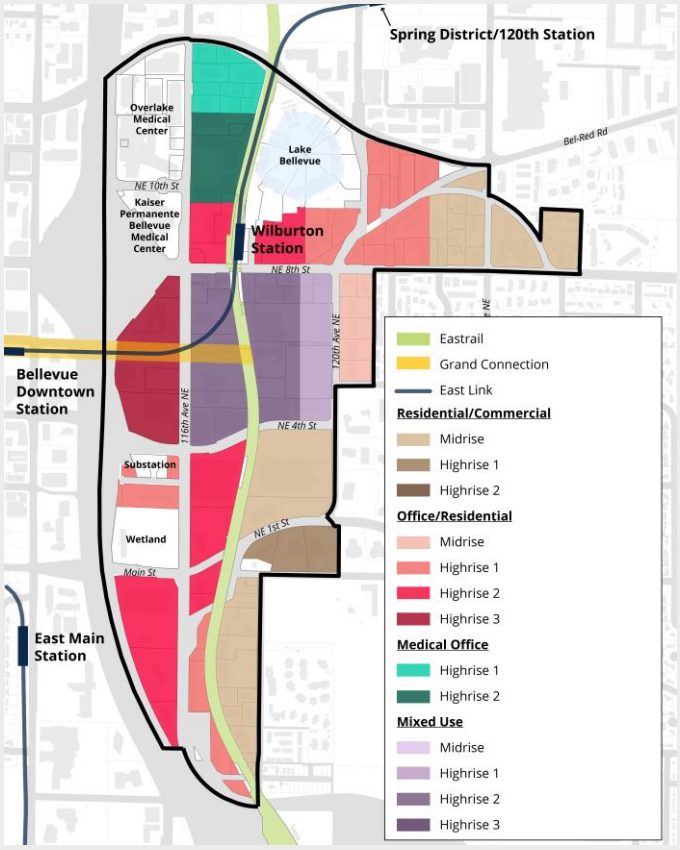
FIGURE 2-4 **Alternative 1 Density of Net Housing Capacity**



SOURCE: City of Bellevue 2023

FIGURE 2-5 **Alternative 1 Density of Net Job Capacity**

TABLE 2-5 **Alternative 1 – Wilburton Study Area**

Growth Level and Pattern	Transportation and Building Form
• Capacity for an additional 9,200 housing units (8,900 above No Action). • Capacity for an additional 44,800 jobs (40,900 above No Action). • Capacity for an additional 15.0 million square feet of commercial development (13.6 million above No Action). **FOCUS OF GROWTH:** In the core of the Wilburton study area, around the intersection of the Eastrail and Grand Connection south of the Wilburton Light Rail Station.  	**TRANSPORTATION:** • NE 6th St extended between I-405 and 116th Ave NE. New multimodal connections create smaller, more walkable blocks throughout the Wilburton study area, but with a greater emphasis in the mixed use node. **LAND USE MIX:** • Residential, office, and other commercial uses in a mixed use node within the core. • Primarily office uses surrounding the mixed use node as well as along 116th Ave NE. • Primarily residential development in areas east and west of 124th Ave NE, and the in area south of NE 4th St and east of Eastrail. • Primarily medical uses in the area north of NE 8th St and east of 116th Ave NE. **DEVELOPMENT INTENSITY:** • Building heights up to around 45 stories between I-405, NE 8th St, NE 4th St, and 116th Ave NE and ranging from 16 to 25 stories in the core. • Transition down to lower building heights ranging from 10 to 16 stories toward the northern, southern, and eastern study area edges. **HOUSING TYPOLOGIES AND LOCATIONS:** • Residential high-rise buildings ranging from 16 to 25 stories in and around a central mixed use node, and along 116th Ave NE. • Residential mid-rise buildings generally up to around 7 to10 stories along the eastern edge of the study area. • Some residential high-rise buildings up to around 45 stories between I-405, NE 8th St, NE 4th St, and 116th Ave NE.

SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Housing and job capacity estimates are rounded to the nearest 100. Commercial square footage capacity is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown. See Chapter 3, *Land Use Patterns and Urban Form*, for a full description of each land use development type, including building types and heights.

2.3.6 Alternative 2: Unlocking Access for More Residents

Alternative 2 Unlocking Access for More Residents: Under Alternative 2, there would be capacity for growth **citywide** in both Mixed Use and Neighborhood Centers and in areas with good access to transit/jobs. Alternative 2 would allow high- and mid-rise residential and mixed use buildings with studios and one-bedrooms in Mixed Use Centers and 3- to 5-story residential and mixed use buildings in Neighborhood Centers. Additional housing opportunities would be permitted including townhomes or 3- to 5-story residential buildings in areas with good transit access. Existing multi-family areas would allow a broader array of housing typologies at higher densities, and duplexes, triplexes, cottage housing, or other low-density typologies would be allowed across the city. Within BelRed, this alternative further expands nodal development intensities south to BelRed Road and allows medium density south of Bel-Red Road in areas within walking distance of the light rail stations.

Alternative 2 would have capacity for 77,000 additional housing units (36,000 above the No Action Alternative and 42,000 above the CPP housing target) and space for an additional 177,000 jobs (53,000 above the No Action Alternative and 107,000 above the CPP job target). See **Table 2-6** and **Figure 2-6** and **Figure 2-7** for the density of citywide net housing and job capacity under Alternative 2.

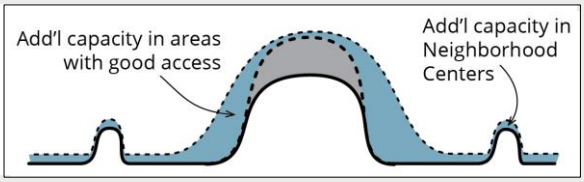
Alternative 2 would spread capacity more evenly across the **Wilburton study area** compared to Alternative 1. Alternative 2 designates more area for residential use and less area for office use compared to Alternative 1. Primarily high-rise office uses would be allowed along the west side of 116th Avenue NE and north of NE 8th Street. A mix of high-rise residential, office, and other commercial uses would be allowed along the east side of 116th Avenue NE and south of NE 8th Street. Less intense high-rise residential development would be allowed east of Eastrail, with more intense high-rise residential development adjacent to Eastrail. Like Alternative 1, Alternative 2 designates the area north of NE 8th Street and east of 116th Avenue NE primarily for medical uses.

Alternative 2 would have capacity for an additional 12.7 million square feet of commercial development in the Wilburton study area and would include an additional 14,200 housing units and space for an additional 38,100 jobs. This represents 10 percent of the gross citywide housing capacity and 15 percent of the gross citywide job capacity. Transportation investments would be the same as under Alternative 1. See **Table 2-7**.

Good Access to Transit

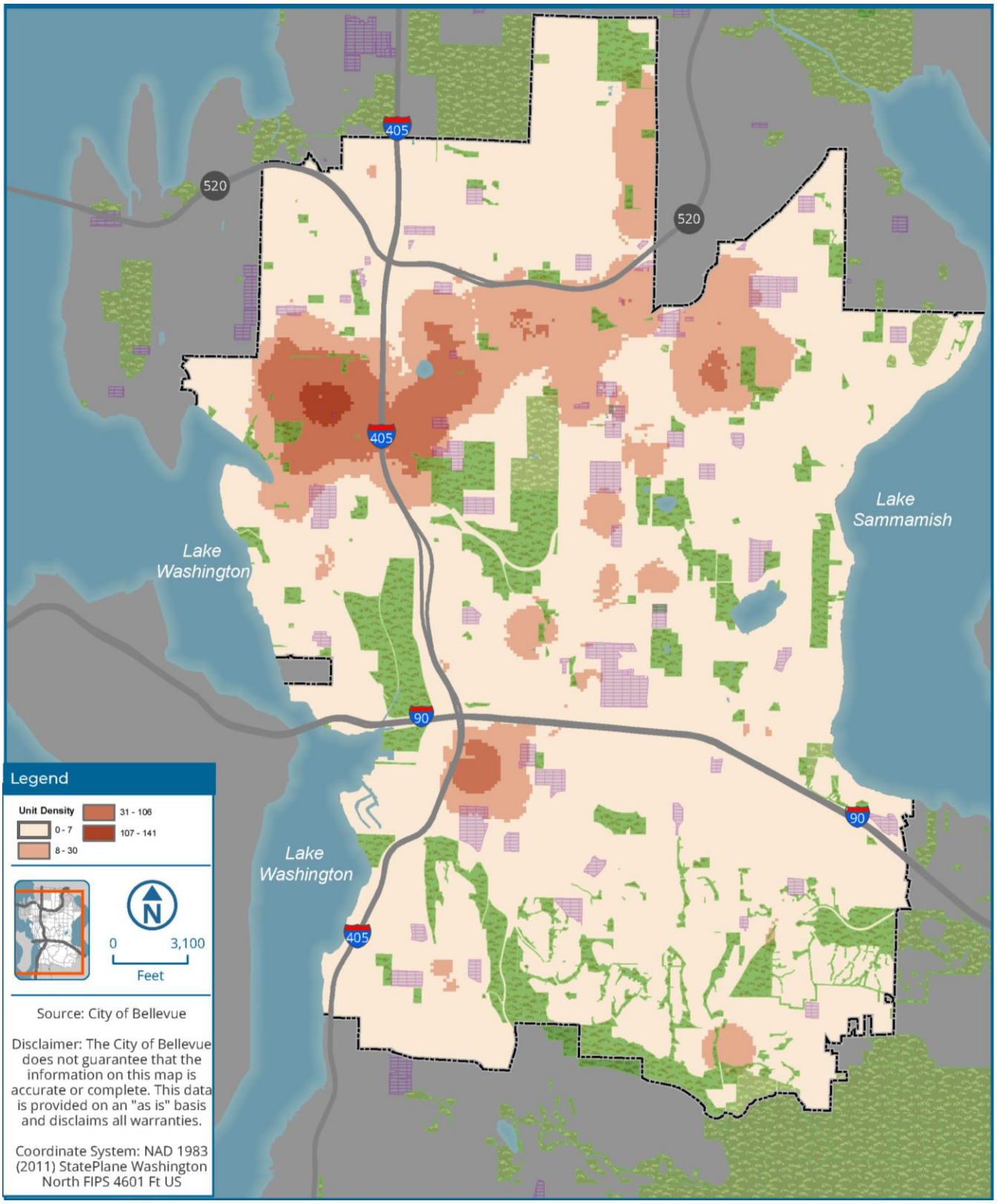
Good access to transit is defined as frequent bus service (every 15 minutes) during the daytime and early evening.

TABLE 2-6 **Alternative 2 Distribution of Growth and Summary of Housing Strategy**

Growth Level and Pattern	Housing Approach
• Capacity for an additional 77,000 housing units (36,000 above No Action). • Capacity for an additional 177,000 jobs (53,000 above No Action). • Capacity for an additional 58.3 million square feet of commercial development. **FOCUS OF GROWTH:** Both in Mixed Use Centers and in areas with good access to transit/jobs.  	**HOUSING TYPOLOGIES:** Typologies like townhomes or small residential buildings in areas with good transit access, duplexes, or other low-density typologies permitted across the city. Residential buildings with studios and one-bedrooms in Mixed Use and Neighborhood Centers. **HOUSING AFFORDABILITY:** Tiered voluntary inclusionary affordability alongside additional capacity in Mixed Use and Neighborhood Centers, increased incentives elsewhere to meet affordability targets. **HOUSING STRATEGY:** In addition to adding housing in Mixed Use Centers with existing capacity, expand middle-scale housing in **areas with good access to transit or jobs**. These areas have high demand today, often causing teardown-rebuilds of single-family housing. Additionally, this alternative provides a denser **mix of uses including housing within existing Neighborhood Centers** (commercial areas within predominantly residential areas of the city). This density could extend farther along and near the transit-rich arterials running through these areas as well. Additional investments in multimodal transportation capacity in these areas (improved access to transit, targeted traffic congestion relief, low-stress bicycle, and pedestrian facilities, etc.) would accompany the higher density development. Because a variety of typologies are achieved using the above approaches, this alternative examines **low-density housing options in existing single-family** areas across the rest of the city. The variety of housing produced in this alternative will provide middle-income (80%–120% Area Medium Income [AMI]) housing of a variety of types, but **deeper affordability** will still be required to achieve a majority of new units that are affordable <80% AMI. A tiered voluntary inclusionary affordability program is included in Mixed Use Centers and in Neighborhood Centers, while voluntary affordability incentives are available across the city.

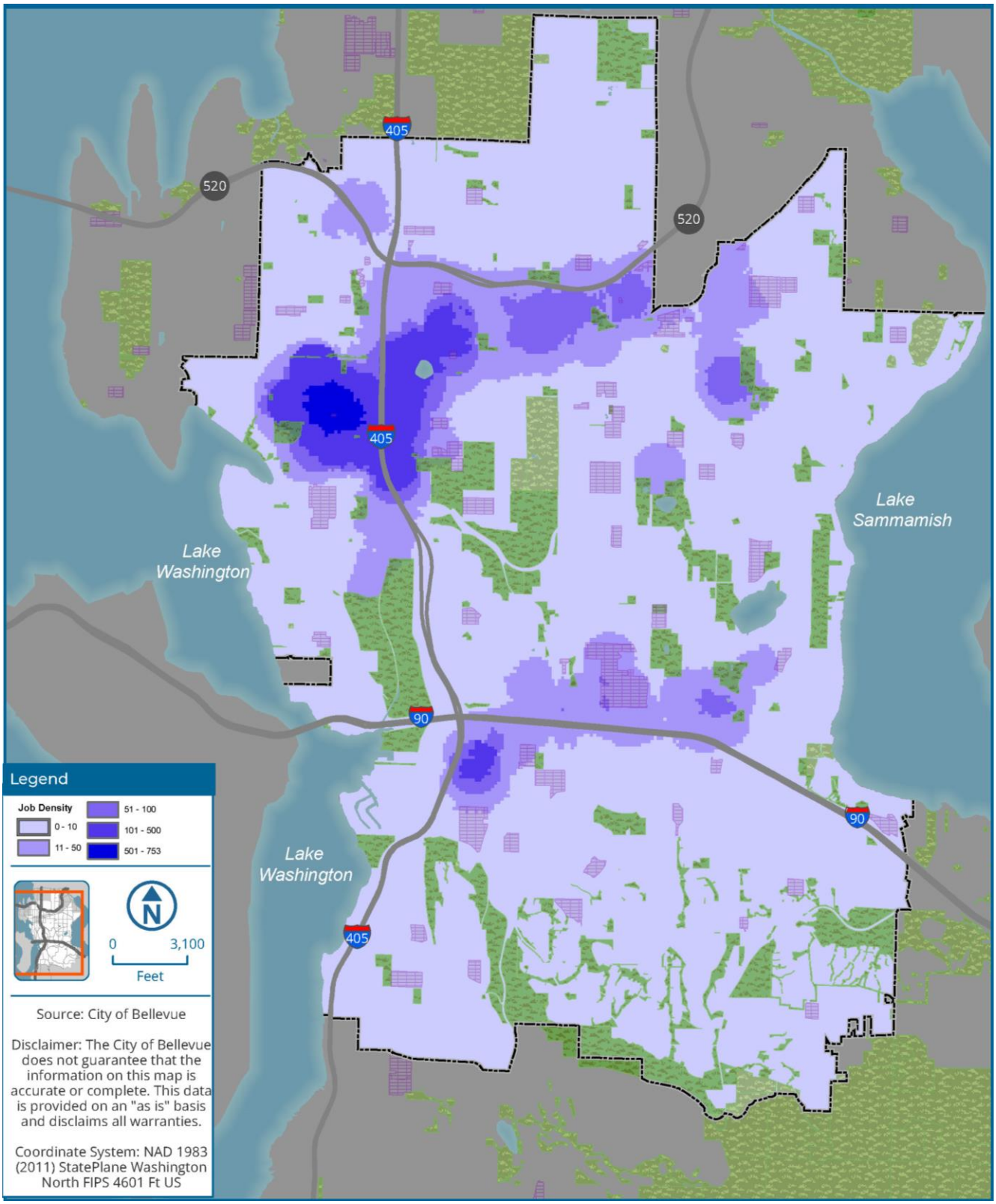
SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Housing and job capacity estimates are rounded to the nearest 1,000. Commercial square footage capacity is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown.



SOURCE: City of Bellevue 2023

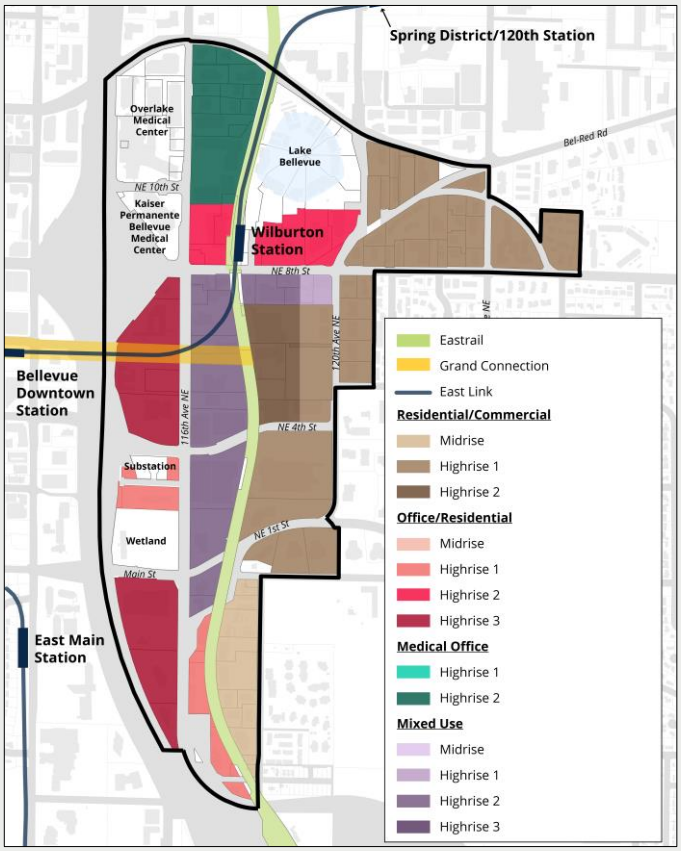
FIGURE 2-6 **Alternative 2 Density of Net Housing Capacity**



SOURCE: City of Bellevue 2023

FIGURE 2-7 **Alternative 2 Density of Net Job Capacity**

TABLE 2-7 **Alternative 2 – Wilburton Study Area**

Growth Level and Pattern	Transportation and Building Form
• Capacity for an additional 14,200 housing units (13,900 above No Action). • Capacity for an additional 38,100 jobs (34,200 above No Action). • Capacity for an additional 12.7 million square feet of commercial development (11.3 million above No Action). **FOCUS OF GROWTH:** Spreads capacity for growth more evenly across the Wilburton study area compared to Alternative 1, with more development intensity in the eastern portion of the study area.  	**TRANSPORTATION:** • NE 6th St extended between I-405 and 116th Ave NE. New multimodal connections create smaller, more walkable blocks throughout the Wilburton study area, but with a greater emphasis in the mixed use node. **LAND USE MIX:** • More residential use and less area for office use compared to Alternative 1. • Primarily office uses along the west side of 116th Ave NE and north of NE 8th St. • Primarily residential uses east of Eastrail. • Primarily mix of residential, office, and other commercial uses between 116th Ave NE and Eastrail. • Like Alternative 1, designates the area north of NE 8th St and east of 116th NE primarily for medical uses. **DEVELOPMENT INTENSITY:** • Compared to Alternative 1, building heights are increased up to around 16 stories along the east edge of the study area north of SE 1st St and east of Eastrail. • Compared to Alternative 1, building heights are increased up to around 25 stories along the northwest edge of the study area adjacent to Overlake Medical Center. • Compared to Alternative 1, building heights are increased up to around 45 stories along the southwest edge of the study area adjacent to I-405 and East Main. **HOUSING TYPOLOGIES AND LOCATIONS:** • Residential high-rise buildings ranging from 16 to 25 stories between 116th Ave NE, NE 8th St, 120th Ave NE, and SE 1st St. • Residential high-rise buildings ranging from 10 to16 stories along the eastern edge of the study area. • More residential high-rise buildings up to around 45 stories adjacent to I-405 compared to Alternative 1.

SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Housing and job capacity estimates are rounded to the nearest 100. Commercial square footage capacity is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown. See Chapter 3, *Land Use Patterns and Urban Form*, for a full description of each land use development type, including building types and heights.

2.3.7 Alternative 3: Providing Options throughout the City

Major Employment Centers

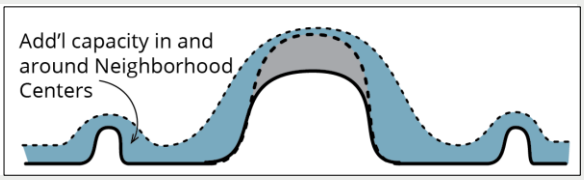
Major employment centers are large commercial areas where most of Bellevue's jobs exist today. These include Downtown and East Main, the commercial parts of BelRed, Wilburton, Crossroads, Factoria, and Eastgate.

Alternative 3 Providing Options throughout the City: Alternative 3 would focus growth **citywide** in Mixed Use Centers and in areas of high opportunity (good access to transit/jobs or near Neighborhood Centers). Similar to Alternative 2, high- and mid-rise residential buildings with studios and one-bedrooms would be allowed in Mixed Use Centers, and existing multi-family areas would allow a broader array of housing typologies at higher densities. Alternative 3 includes additional capacity for 3- to 5-story residential and mixed use buildings in and within walking distance of Neighborhood Centers. Housing types like townhomes or small residential buildings would be allowed in areas with good transit access and around Neighborhood Centers. Duplexes, triplexes, cottage housing, or other low-density typologies would be permitted across the city. Small residential buildings (2 or 3 stories) and similar scale residential buildings would also be allowed close to major employment centers like Downtown. Development intensities within BelRed nodes would be increased. Residential use would also be expanded to more areas in BelRed, and additional density would be allowed within the city's existing lowest density areas.

Alternative 3 would have capacity for 95,000 additional housing units (54,000 above the No Action Alternative, and 60,000 above the CPP housing target) and space for an additional 200,000 jobs (76,000 above the No Action Alternative and 130,000 above the CPP job target). See **Table 2-8** and **Figure 2-8** and **Figure 2-9** for the density of citywide net housing and job capacity under Alternative 3.

Under Alternative 3, the **Wilburton study area** would focus capacity in the core of the study area like Alternative 1, as well as in mixed use nodes throughout the study area. Alternative 3 would allow for a mix of mid-rise to high-rise residential, office, and other commercial uses across the study area. Primarily mid-rise residential development would be allowed east of 124th Avenue NE and along 118th Avenue SE, and high-rise residential development would be allowed around Lake Bellevue and along NE 1st Street Compared to Alternatives 1 and 2, Alternative 3 designates a smaller area for primarily medical uses north of NE 8th Street and east of 116th Avenue NE. Transportation investments would be the same as Alternatives 1 and 2, but with the extension of NE 6th Street studied to both 116th Avenue NE and 120th Avenue NE.

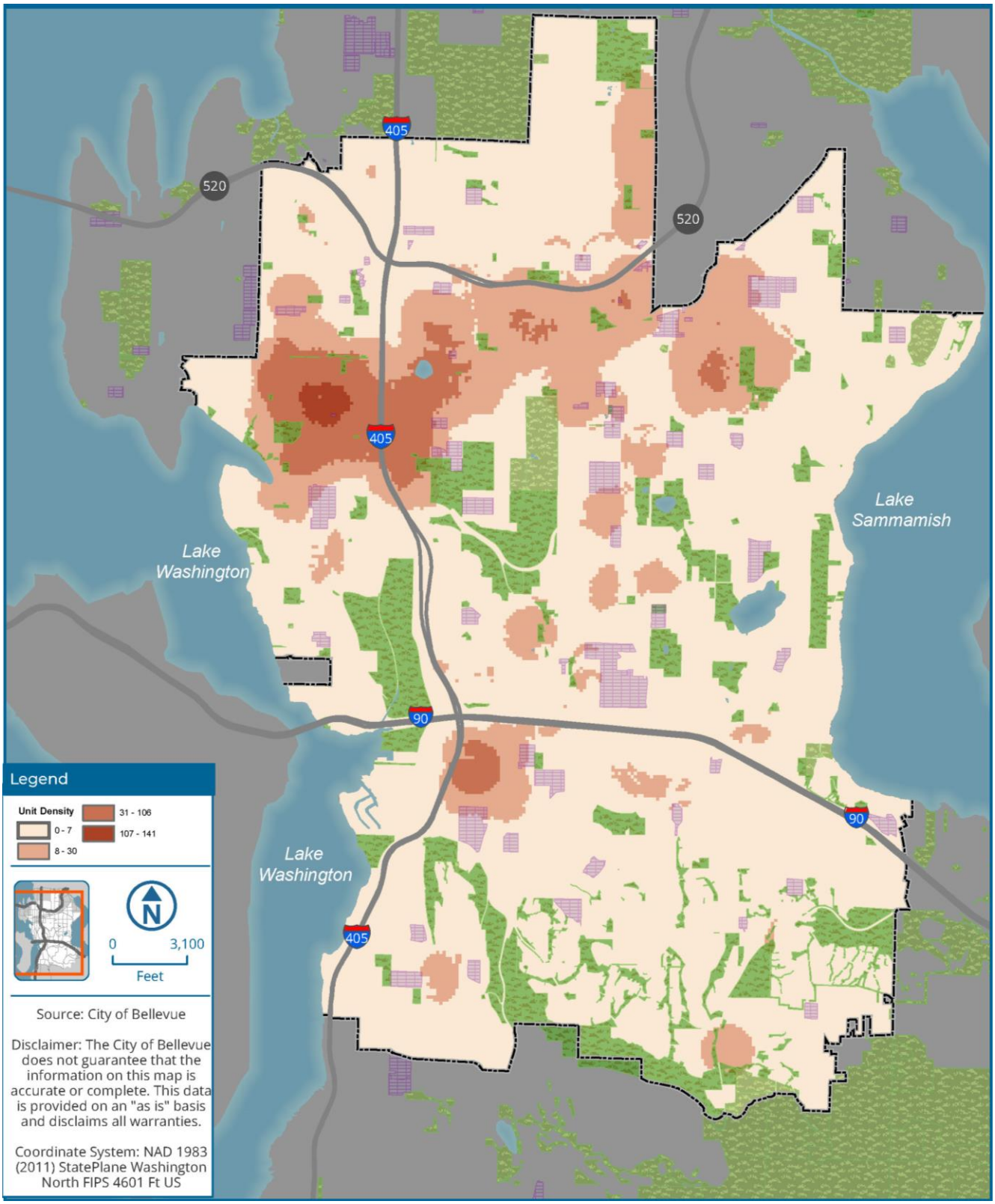
TABLE 2-8 **Alternative 3 Distribution of Growth and Summary of Housing Strategy**

Growth Level and Pattern	Housing
• Capacity for an additional 95,000 housing units (54,000 above No Action). • Capacity for an additional 200,000 jobs (76,000 above No Action). • Capacity for an additional 67.3 million square feet of commercial development. **FOCUS OF GROWTH:** In Mixed Use Centers, in areas of high opportunity (good access to transit/jobs or near Neighborhood Centers).  	**HOUSING TYPOLOGIES:** Typologies such as townhomes or small residential buildings in areas with good transit access and around Neighborhood Centers; duplexes or other low-density typologies permitted across the city. Larger residential buildings with studios and one-bedrooms in Mixed Use Centers. **HOUSING AFFORDABILITY:** Mandatory inclusionary affordability alongside additional capacity in Mixed Use Centers; increased incentives elsewhere to meet affordability targets. **HOUSING STRATEGY:** In addition to the growth concepts in Alternative 2 adding housing in Mixed Use Centers, in areas with good access to transit or jobs, and on larger sites across the city, expand housing capacity **in and near Neighborhood Centers** (commercial areas within predominantly residential areas of the city). This alternative also encourages the **creation of new Neighborhood Centers** in areas that currently lack access to essential services within a short distance. This density could extend farther along and near the transit-rich arterials running through these areas as well. Similar to Alternative 2, this alternative would also include more extensive multimodal transportation investments in these areas of higher proposed densities. This alternative focuses on equitably allowing **middle-scale housing** in areas of high opportunity across the city. A large variety of middle-scale types would focus on areas of high demand, while a smaller variety is available across the rest of the city. The variety of housing produced above would provide middle-income housing (80–120% AMI), but **deeper affordability** would still be required to achieve a majority of new units that are affordable <80% AMI. A mandatory inclusionary affordability program is included in Mixed Use Centers, while voluntary affordability incentives are expanded throughout the city.

SOURCE: City of Bellevue 2023; BERK 2023

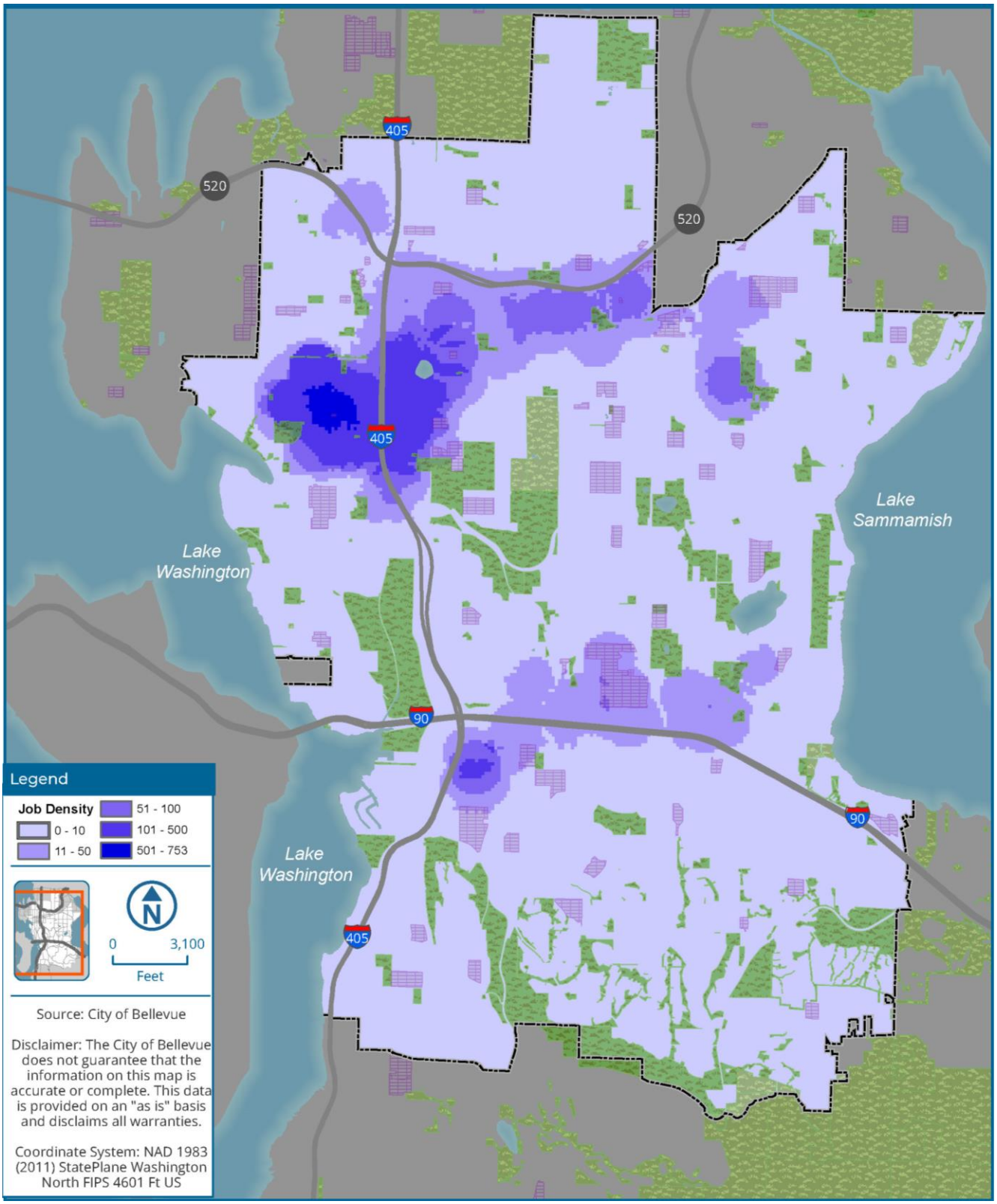
NOTES: Housing and job capacity estimates are rounded to the nearest 1,000. Commercial square footage capacity is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown.

Alternative 3 would have capacity for an additional 15.5 million square feet of commercial development in the Wilburton study area and would include an additional 14,300 housing units and space for an additional 44,500 jobs. This represents 9 percent of the gross citywide housing capacity and 16 percent of the gross citywide job capacity (similar to Alternative 2) and is the highest combined amount of future capacity among the three Action Alternatives. See **Table 2-9**.



SOURCE: City of Bellevue 2023

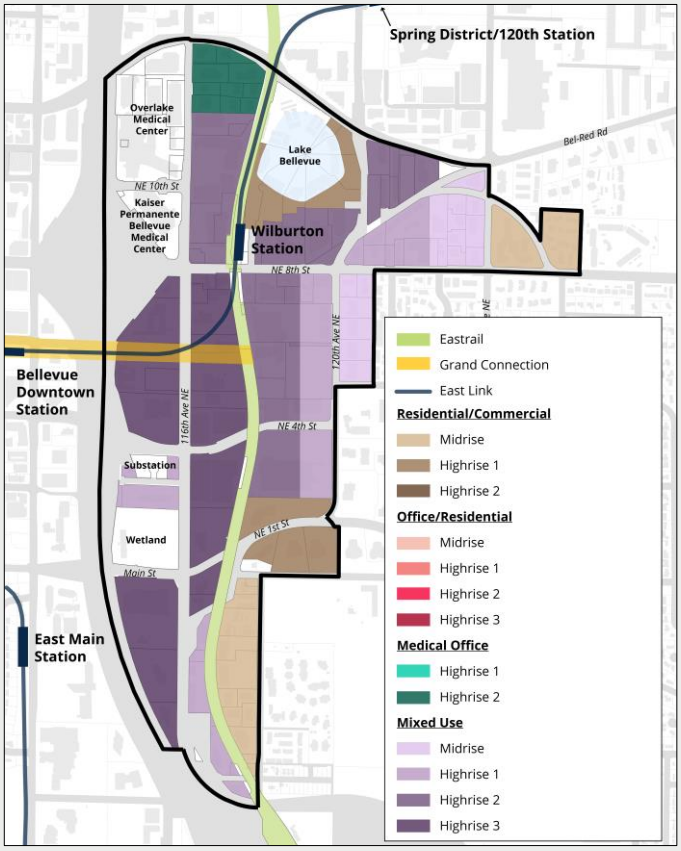
FIGURE 2-8 **Alternative 3 Density of Net Housing Capacity**



SOURCE: City of Bellevue 2023

FIGURE 2-9 **Alternative 3 Density of Net Job Capacity**

TABLE 2-9 **Alternative 3 – Wilburton Study Area**

Growth Level and Pattern	Transportation and Building Form
• Capacity for an additional 14,300 housing units (14,000 above No Action). • Capacity for an additional 44,500 jobs (40,600 above No Action). • Capacity for an additional 15.5 million square feet of commercial development (14.1 million above No Action). **FOCUS OF GROWTH:** In the core of the study area (same as Alternative 1) as well as in several mixed use nodes located throughout the Wilburton study area. Additional capacity to parcels around Lake Bellevue.  	**TRANSPORTATION:** • Studies NE 6th St extension from I-405 to both 116th Ave NE 120th Ave NE, with an at-grade intersection at 116th Ave NE. New multimodal connections create smaller, more walkable blocks throughout the Wilburton study area, but with a greater emphasis in the mixed use node. **LAND USE MIX:** • Mix of residential, office, and commercial uses across most of the study area. • Primarily residential uses east of 124th Ave NE, along Lake Bellevue, and along 118th Ave NE and NE 1st St. • Compared to Alternatives 1 and 2, smaller area for primarily medical uses north of NE 8th St and east of 116th Ave NE. **DEVELOPMENT INTENSITY:** • Compared to Alternative 1, building heights are increased up to around 25 stories along both sides of 120th Ave NE north of NE 8th St heading toward Spring District. • Similar to Alternative 2, building heights are increased up to around 25 stories along the northwest edge of the study area. • Similar to Alternative 2, building heights are increased up to around 45 stories along the southwest edge of the study area adjacent to I-405 and East Main. • Compared to Alternatives 1 and 2, building heights are increased up to around 45 stories between 116th Ave NE, NE 8th St, Eastrail, and NE 1st St. **HOUSING TYPOLOGIES AND LOCATIONS:** • Residential buildings throughout the study area except for the Medical Office area along 116th Ave NE, ranging from up to around 45 stories adjacent to I-405 to up to around 10 stories toward the eastern edge of the study area. • Residential high-rise buildings up to around 16 stories around Lake Bellevue. • Adding to Alternatives 1 and 2, includes residential high-rise buildings up to around 45 stories between 116th Ave NE, NE 8th St, Eastrail, and SE 1st St.

SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Housing and job capacity estimates are rounded to the nearest 100. Commercial square footage capacity is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown. See Chapter 3, *Land Use Patterns and Urban Form*, for a full description of each land use development type, including building types and heights.

2.3.8 Comparison of Alternatives

Table 2-10 and **Table 2-11** summarize the distribution of net housing and job capacity citywide and in the Wilburton study area.

TABLE 2-10 **Distribution of Net Housing and Job Capacity by Alternative, Citywide**

Location	Alternative 0 (No Action)		Alternative 1		Alternative 2		Alternative 3	
	Housing	Jobs	Housing	Jobs	Housing	Jobs	Housing	Jobs
Citywide	**41,000**	**124,000**	**59,000**	**179,000**	**77,000**	**177,000**	**95,000**	**200,000**
Mixed Use Centers	31,500	119,500	45,900	171,200	52,600	168,500	60,900	184,500
Neighborhood Centers	100	2,900	100	2,800	1,600	3,800	1,700	3,800
Transit-Proximate Areas	17,900	85,300	26,300	123,100	34,100	124,00	36,800	133,000
Low-Density Residential	3,700	(200)	4,500	(200)	7,100	(200)	14,600	(200)

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Growth estimates are rounded to the nearest 1,000 citywide and 100 for geographic subareas. The actual pace of growth could differ or be less than what is shown.

TABLE 2-11 **Distribution of Net Housing and Job Capacity by Alternative, Wilburton Study Area**

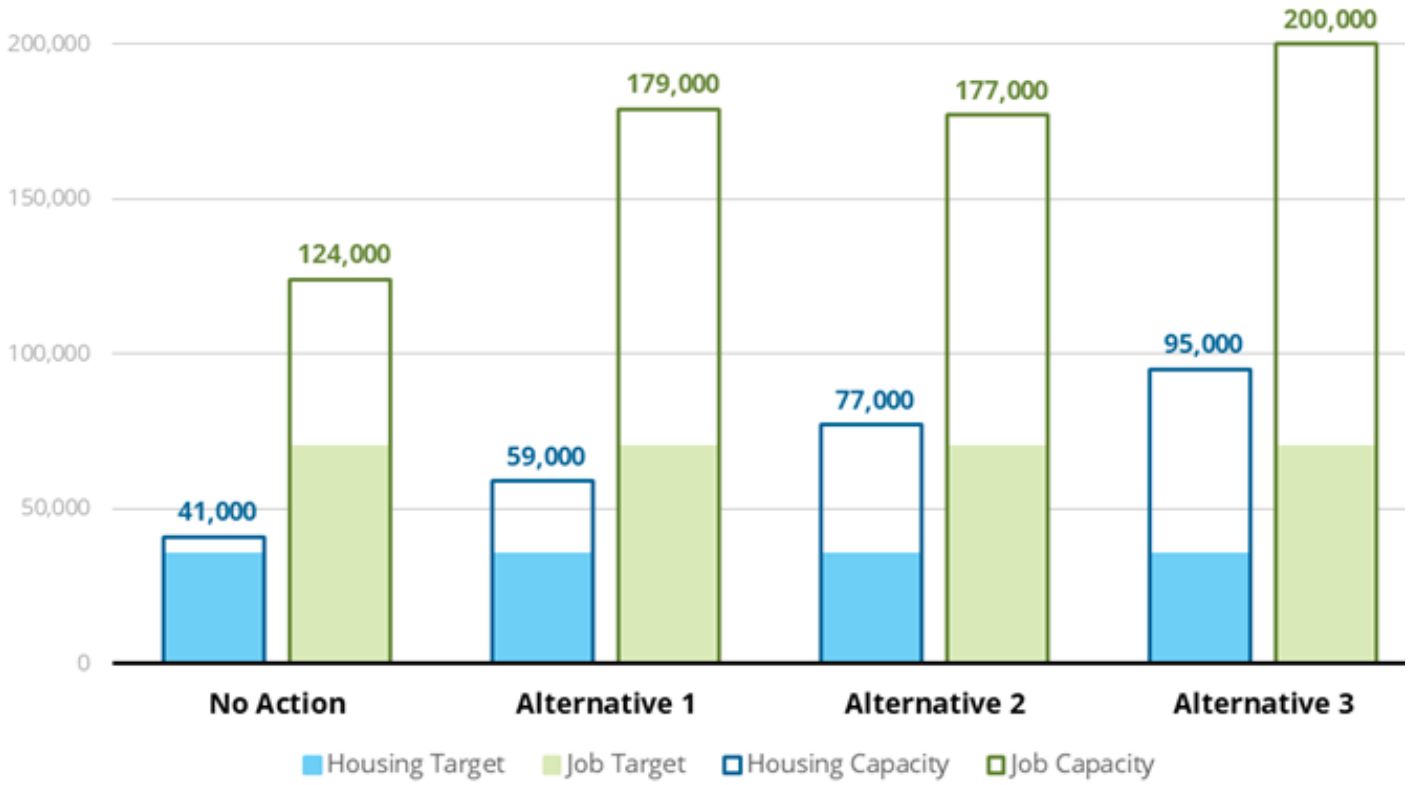
Location	Alternative 0 (No Action)		Alternative 1		Alternative 2		Alternative 3	
	Housing	Jobs	Housing	Jobs	Housing	Jobs	Housing	Jobs
Wilburton Study Area	300	3,900	9,200	44,800	14,200	38,100	14,300	44,500

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Growth estimates are rounded to the nearest 100. The actual pace of growth could differ or be less than what is shown.

Note that the four geographic categories listed in Table 2-10 represent various subsets of the citywide total—these are not all mutually exclusive and thus do not sum to the citywide total.

Figure 2-10 compares citywide capacity for new housing and jobs under each alternative to the adopted targets, and **Table 2-12** summarizes features of the alternatives studied in this EIS.



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Growth estimates are rounded to the nearest 1,000. The actual pace of growth could differ or be less than what is shown. Housing and job capacity used in this EIS analysis is higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report (see Section 2.3.4 above).

FIGURE 2-10 **Net Housing and Job Capacity Citywide vs. Adopted Targets (2019–2044), All Alternatives**

TABLE 2-12 **Comparison of Citywide Alternative Features**

Feature	Alternative 0 (No Action)	Alternative 1	Alternative 2	Alternative 3
Theme	Current plan	Focus growth in centers with gentle growth across the city	Focus growth in centers and in areas with good access to jobs and transportation with gentle density across the city	Focus growth in and around Mixed Use and Neighborhood Centers and in areas of high opportunity with gentle density across the city
Growth Pattern	Downtown, BelRed, and East Main	Centers: Downtown, BelRed, Wilburton/ East Main, Eastgate, Factoria, Crossroads Other: Gentle density throughout	Mixed Use Centers, Neighborhood Centers, and areas with good access to transit/jobs Other: Gentle density throughout	Mixed Use Centers, in and around Neighborhood Centers, areas with good access to transit/jobs and in areas of high opportunity (close to major employment centers)
Housing Types	Residential buildings with studios, 1-bed	Residential buildings in Mixed Use Centers with units ranging from 0 to 2 or 3 bedrooms Duplexes, townhomes, and similar types across city	Residential buildings with studios, 1-bed in Mixed Use and Neighborhood Centers Duplexes to small residential buildings in areas with access to transit/jobs Duplexes on larger lots	Residential buildings with studios, 1-bed in Mixed Use Centers Duplexes to small residential buildings in areas of high opportunity and near Neighborhood Centers Duplexes on larger lots Additional density allowed in existing lowest density areas
Housing Affordability	Less than 10%	Mandatory inclusionary affordability in growth corridor Increased incentives elsewhere	Tiered incentives in Mixed Use and Neighborhood Centers Increased incentives across city	Mandatory inclusionary affordability in Mixed Use Centers Increased incentives across the city
Transportation Investments	Current	NE 6th St extended between I-405 and 116th Ave NE. New multimodal connections that create smaller, more walkable blocks throughout the Wilburton study area, but with a greater emphasis in the mixed use node.	Same as Alternative 1	Same as Alternative 1 except NE 6th St extended between I-405 and 120th Ave NE
Plan Policies	Current	Updated	Updated	Updated
Code	Current	Updated	Updated	Updated

SOURCE: City of Bellevue 2023; BERK 2023

INTENTIONALLY BLANK

CHAPTER 3 Land Use Patterns and Urban Form

3.1 Introduction

This chapter summarizes the affected environment—including current land use plan and policy framework and current land and shoreline uses—and compares impacts of the alternatives on land and shoreline use in the city. The analysis focuses on land use patterns and implications for land use compatibility, displacement of current uses, and access to community assets under each alternative. See Chapter 4, *Relationship to Plans and Policies*, for an analysis of compatibility with land use plans and policies and Chapter 6, *Aesthetics*, for an analysis of neighborhood character, physical form (height, bulk, and scale), viewsheds, shadows, and light and glare focusing on the Wilburton study area. See Appendix B for Land Use Patterns and Urban Form Appendix and Land Use Category Maps.

3.2 Affected Environment

This section addresses land use patterns and development character in the City of Bellevue and provides a baseline for analyzing the impacts of land use and development of the four alternative growth scenarios. Alternative 0 (No Action) is the baseline for the analysis. The review is conducted on a citywide scale and for several smaller geographies within the city—including Mixed Use Centers, Neighborhood Centers, transit-proximate areas, and the Wilburton study area. Note that the Mixed Use and Neighborhood Centers are mutually exclusive geographic areas, while the transit-proximate

areas and Wilburton study area overlap with the boundaries of the Mixed Use and Neighborhood Centers.

The analysis relies on geospatial information provided by the City of Bellevue, such as assessor tax parcel information including present use codes, and comprehensive plan land use and zoning maps.

3.2.1 Current Policy and Regulatory Framework

The current policy and regulatory framework regulating land use in the City of Bellevue flows from the State of Washington Growth Management Act (GMA), the Puget Sound Regional Council's (PSRC's) Multi-County Planning Policies (MPPs), King County's County-Wide Planning Policies (CPPs), the city's current Comprehensive Plan, and implementation actions including development standards in the Land Use Code (Title 20 of the Bellevue City Code [BCC]) and the Shoreline Master Program (SMP). Several other regulatory measures affect land use including localized overlay districts and design guidelines.

This section describes the current Comprehensive Plan land use and zoning framework (including overlay districts) and current land use conditions. State, regional, and local land use policies are reviewed and evaluated in Chapter 4, *Relationship to Plans and Policies*.

COMPREHENSIVE PLAN LAND USE AND ZONING FRAMEWORK

The City of Bellevue's Comprehensive Plan Land Use Map is part of the Comprehensive Plan and expresses graphically the 20-year vision of preferred land use patterns to guide development within the city. Mixed use and often neighborhood-specific designations are applied in major mixed use employment and residential areas of the city such as Downtown, BelRed, Eastgate, and East Main. Comprehensive Plan land use designations in other areas of the city are generalized into residential (single-family or multi-family) or retail, office, industrial, medical, or camp and conference designations meant to suggest specific uses.

The Comprehensive Plan land use designations are implemented by a corresponding range of zoning districts and development regulations established in the Land Use Code. There may be different levels of zoning within each land use area that provide more detail about what can be built. Property within an overlay district is subject both to its zone classification regulations and to additional requirements

imposed for the overlay district. The overlay district provisions apply if they conflict with the provisions of the underlying zone. **Table 3-1** summarizes the land use designations and corresponding implementing zones. Specific zones and overlay districts are described under the *Bellevue City Code* section that follows.

TABLE 3-1 **Generalized Comprehensive Plan Land Use Designations and Implementing Zones**

Generalized Comprehensive Plan Land Use Designation	Implementing Zones
RESIDENTIAL	
Single Family Single-family districts provide for low- and moderate-density residential areas. Low-density residential areas may serve to protect steep slopes or unstable land from overdevelopment and may include agricultural uses and activities compatible with low residential density. Medium-, high-, and urban-residential-density areas provide for areas of low to moderate densities and permit compatible related activities.	• Single Family Low Density: R-1, R-1.8 • Single Family Medium Density: R-2.5, R-3.5 • Single Family High Density: R-4, R-5 • Single Family Urban Residential: R-7.5
Multi Family Multi-family residential districts provide areas for attached residential dwellings of low density (10 units per acre) and moderate density (15, 20, and 30 units per acre). The R-10 and R-15 Districts are more restrictive and may be utilized as a buffer between Suburban Residential Districts and moderate-density residential or commercial districts. The R-20 and R-30 Districts are intended to be convenient to centers of employment and have primary access to arterial streets.	• Multifamily Low Density: R-10 • Multifamily Medium Density: R-15, R-20 • Multifamily High Density: R-30
RETAIL, OFFICE, AND INDUSTRIAL	
Retail Retail districts provide for a range of small-scale, mixed use commercial areas that provide housing opportunities and retail and service businesses for the surrounding residential community as well as larger regional business activities that provide goods and services to other businesses and the general public.	• NB • CB • GC
Office Office districts provide areas for business, financial, and professional service offices. Areas zoned for low-intensity office may act as a buffer between residential and more intensively developed office or commercial properties. Larger office districts are typically in proximity to other major business and commercial districts. Office districts zoned for integrated complexes made up of offices, hotels or motels, eating establishments, and retail sales accessory to permitted uses typically have convenient access to freeways and major highways.	• O • OLB • OLB 2 • OLB-OS • PO
Light Industrial Light industrial districts provide for the location of a broad array of activities, including manufacturing, wholesale trade, and distribution activities. Offices are discouraged unless they support the primary functions of the district. Sales of goods and services are subordinate to permitted activities, and sales of bulky or large-scale items are appropriate, except for auto sales and rentals, which are appropriate only in certain locations.	• LI

Generalized Comprehensive Plan Land Use Designation	Implementing Zones
MIXED USE	
Mixed Use Mixed use areas provide for a mix of retail, service, office, and residential uses. Neighborhood mixed use areas emphasize retail and service uses that are compatible with surrounding neighborhoods and easily accessible from nearby office and/or residential uses. Specific zoning designations in larger mixed use areas—like Downtown or BelRed—or areas designated for transit-oriented development (TOD)—like Eastgate and East Main—may emphasize a certain mix of uses but generally allow and encourage various complementary uses. For example, the purpose of the Downtown-OLB Zone is to provide an area for integrated complexes made up of office, residential, and hotel uses, with eating establishments and retail sales secondary to these primary uses. Downtown is further subdivided into seven neighborhoods: Northwest Village, City Center North, Ashwood, Eastside Center, Old Bellevue, City Center South, and East Main. These neighborhoods create a series of distinct, mixed use areas within Downtown that reinforce their locational assets and unique identities and are a key organizing principle to implement the Great Place Strategy of the Downtown Subarea Plan. BelRed is a major mixed use employment and residential area characterized by a transit-oriented, nodal development pattern. The subarea promotes a mix of employment, retail, and residential opportunities with more intense uses and greater heights concentrated in designated nodal development areas along the NE Spring Boulevard corridor that will be served by high-capacity transit. The East Main and Eastgate TOD areas provide for a mix of housing, retail, office, and service uses near planned light rail service. The highest intensity uses in East Main are planned closest to the station with lower intensity uses closer to Mercer Slough and the associated wetlands. Eastgate plans for a mix of uses but emphasizes housing.	• NMU • Downtown: DT-O-1, DT-O-2, DT-MU, DT-R, DT-OB, and DT-OLB • BelRed: BR-MO, BR-MO-1, BR-OR, BR-OR-1, BR-OR-2, BR-RC-1, BR-RC-2, BR-RC-3, BR-CR, BR-R, BR-GC, and BR-ORT • Eastgate TOD: EG-TOD, OLB/EG-TOD • East Main TOD: EM-TOD-H and EM-TOD-L
OTHER	
Medical Medical districts provides for the location of hospital uses and ancillary uses to the primary hospital use located on the same site or on sites in close proximity. The purpose is to encourage comprehensive, long-term master development planning and to allow flexible dimensional standards to facilitate the development of major medical institutions and provision of the vital public services offered by these institutions.	• MI
Camp and Conference Center Camp and Conference Center districts provide areas for a unified mix of group day or residence camps and professional, educational, or religious meetings, conferences, seminars, and retreats and their associated facilities and activities. These are used primarily by organizations and schools and the families and individuals they enroll. The purpose of the designation is to maintain the compatibility of this unique mix of uses with surrounding neighborhoods by limiting the overall intensity of the site and protect lower intensity uses from the effects of higher intensity uses.	• CCC

SOURCE: BelRed Subarea Plan 2010; Eastgate Subarea Plan and Amendments 2017; East Main Station Area Plan 2016; Downtown Subarea Plan 2022; Ordinance 6670 Adopted July 18, 2022; Land Use Code 2022; BERK 2023

NOTE: BCC Chapter 20.10 was recently amended by Ordinance 6670, codified in September 2022.

BELLEVUE CITY CODE

As described above, Comprehensive Plan land use designations are implemented by a corresponding range of zoning districts and development regulations established in the Land Use Code. **Table 3-2** summarizes the generalized zoning categories and overlay districts detailed in the BCC.

TABLE 3-2 **Generalized Zoning Categories and Overlay Districts**

Generalized Categories	Zones
Single Family	• Single Family Low (SF-L) Density (R-1 and R-1.8) • Single Family Medium (SF-M) Density (R-2.5 and R-3.5) • Single Family High Density (R-4 and R-5) • Single Family Urban Residential (R-7.5) • Camp and Conference Center (CCC)
Multifamily	• Multifamily Low Density (R-10) • Multifamily Medium Density (R-15 and R-20) • Multifamily High Density (R-30) • Neighborhood Specific: – Downtown-Residential (DT-R) – BelRed-Residential (BR-R) – BelRed-Residential/Commercial Node 1 (BR-RC-1) – BelRed-Residential/Commercial Node 2 (BR-RC-2) – BelRed-Residential/Commercial Node 3 (BR-RC-3) – Eastgate Transit-Oriented Development (EG-TOD)
Office	• Office (O) • Office and Limited Business (OLB) • Office and Limited Business District 2 (OLB 2) • Office and Limited Business-Open Space (OLB-OS) • Professional Office (PO) • Neighborhood Specific: – Downtown-Office 1 (DT-O-1) – Downtown-Office 2 (DT-O-2) – Downtown-Office and Limited Business (DT-OLB) – BelRed-Medical Office (BR-MO) – BelRed-Medical Office Node (BR-MO-1) – BelRed-Office/Residential (BR-OR) – BelRed-Office/Residential Node 1 (BR-OR-1) – BelRed-Office/Residential Node 2 (BR-OR-2) – BelRed-Office/Residential Transition (BR-ORT)

Generalized Categories	Zones
	– East Main TOD Higher Density (EM-TOD-H) – East Main TOD Lower Density (EM-TOD-L) – Factoria 2 (F2) – Factoria 3 (F3)
Commercial	• Community Business (CB) • General Commercial (GC) • Neighborhood Business (NB) • Neighborhood Mixed Use District (NMU) • Neighborhood Specific: – Downtown-Mixed Use (DT-MU) – Downtown-Old Bellevue (DT-OB) – BelRed-Commercial/Residential (BR-CR) – BelRed-General Commercial (BR-GC) – Factoria 1 (F1)
Industrial	• Light Industrial (LI)
Evergreen Highlands	• Evergreen Highlands Design District (EH)
Medical Institution	• Medical Institution (MI)
Overlay Districts	• Shoreline Overlay District • Critical Areas Overlay District • Downtown Perimeter Overlays (A-1, A-2, A-3, B-1, B-2, and B-3) • Transition Area Design District • Evergreen Highlands Performance Areas (EH-A, EH-B, EH-C, and EH-D) • Evergreen Highlands Subarea Transportation Improvement Overlay District • Light Rail Overlay District • Medical Institution District Development Areas (DA1, DA2, and DA3)

SOURCE: Ordinance 6670 Adopted July 18, 2022; Bellevue Map Viewer 2023; Land Use Code 2022; BERK 2023

NOTES: BCC Chapter 20.10 was recently amended by Ordinance 6670, codified in September 2022. Additional elements of the Land Use Code specific to urban form are discussed in Chapter 6, *Aesthetics* (such as design guidelines).

SHORELINES AND CRITICAL AREAS

Designated shorelines and critical areas overlay the primary Comprehensive Plan land use designations and zoning regulations. Critical areas designations include streams and riparian areas, wetlands, habitats for species of local importance, geological hazard areas, flood hazard areas, and shorelines. See Chapter 4, *Relationship to Plans and Policies*, for more information about the Shoreline Master Program and the purpose of each environment designation.

3.2.2 Current Conditions

This section summarizes current land use conditions citywide and by the following geographies: Mixed Use Centers, Neighborhood Centers, transit-proximate areas, and the Wilburton study area (mapped in Figure 3-9, Figure 3-10, Figure 3-11, and Figure 3-13, below). Greater detail is provided in subsequent sections.

CITYWIDE

Current Land Use

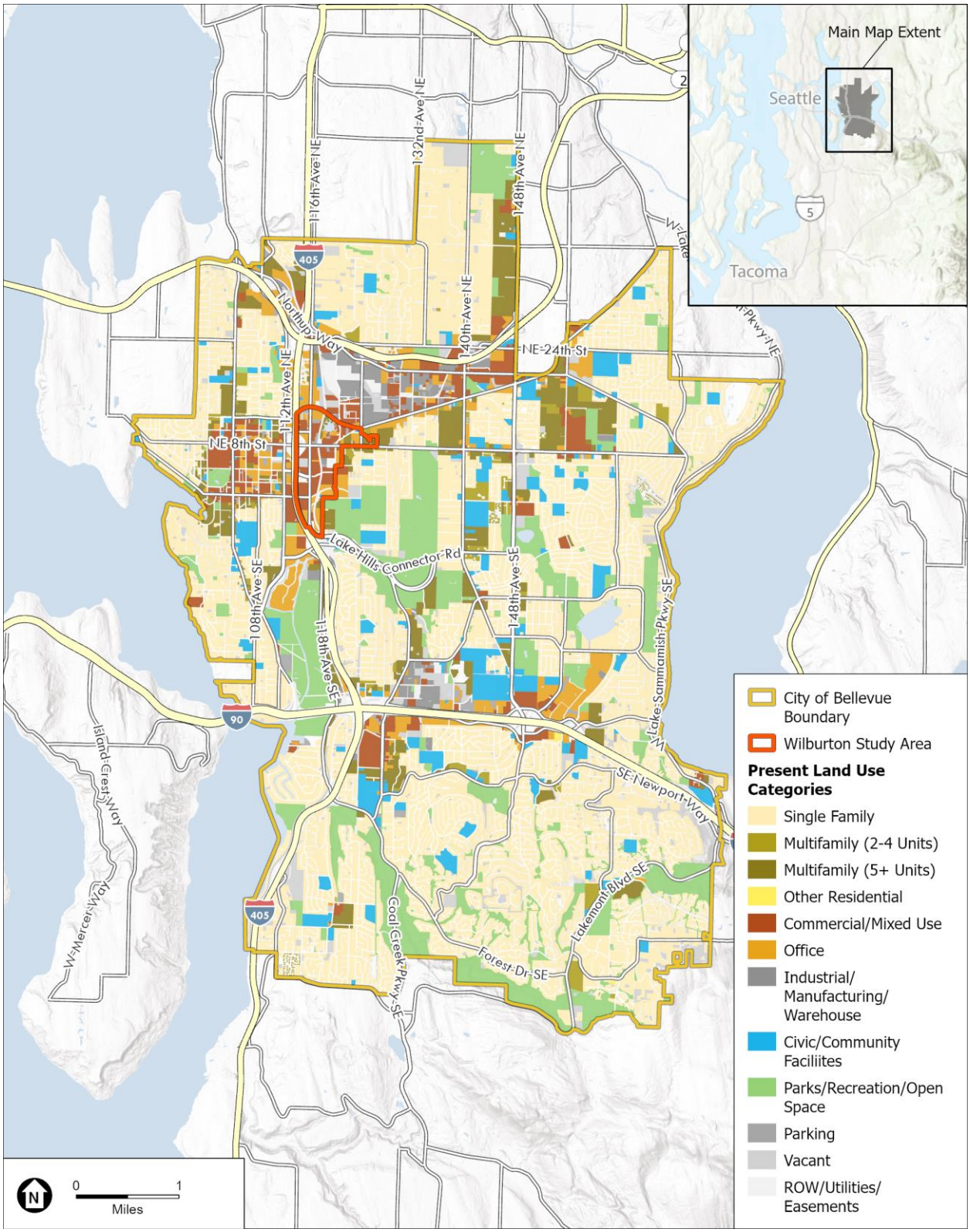
Based on current land use data from the city and King County Assessor, the predominant land use in Bellevue citywide consists of low-density residential. Single-family residential properties account for more than half of the acres citywide (53 percent) and is the dominant land use outside of the Mixed Use and Neighborhood Centers. Multi-family development is mostly concentrated within or adjacent to the Mixed Use and Neighborhood Centers, with an additional concentration bordering the Microsoft offices in Redmond (on 148th Avenue NE north of SR 520). Multi-family developments with 5 units or more account for approximately 6 percent of citywide land use, while those with 2 to 4 units (duplexes, triplexes, and fourplexes) account for only 1 percent. See **Table 3-3** and **Figure 3-1**.

TABLE 3-3 **Current Land Use, Acres Citywide and by Location**

Current Use Category	Mixed Use Centers	Neighborhood Centers	Transit-Proximate Areas	Wilburton Study Area	Citywide
Single Family	13	15	487	<1	*9,165*
Multifamily (2–4 units)	31	1	34	—	*253*
Multifamily (5+ units)	310	18	353	22	*1,116*
Commercial/Mixed Use	508	104	367	102	*840*
Office	296	127	291	63	*824*
Industrial/Manufacturing/Warehouse	167	11	17	2	*304*
Civic/Community Facilities	123	13	239	1	*942*
Parks/Recreation/Open Space	68	5	183	—	*2,729*
Parking	43	5	51	10	*91*
Vacant	76	42	85	10	*837*
ROW/Utilities/Easements	94	13	45	21	*201*
Total	***1,729***	***354***	***2,151***	***233***	***17,303***

SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

NOTES: Based on the city's parcel and park geographic information system (GIS) layers and current use codes from the King County Assessor (per "KCPresentUse" field codes). Present use codes from the Assessor were assigned a general land use category and checked against the city's park layer. Uncategorized parcels were assigned a present use category based on Google Maps. Does not include all right-of-way (ROW) in the city—only includes ROW associated with a designated parcel per the Assessor.



SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

FIGURE 3-1 **Current Land Use, Citywide**

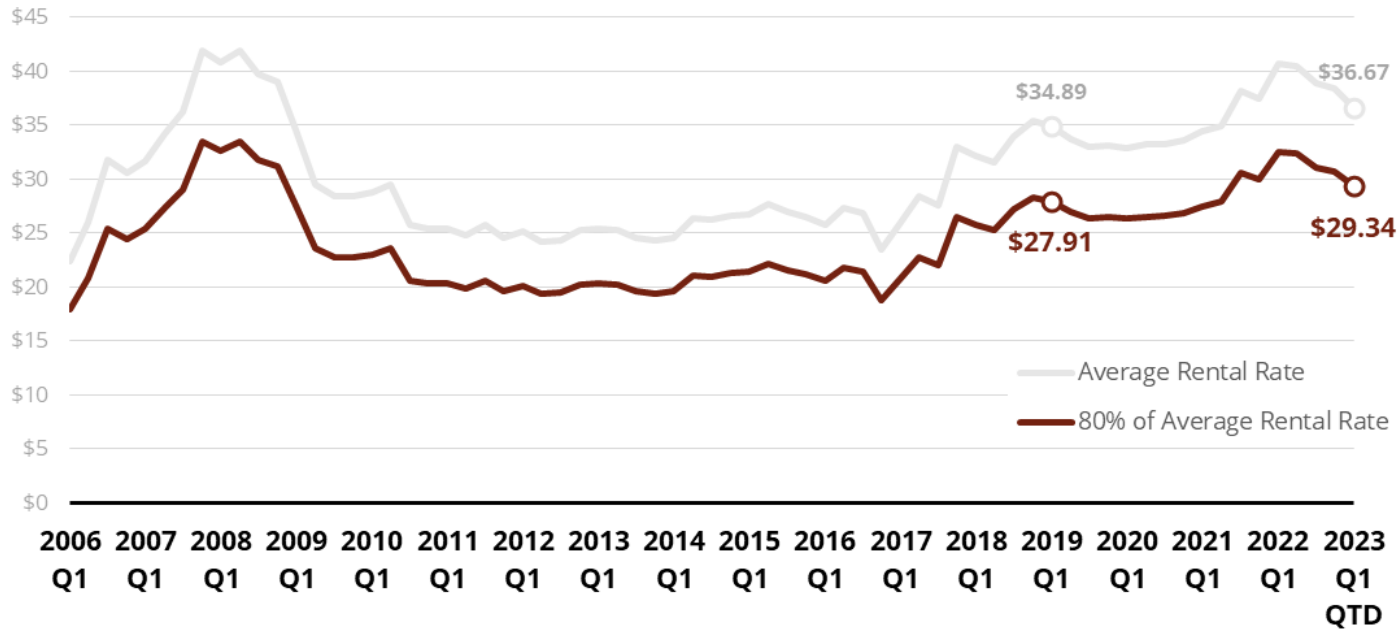
Commercial Use, Rents, and Vacancy

Bellevue is one of two metropolitan job centers in King County and the primary job center for the Eastside. Commercial, mixed use, and office development is primarily clustered in the Mixed Use and Neighborhood Centers. Together, these account for about 10 percent of land uses citywide. Mixed use development is heavily concentrated in Downtown (e.g., Lincoln Square and The Bravern) with some smaller scale mixed use scattered in other centers. Other regional retail and service centers include Bellevue Square in Downtown, the Marketplace at Factoria, and Crossroads Shopping Center. Citywide, there was 50.7 million square feet of commercial space in 2019. Most office buildings are in Downtown and along major transportation corridors such as I-405, I-90, SR 520, and Bel-Red Road.

Average commercial rent as of the first quarter (Q1) of 2019 in Bellevue was $34.89 per square foot. Affordable commercial rent as defined by the city would be 80 percent of the citywide overall rate, or $27.91 as of Q1 2019. Commercial rent has risen slightly since 2019 to a median rate of $36.67 for Q1 2023 year to date (80 percent of this would be $29.34 per square foot). It is important to note that the data reported by CoStar are not a full representation of all the commercial rental rates in Bellevue and tend to focus on larger commercial spaces (often missing smaller retail or office space in mixed use buildings and small-scale neighborhood retail). See **Figure 3-2**.

The commercial real estate market is often cyclical. Rents and vacancy rates can fluctuate over time in response to changes in the economy and other market conditions. Commercial vacancy rates citywide, for example, peaked just below 8 percent during the Great Recession (December 2007 – June 2009)[1] but have since decreased and remained below 3 percent since 2013. Periods with lower vacancy rates in **Figure 3-3** typically map to higher rental rates in Figure 3-2 and vice versa. If commercial vacancy rates are too low, the market is less likely to accommodate additional growth or moves, which could stagnate job growth or exacerbate involuntary commercial displacement as redevelopment occurs.

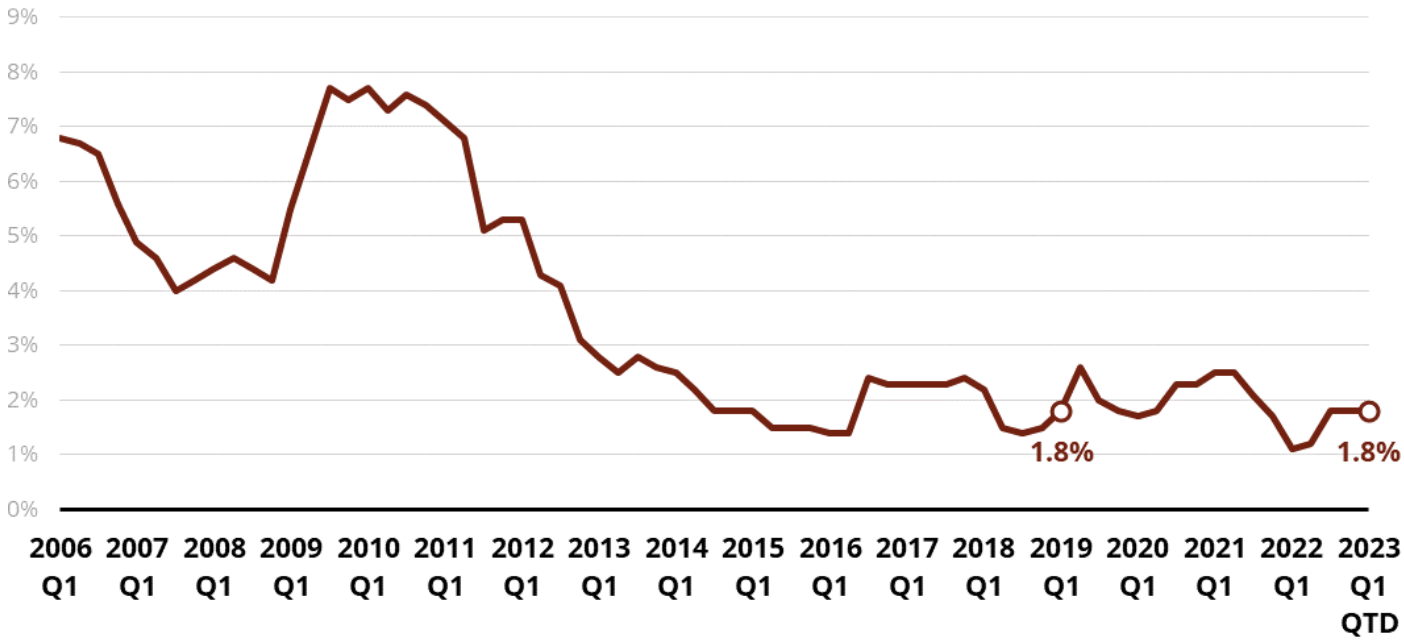
[1] Federal Reserve 2013.



SOURCE: CoStar (triple net rent overall) 2023; BERK 2023

NOTES: Graph represents triple net rent overall as reported by CoStar. Triple net rent is defined as a lease in which a tenant is responsible for all expenses associated with their proportional share of occupancy of the building. CoStar data are not a full representation of all the commercial rental rates in Bellevue and tend to focus on larger commercial spaces (often missing smaller retail or office space in mixed use buildings and small-scale neighborhood retail). The rental rates reported here also do not necessarily represent what tenants are willing to pay to rent new space but rather what tenants are actually paying.

FIGURE 3-2 **Commercial Rental Rates per Square Foot, Q1 2006–Q1 2023 Year to Date**



SOURCE: CoStar 2023; BERK 2023

NOTE: Graph represents total vacancy rates (direct and sublet) as reported by CoStar.

FIGURE 3-3 **Commercial Vacancy Rates, Q1 2006–Q1 2023 Year to Date**

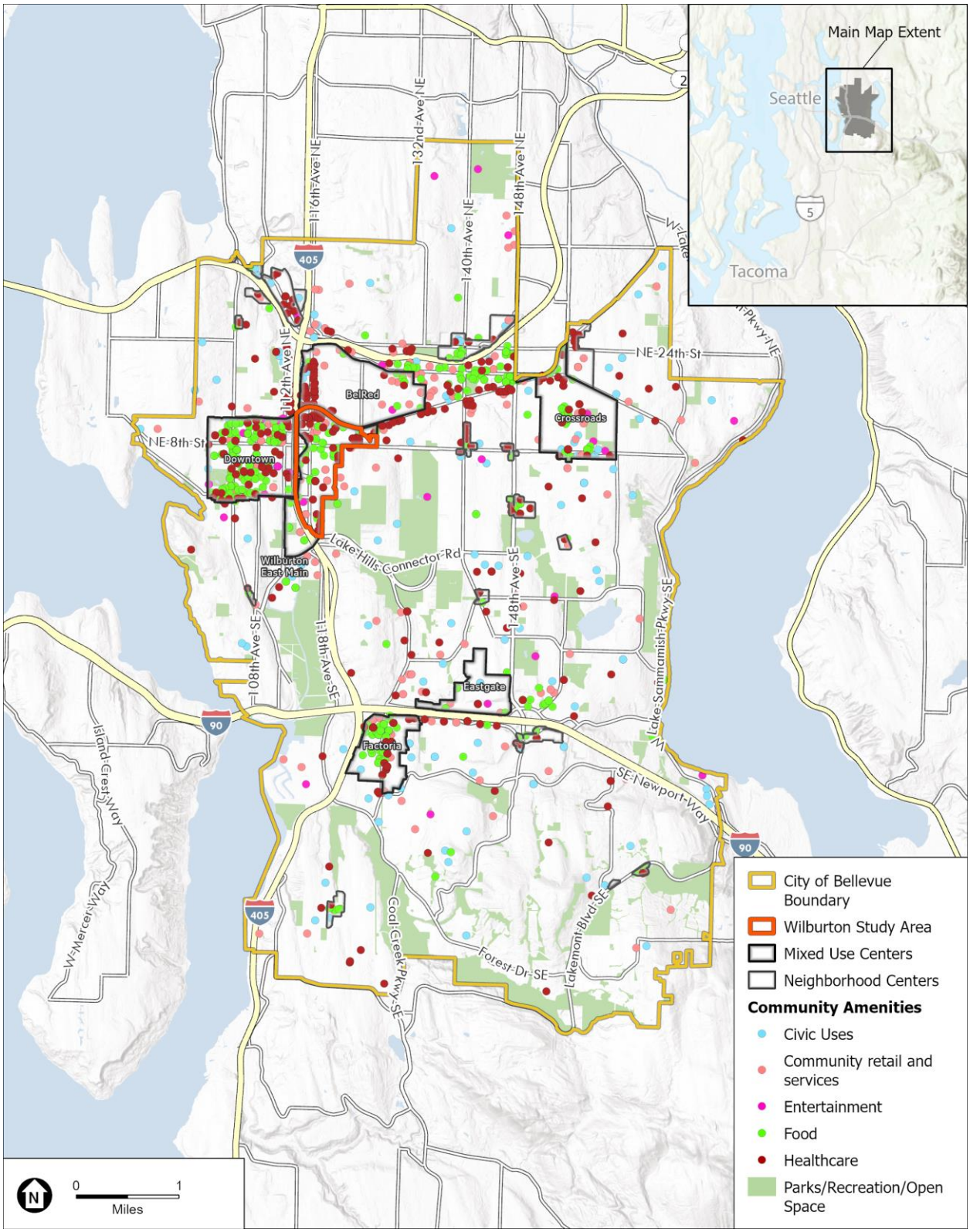
Community Amenities: Recreation and Services

Parks, recreation, and open space account for approximately 16 percent of acres citywide. About half of these are public parks (1,284 acres), including several larger facilities such as Mercer Slough Nature Park, Wilburton Hill Park, Weowna Park, Lewis Creek Park, and Kelsey Creek Park. About 38 percent are considered open space (1,040 acres) woven throughout neighborhoods south of I-90 (e.g., Coal Creek Natural Area and Lakemont Open Space), around the Lake Hills Greenbelt, or in the Woodridge neighborhood. The remaining facilities are comprised of sports facilities, golf courses, and the Sunset Hills Memorial Park Cemetery. Most parks, recreation, and open space facilities are located outside of the Mixed Use and Neighborhood Centers. Civic and community facilities account for approximately 5 percent of land uses citywide. These include public and private schools, government buildings, community centers, fire and police stations, places of worship, day cares, and art galleries or museums. See Table 3-3 and Figure 3-1.

Community retail and services, entertainment, food, and healthcare amenities are generally concentrated in the Mixed Use Centers (corresponding to the concentration of commercial, mixed use, and office development) or in areas with good access to transit. Outside of parks and open space and schools, civic amenities are also concentrated in the Mixed Use Centers. These include government services, day cares, libraries, and post offices. The distribution of these amenities is mapped in **Figure 3-4,** with counts by location shown in **Table 3-4**. Specific amenities ideal as community gathering spaces include city service facilities (e.g., City Hall), libraries, schools, places of worship, shopping malls, active park or recreation facilities, and assembly buildings or cultural arts facilities (e.g., the Convention Center or Bellevue Arts Museum). The distribution of these community gathering spaces is mapped in **Figure 3-5**, with counts by location shown in **Table 3-5**.

Good Access to Transit

Good access to transit is defined as frequent bus or train service (every 15 minutes) during the daytime and early evening.



SOURCE: City of Bellevue 2023; King County 2023; Google Maps 2023; BERK 2023

FIGURE 3-4 **Community Amenities, Citywide**

TABLE 3-4 **Community Amenities, Count Citywide and by Location**

Community Amenities	Mixed Use Centers	Neighborhood Centers	Transit-Proximate Areas	Wilburton Study Area	Citywide
Civic Uses	53	14	68	8	*162*
Community Retail and Services	217	33	215	26	*384*
Entertainment	20	1	19	1	*36*
Parks and Open Space	10	6	33	2	*145*
Food	358	63	331	35	*529*
Healthcare	293	71	322	92	*539*
Total	***951***	***188***	***988***	***164***	***1,795***

SOURCE: City of Bellevue 2023; King County 2023; Google Maps 2023; BERK 2023

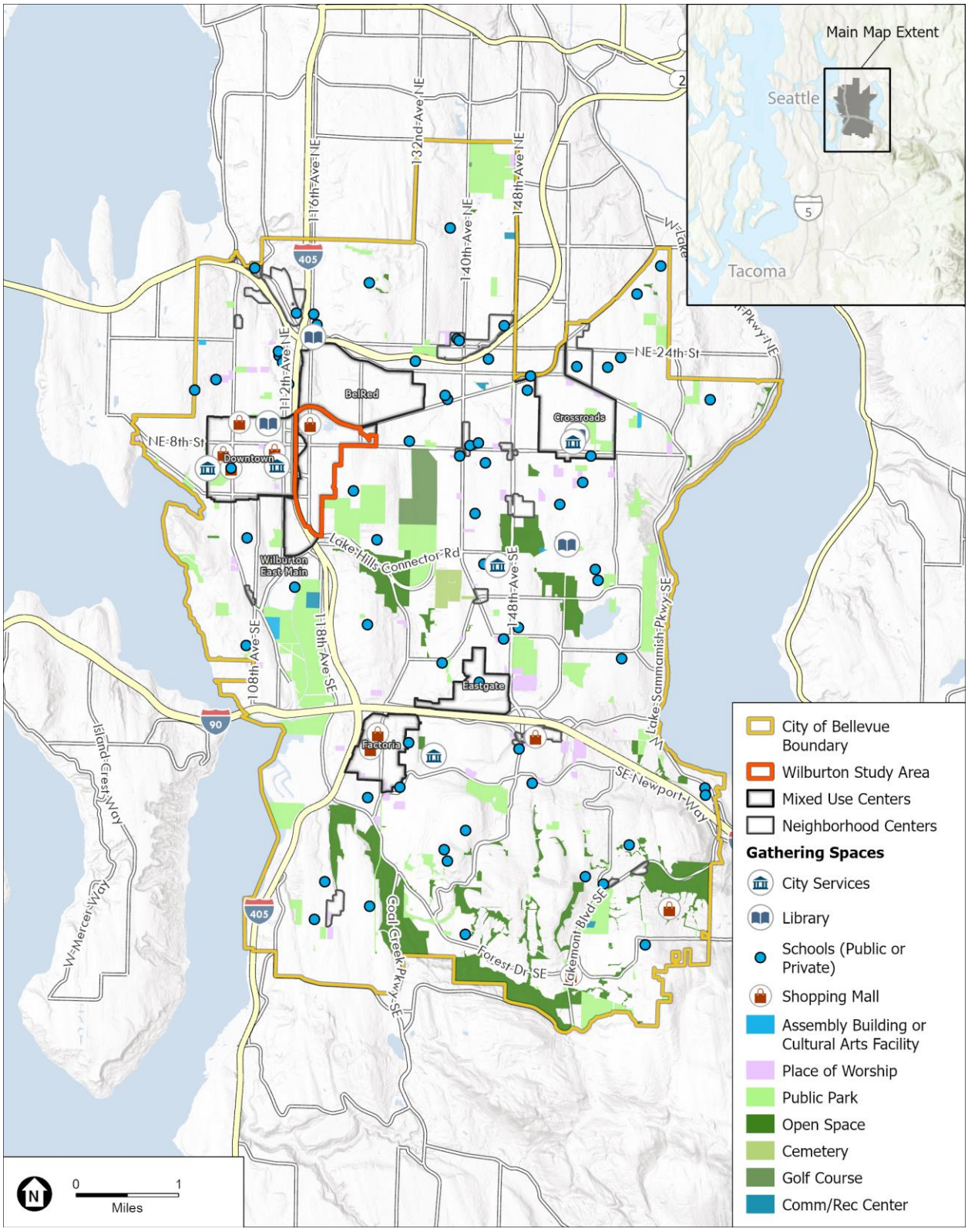
NOTE: Based on City's amenity, facilities, and park GIS layers and King County Assessor current land use data.

TABLE 3-5 **Community Gathering Spaces, Count Citywide and by Location**

Community Gathering Spaces	Mixed Use Centers	Neighborhood Centers	Transit-Proximate Areas	Wilburton Study Area	Citywide
City Services	3	—	2	—	*5*
Libraries	3	1	3	—	*5*
Schools	4	8	18	—	*72*
Places of Worship	9	8	28	—	*63*
Shopping Malls	8	2	7	1	*12*
Active Parks and Recreation	10	3	28	2	*121*
Assembly/Arts Facility	8	—	9	1	*13*
Total	***45***	***22***	***95***	***4***	***291***

SOURCE: City of Bellevue 2023; King County 2023; Google Maps 2023; BERK 2023

NOTE: Based on the city's amenity, facilities, and park GIS layers and King County Assessor current land use data.



SOURCE: City of Bellevue 2023; King County 2023; Google Maps 2023; BERK 2023

FIGURE 3-5 **Community Gathering Spaces, Citywide**

Current Comprehensive Plan Land Use Designations and Zoning

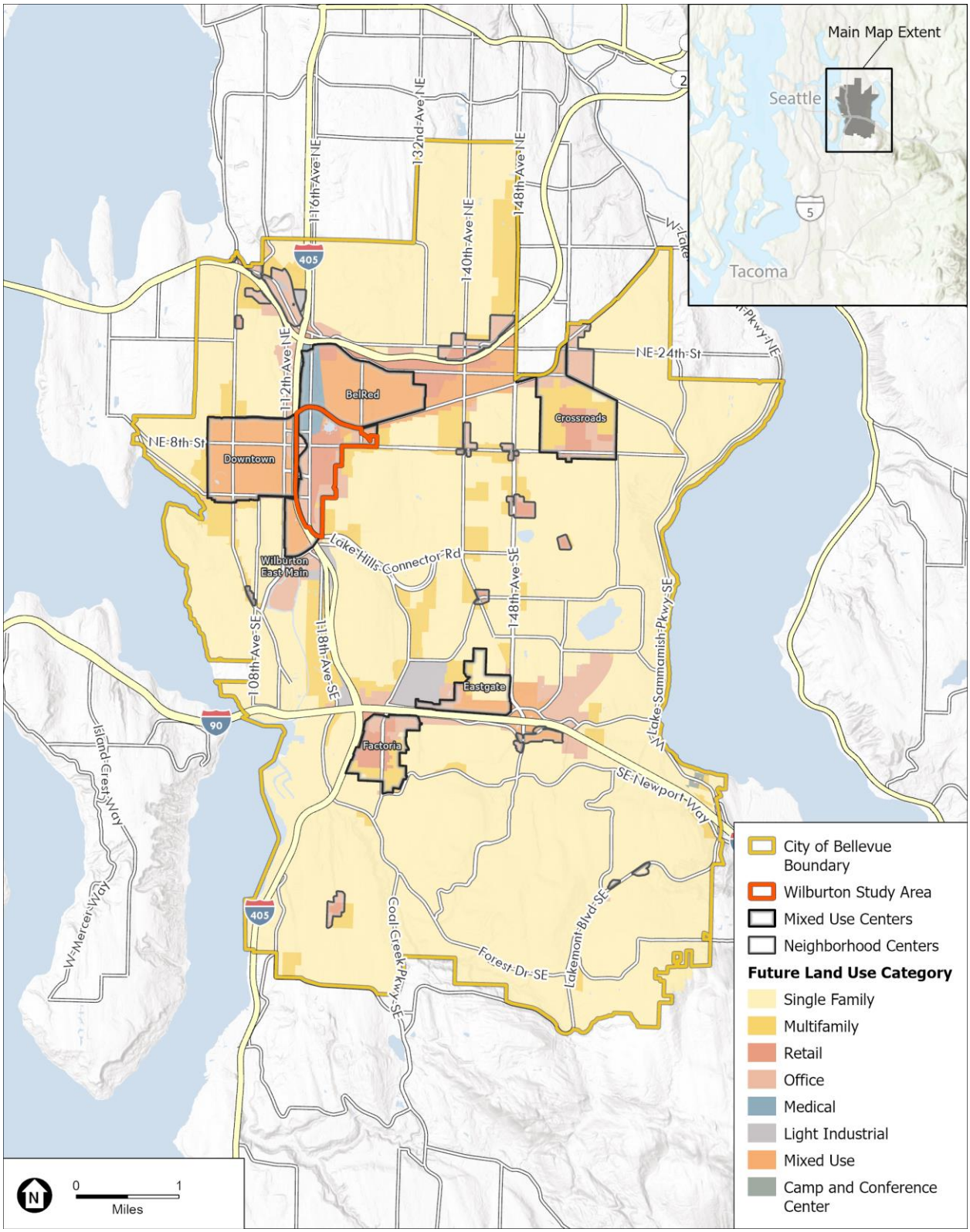
Citywide, single-family residential is the largest Comprehensive Plan land use designation category, accounting for about 76 percent of the city since it often includes several other kinds of lands like parks and institutions. Other designations are primarily concentrated in the Mixed Use and Neighborhood Centers and along major transportation corridors. The remaining quarter is primarily split between multi-family (8 percent), office and mixed use (6 percent each), and retail (3 percent). Downtown and BelRed are almost entirely designated mixed use, while the other centers include a combination of office, commercial, and multi-family designations. See **Table 3-6** and **Figure 3-6**. Generalized zoning follows a similar pattern as the Comprehensive Plan Land Use Map (see **Table 3-7** and **Figure 3-7**).

TABLE 3-6 **Generalized Comprehensive Plan Land Use Designations, Acres Citywide and by Location**

Generalized Land Use Category	Mixed Use Centers	Neighborhood Centers	Transit-Proximate Areas	Wilburton Study Area	Citywide
Single Family	98	38	1,078	<1	*16,329*
Multifamily	275	19	471	8	*1,723*
Retail	298	84	248	113	*585*
Office	288	236	376	114	*1,246*
Light Industrial	<1	17	6	—	*221*
Mixed Use	907	28	519	27	*1,276*
Medical	116	—	106	42	*136*
Camp and Conference Center	—	—	—	—	*9*
Total	***1,981***	***422***	***2,803***	***304***	***21,526***

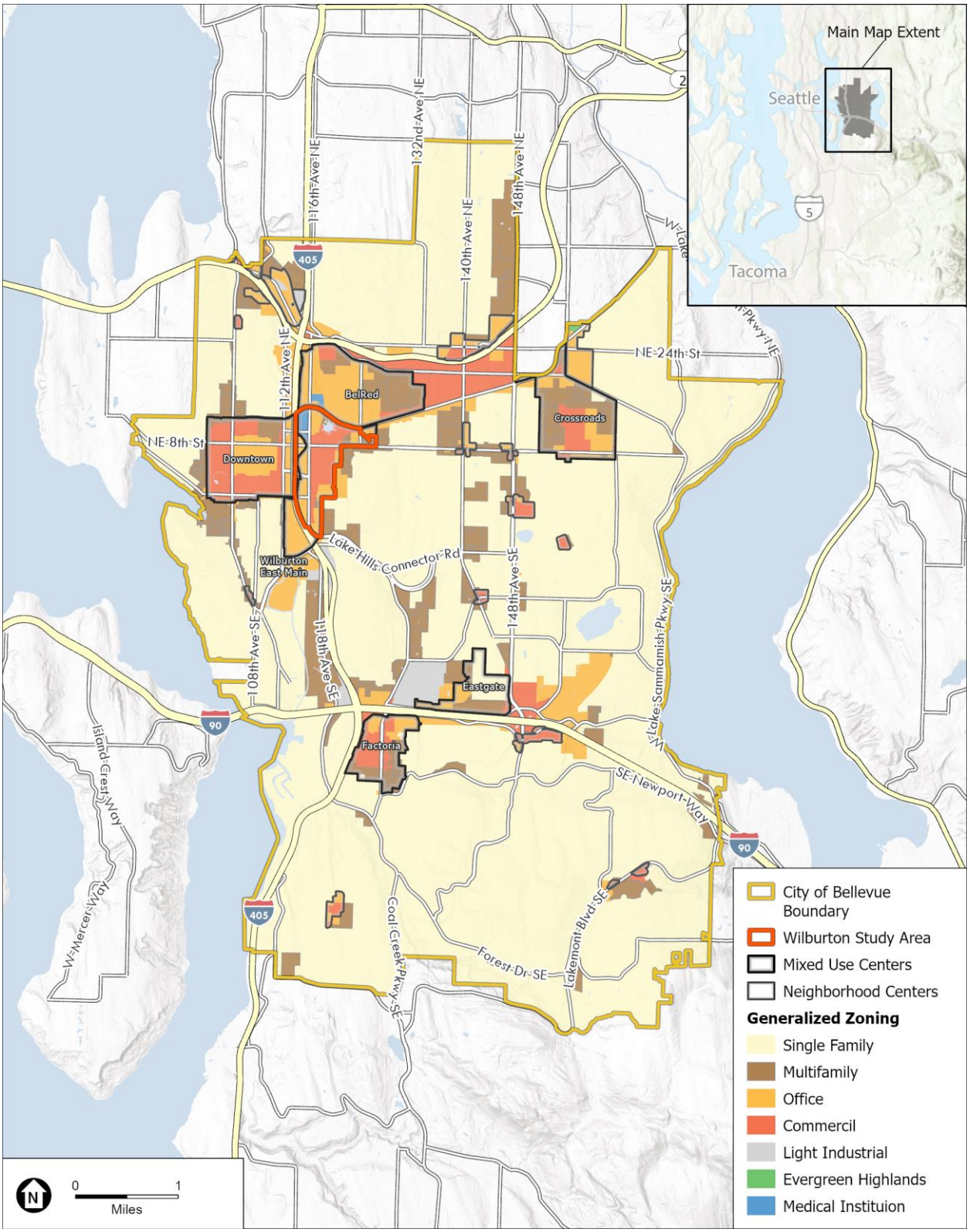
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Based on aggregated general land use categories as defined in the city's Comprehensive Plan GIS layer. Acreage includes ROW per the city's Comprehensive Plan Land Use Map. Most parks and open space as well as Bellevue College are designated as single-family.



SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 3-6 **Comprehensive Plan Land Use, Citywide**



SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 3-7 **Generalized Zoning, Citywide**

TABLE 3-7 **Generalized Zoning, Acres Citywide and by Location**

Generalized Zoning Category	Mixed Use Centers	Neighborhood Centers	Transit-Proximate Areas	Wilburton Study Area	Citywide
Single Family	96	29	1,079	<1	*16,309*
Multifamily	524	19	568	25	*2,020*
Office	763	230	604	135	*1,826*
Commercial	569	121	523	123	*1,157*
Light Industrial	<1	17	6	—	*215*
Evergreen Highlands	—	7	1	—	*7*
Medical Institution	28	—	22	21	*29*
Total	***1,981***	***422***	***2,804***	***304***	***21,562***

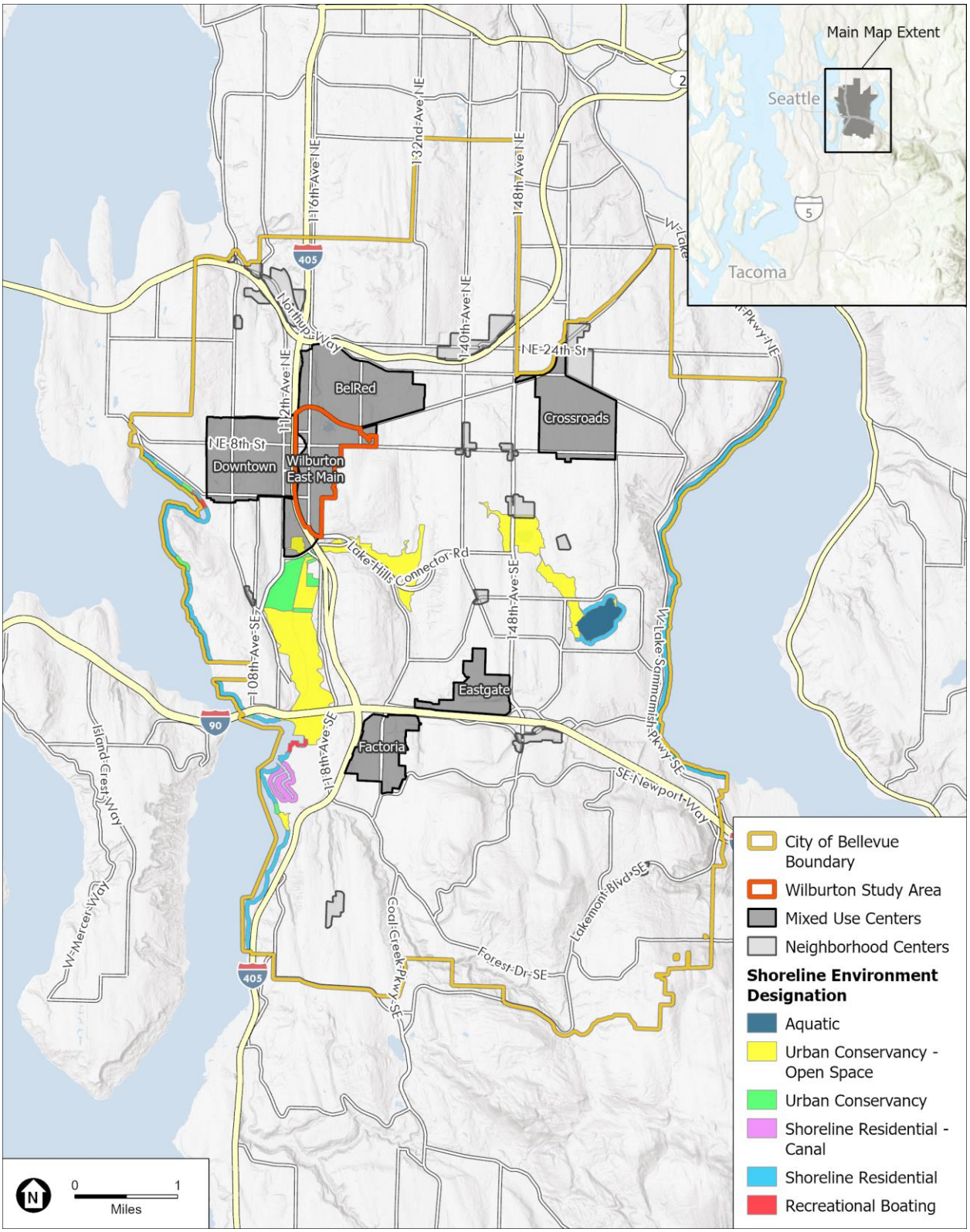
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Based on generalized zoning class as defined in the city's Zoning GIS layer. Acreage includes ROW per the city's Zoning Map. Most parks and open space as well as Bellevue College are zoned single-family.

Shorelines

The city's Shoreline Jurisdiction encompasses 960 acres citywide (including 19.7 miles of stream and lakeshore) and is regulated through zoning and shoreline environment designations. The Shoreline Jurisdiction includes Lake Washington, Lake Sammamish, Lower Kelsey Creek, Mercer Slough, and Phantom Lake, as well as associated wetlands and shorelands 200 feet from the ordinary high water mark (including the floodway and 200 feet of any adjacent floodplain) of each of the listed water bodies. See **Figure 3-8**.

Table 3-8 summarizes the acreage of each designation citywide and within specific geographies. About two-thirds of shorelines citywide are within the Urban Conservancy—Open Space environment (55 percent) or Urban Conservancy environment (10 percent comprised primarily of wetlands associate with Mercer Slough and Lower Kelsey Creek. Some small pockets of the Urban Conservancy environment line the shores of Lake Washington and Lake Sammamish. Another quarter are within the Shoreline Residential environment (25 percent) on the shores of Lake Washington, Lake Sammamish, and Phantom Lake, and 3 percent are designated Shoreline Residential—Canal just north of Newcastle Beach Park. About 1 percent of shorelines citywide are within the Recreational Boating environment along Lake Washington. Phantom Lake comprises the entirety of citywide shorelines designated aquatic. See also Chapter 4, *Relationship to Plans and Policies*, for more information about the Shoreline Master Program and the purpose of each environment designation.



SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 3-8 **Shoreline Designations, Citywide**

TABLE 3-8 **Shoreline Designations, Acres Citywide and by Location**

Shoreline Designation	Mixed Use Centers	Neighborhood Centers	Transit-Proximate Areas	Wilburton Study Area	Citywide
Aquatic	—	—	—	—	*65*
Urban Conservancy—Open Space	12	4	56	—	*618*
Urban Conservancy	—	—	1	—	*118*
Shoreline Residential—Canal	—	—	—	—	*37*
Shoreline Residential	—	—	5	—	*279*
Recreational Boating	—	—	—	—	*11*
Total	***12***	***4***	***62***	***—***	***1,128***

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Based on shoreline environments as defined in the city's Shoreline GIS layer.

MIXED USE CENTERS

There are six Mixed Use Centers in the City of Bellevue: Downtown, BelRed, Eastgate, Factoria, Wilburton-East Main, and Crossroads. Note that the boundaries of the Wilburton-East Main Mixed Use Center and Wilburton study area are different. The BelRed Mixed Use Center is also a subset of the BelRed Subarea and is based on the county criteria for center designation (see Chapter 4, *Plans and Policies*). See **Figure 3-9**.

Current Land Use

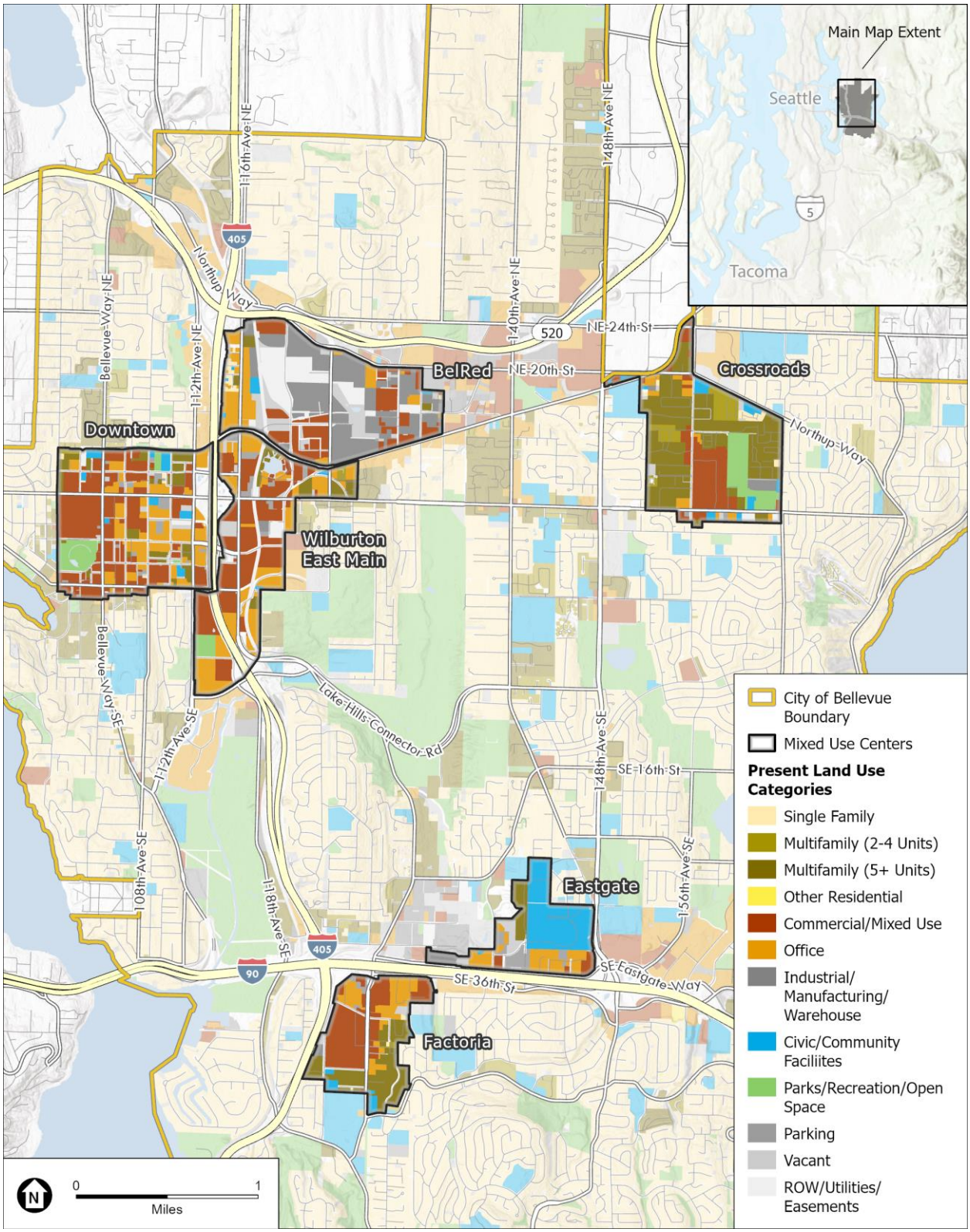
Downtown

Downtown Bellevue has become the regional growth center of the Eastside. It is home to regional shopping destinations and tall office buildings as well as historic Main Street. Since the late 1990s, many new residential developments have been built in Downtown and the area is now one of the city's largest residential neighborhoods. Amenities such as the Meydenbauer Center, Bellevue Arts Museum, KidsQuest Children's Museum, the regional library, and the 21-acre Downtown Park contribute to the vitality of the Downtown Bellevue experience for a growing number of workers and residents. Downtown is further subdivided into seven neighborhoods: Northwest Village, City Center North, Ashwood, Eastside Center, Old Bellevue, City Center South, and East Main. Each of the neighborhoods in Downtown has its own unique character and feel.

Downtown currently has the greatest housing and employment density in the city. As of 2019, there were about 59,900 jobs (43 percent of jobs citywide), 17.3 million square feet of commercial space, and 10,000 housing units (15 percent of units citywide) in Downtown. Together with cultural and entertainment uses, the presence of residents and workers provides an active daytime and nighttime environment. There are almost 400 amenities in Downtown, the greatest number of all Mixed Use Centers. However, this is a relatively low number of amenities relative to housing units (a ratio of about four amenities for every 100 housing units), driven in part by the high number of housing units currently in the center. A little under half of these are food related (47 percent), 28 percent are community retail or services, and about 15 percent are related to healthcare. Downtown is also home to many civic uses (many of which are housed at City Hall) and three parks. About 42 percent of the community gathering spaces in centers are located in Downtown (19 of 45). See Figure 3-5, Figure 3-9, **Table 3-9**, and **Table 3-10**.

PSRC Regional Growth Centers

Downtown Bellevue is a designated Metropolitan Regional Growth Center (RGC) per the Puget Sound Regional Council (PSRC). There are multiple Metropolitan and Urban RGCs designated on the Eastside, but Downtown Bellevue is the largest of these. See also Chapter 4, *Relationship to Plans and Policies*.



SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

FIGURE 3-9 **Current Land Use, Mixed Use Centers**

TABLE 3-9 **Current Land Use, Acres by Mixed Use Center**

Current Use Category	Downtown	BelRed	Eastgate	Factoria	Wilburton-East Main	Crossroads
Single Family	1	5	—	1	<1	5
Multifamily (2–4 units)	2	—	—	1	3	25
Multifamily (5+ units)	33	5	16	60	23	173
Commercial/Mixed Use	158	72	8	78	125	68
Office	74	48	33	35	92	14
Industrial/Mfg./Warehouse	—	149	7	2	2	7
Civic/Community Facilities	13	5	79	8	1	16
Parks/Rec./Open Space	25	—	—	—	9	35
Parking	11	1	15	3	10	1
Vacant	7	39	10	4	10	6
ROW/Utilities/Easements	3	67	—	<1	20	4
Total	***326***	***392***	***169***	***193***	***296***	***354***

SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

NOTES: Based on the city's parcel and park GIS layers and current use codes from the King County Assessor (per "KCPresentUse" field codes). Present use codes from the Assessor were assigned a general land use category and checked against the city's park layer. Uncategorized parcels were assigned a present use category based on Google Maps.

TABLE 3-10 **Community Amenities, Count by Mixed Use Center**

Current Use Category	Downtown	BelRed	Eastgate	Factoria	Wilburton-East Main	Crossroads
Civic Uses	27	3	2	3	8	10
Community Retail and Services	111	19	6	28	29	24
Entertainment	12	3	—	—	1	4
Parks and Open Space	3	3*	—	—	2	1
Food	187	8	3	60	42	58
Healthcare	58	68	2	40	94	31
Total	***398***	***104***	***13***	***131***	***176***	***128***

SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

NOTE: Based on the city's amenity and park GIS layers.

* Per city staff, there is currently one park in the Spring District that has not been dedicated to the city. In addition, a 7.1-acre wetland parcel that serves as open space, and a just over 5-acre wetland parcel with a trail that runs along it connects 120th Avenue NE to the Eastrail. These are not mapped in the city's GIS layer, nor are they mapped in this chapter.

BelRed

The BelRed Mixed Use Center is a subset of the BelRed Subarea and is based on the county criteria for center designation (see Chapter 4, *Plans and Policies*). BelRed was historically characterized by warehouses and manufacturing. The center has begun to transition with the departure of many of the traditional uses, the expansion of the Medical Institution district, and the introduction of residential, office, and food services. About 38 percent of land within the center is still considered industrial, manufacturing, or warehouses, and about 10 percent is currently vacant. About one-third is either commercial, mixed use, or office (30 percent). Mixed use development is generally located near the future Spring District Light Rail Station, while office uses are clustered around 116th Avenue NE. See Figure 3-9 and Table 3-9.

As of 2019, the BelRed Mixed Use Center had about 5,400 jobs (4 percent of jobs citywide), 3.7 million square feet of commercial space, and a little under 600 housing units (about 1 percent of units citywide). A relatively high number of amenities relative to housing units are located in BelRed (a ratio of 6 units for every one amenity) driven in part by the low number of housing units currently in the center.[2] There are currently just over 100 amenities in BelRed, or about 18 amenities per 100 housing units, about two-thirds of which are either neighborhood clinics or hospitals (65 percent). About 18 percent of current amenities are community retail and services, and 8 percent are restaurants, bars, or grocery stores. There are three community gathering space (Theatre33 and two active parks). There is currently one park in the Spring District that has not been dedicated to the city. In addition, a 7.1-acre wetland parcel serves as open space and a just over 5-acre wetland parcel with a trail that runs along it connects 120th Avenue NE to the Eastrail. See Figure 3-4, Figure 3-5, and Table 3-10.[3]

Eastgate

Bellevue College is the largest single use in Eastgate and is expected to grow as the city grows over the course of the 20-year planning period. The college accounts for about 47 percent of total acreage, and nearby multi-family housing primarily for students accounts for another 9 percent. The college is anticipated to be designated as Institutional to accommodate its expected growth and potential

[2] There are approximately 2.8 amenities per 100 housing units citywide and 5.4 amenities per 100 housing units within Mixed Use Centers.
[3] The three parks and open space in BelRed are not mapped in the city's GIS layer. These are not shown Figure 3-4 or Figure 3-5 but are included in the counts in Table 3-10.

redevelopment. Another third of current uses are larger scale commercial (including two hotels and a car dealership), office parks, or parking (including the Eastgate Park and Ride) bordering I-90. See Figure 3-9 and Table 3-9.

As of 2019, the Eastgate Mixed Use Center had about 6,100 jobs (4 percent of jobs citywide), 2.0 million square feet of commercial space, and 200 housing units (less than 1 percent of units citywide and the lowest of all Mixed Use Centers). There are currently only 13 amenities in Eastgate, the lowest of all Mixed Use Centers. Bellevue College is the only community gathering space within the center. See Figure 3-4, Figure 3-5, and Table 3-10.

Factoria

Factoria includes the Marketplace at Factoria—a regional retail center anchored by Target, Nordstrom Rack, T.J. Maxx, and Amazon Fresh—as well as retail and services that cater to the surrounding neighborhoods. Office complexes along the I-90 corridor are also home to many businesses, including T-Mobile, which is the city's third largest employer behind Amazon and Microsoft. The southeast portion of the center is primarily multi-family apartment complexes or condos with 5 units or more. Newport High School is also located just over the southeast border of the Factoria Mixed Use Center. See Figure 3-9 and Table 3-9.

As of 2019, the Factoria Mixed Use Center had about 8,500 jobs (6 percent of jobs citywide), 2.6 million square feet of commercial space, and 1,200 housing units (2 percent of units citywide). A relatively high number of amenities relative to housing units are located in Factoria (a ratio of 11 amenities per 100 housing units).[4] There are currently about 130 amenities in Factoria, about half of which are restaurants or grocery stores (46 percent). Another third of amenities are either neighborhood clinics or pharmacies (31 percent), about 21 percent are considered community retail or services, and there are currently no parks or open space within the center. Four community gathering spaces—including the Marketplace at Factoria and two places of worship—are within the center. See Figure 3-4, Figure 3-5, and Table 3-10.

[4] There are approximately 2.8 amenities per 100 housing units citywide and 5.4 amenities per 100 housing units within Mixed Use Centers.

Wilburton-East Main

The Wilburton-East Main Mixed Use Center and Wilburton study area overlap but are not coterminous. The Wilburton-East Main Mixed Use Center includes the Wilburton study area and areas to the east and southeast of the East Main Light Rail Station south to SE 8th Street; it does not include any land to the west of the East Main Light Rail Station. The area includes a concentration of primarily medical offices and hotels, a significant number of auto dealers, and large format or "big box" retail stores. Nearly three-quarters of the center is currently either commercial, mixed use, or office development (74 percent). See Figure 3-9 and Table 3-9.

As of 2019, Wilburton-East Main had the greatest employment density outside of Downtown with about 11,600 jobs (8 percent of jobs citywide) and 4.4 million square feet of commercial space. About 400 housing units were also located in Wilburton-East Main (less than 1 percent of units citywide) as of 2019. A relatively high number of amenities relative to housing units are located in Wilburton-East Main (a ratio of about 43 amenities per 100 housing units), driven in part by the low number of housing units currently in the center.[5] More than half of the existing 176 amenities in the center are neighborhood clinics, hospitals, or pharmacies (53 percent). Another quarter of amenities are food related (24 percent), and while one park (the Bel-Red Mini Park at NE 12th Street and 124th Avenue NE) and Eastrail are within Wilburton East-Main, parks and open space account for only 4 percent of land area in the Mixed Use Center. There are five community gathering spaces in the center in total, including the Bel-Red Mini Park, Eastrail, and Eastside Heritage Center. See Figure 3-4, Figure 3-5, and Table 3-10.

See also the Wilburton Study Area section below.

Crossroads

Crossroads is a community commercial center containing retail stores and offices that serve both the nearby neighborhoods and the larger community. The Crossroads Shopping Center is anchored by large format or "big box" retail and grocery stores (such as QFC, Daiso, Barnes & Noble, Michaels, and Cost Plus World Market). The shopping center is a hub of activity in the area and features regular stage entertainment and special events, a seasonal Farmer's Market, an ethnic food court, and an activity area where residents gather to play chess and other games. The areas north of the retail center and west

[5] There are approximately 2.8 amenities per 100 housing units citywide and 5.4 amenities per 100 housing units within Mixed Use Centers.

of 156th Avenue NE are primarily multi-family apartment complexes or condos with 5 units or more and account for nearly half of the overall acreage within the center (49 percent). A limited number of offices and community or civic uses (e.g., a post office or place of worship) border Bel-Red Road/Northup Way and NE 8th Street. A branch of the King County Library and Bellevue Mini City Hall exist within the Crossroads Shopping Center. See Figure 3-9 and Table 3-9.

As of 2019, the Crossroads Mixed Use Center had about 3,600 jobs (3 percent of jobs citywide and the lowest of all Mixed Use Centers), 1.4 million square feet of commercial space, and 5,300 housing units (8 percent of units citywide). A relatively low number of amenities relative to housing units are located in Crossroads (a ratio of about two amenities per 100 housing units).[6] There are currently almost 130 amenities in the center, about half of which are restaurants or grocery stores (45 percent). Another quarter of amenities are either neighborhood clinics or pharmacies (24 percent) and about 19 percent are considered community retail or services. The 34+ acre Crossroads Park and Community Center is the only park or open space within the center but features a nine-hole golf course, a community garden, a water park for children, and a popular multipurpose park. The city operates three major facilities to address the needs and interests of Bellevue residents: Mini City Hall, offering information and referral services in many languages; the Crossroads Community Center; and the Crossroads Police substation. The Bellevue Youth Theatre also hosts year-round youth productions, including theater in-the-round and outdoor amphitheater shows. There are 13 community gathering spaces in Crossroads, including Crossroads Park, five places of worship, and two schools. See Figure 3-4, Figure 3-5, and Table 3-10.

Current Comprehensive Plan Land Designations Use and Zoning

Downtown

Local and regional plans like VISION 2050 designate Downtown Bellevue as one of King County's Urban Centers and as the area in Bellevue that will receive the city's most intense development. In VISION 2050, Downtown Bellevue is one of 29 Regional Growth Centers and the largest employment center outside of Seattle. Downtown both serves the region and plays a vital role for the residents within its boundaries and from adjacent neighborhoods in

[6] There are approximately 2.8 amenities per 100 housing units citywide and 5.4 amenities per 100 housing units within Mixed Use Centers.

Bellevue by providing convenient access to everyday goods and services.

About 95 percent of Downtown is designated mixed use on the Comprehensive Plan Land Use Map, with the remaining 5 percent designated office. Generalized zoning is a corresponding combination of commercial (55 percent), office (35 percent), and multi-family (10 percent). See Figure 3-6, **Table 3-11**, and **Table 3-12**.

TABLE 3-11 **Comprehensive Plan Land Use, Acres by Mixed Use Center**

Generalized Land Use Category	Downtown	BelRed	Eastgate	Factoria	Wilburton-East Main	Crossroads
Single Family	—	—	79	8	—	10
Multifamily	—	—	15	73	8	179
Retail	—	18	—	88	112	80
Office	21	—	27	43	109	88
Light Industrial	—	—	—	—	—	—
Mixed Use	411	332	52	—	93	19
Medical	—	75	—	—	40	—
Camp and Conference Center	—	—	—	—	—	—
Total	***432***	***426***	***173***	***212***	***362***	***376***

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Based on aggregated general land use categories as defined in the city's Comprehensive Plan GIS layer. Acreage includes ROW per the city's Comprehensive Plan Land Use Map. Most parks and open space as well as Bellevue College are designated as single-family.

TABLE 3-12 **Generalized Zoning, Acres by Mixed Use Center**

Generalized Zoning Category	Downtown	BelRed	Eastgate	Factoria	Wilburton-East Main	Crossroads
Single Family	<1	—	79	7	—	10
Multifamily	43.2	144	51	75	23	188
Office	152	240	38	43	196	94
Commercial	237	34	5	87	122	83
Light Industrial	—	—	<1	—	—	—
Medical Institution	—	8	—	—	21	—
Total	***432***	***426***	***173***	***212***	***362***	***376***

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Based on zoning class as defined in the city's Zoning GIS layer. Acreage includes ROW per the city's Zoning Map. Most parks and open space as well as Bellevue College are zoned single-family.

BelRed

BelRed is envisioned as a major mixed use employment and residential area characterized by a transit-oriented, nodal development pattern that, over time, will replace the area's original low-intensity light industrial and commercial past. The city encourages land uses in the BelRed area that promote employment, retail, and residential opportunities. More intense uses and greater heights are concentrated in designated nodal development areas along the NE Spring Boulevard corridor that are intended to be served by high-capacity transit. New development in these designated nodal areas is expected to have a transit-supportive and pedestrian-friendly form. The entire BelRed area is intended to be distinguished by environmental and community amenities that serve residents and employees in the area as well as nearby neighborhoods and the entire city. New development is expected to make significant contributions to these amenities, and to the infrastructure needed to support redevelopment.

A little over three-quarters of BelRed is designated mixed use on the Comprehensive Plan Land Use Map (78 percent). Another 18 percent is designated medical to the east and west of 116th Avenue NE, and 4 percent is designated retail south of SR 520 and 120th Avenue NE. About two-thirds of BelRed are office, commercial, or medical institution (66 percent) zones, with the remaining third classified as multi-family (34 percent). See Figure 3-6, Table 3-11, and Table 3-12.

Eastgate

Eastgate is expected to continue functioning as a strong employment center in the city with additional transit-oriented development around the Eastgate Park & Ride and south of Bellevue College. A little under half of Eastgate is designated single-family (46 percent) on the Comprehensive Plan Land Use Map but is occupied by Bellevue College, which is anticipated to be designated and redeveloped as Institutional, and this area is not expected to redevelop as single-family. Areas adjacent to I-90 are split between office (15 percent) in the west and mixed use (30 percent) in the east, and the areas just west of Bellevue College are designated for low-density multi-family (9 percent). Outside of single-family zones (46 percent), zoning is split between multi-family (29 percent), office (22 percent), and a limited amount of commercial (3 percent) zones. See Figure 3-6, Table 3-11, and Table 3-12.

Factoria

The Factoria center is envisioned as a well-integrated, mixed use urban area centered around a thriving and cohesive commercial district. Comprehensive Plan land use designations in the Factoria Mixed Use Center are primarily a combination of retail (41 percent) surrounding the Marketplace at Factoria, office (20 percent) adjacent to I-90, and medium- and high-density multi-family (34 percent) in the south and east. The remaining 4 percent is designated single-family scattered along the south and east edges. Factoria is the only Mixed Use Center without any mixed use designations per the adopted Comprehensive Plan Land Use Map. Zoning is primarily a combination of commercial (41 percent), multi-family (35 percent), and office (20 percent). However, the F1 District (which generally includes the Marketplace at Factoria) is a designated mixed use residential and regional retail center per the Land Use Code.[7] See Figure 3-6, Table 3-11, and Table 3-12.

Wilburton-East Main

The Wilburton-East Main center is expected to change significantly due to its strategic location between Downtown and BelRed and its proximity to the freeway and light rail. A little under one-third each of the Wilburton-East Main Mixed Use Center is designated retail (31 percent) and office (30 percent). Retail designations are clustered between 116th Avenue NE and 120th Avenue NE, while office designations are typically between I-405 and 116th Avenue NE. Another 11 percent is designated medical to the north of NE 8th Street surrounding 116th Avenue NE, and 2 percent is designated medium- and high-density multi-family east of 120th Avenue NE. About half of zoning is classified as office (54 percent) and two thirds as commercial (34 percent). Another 6 percent each is zoned multi-family or medical institution. See Figure 3-6, Table 3-11, and Table 3-12.

About one-quarter of the center is designated mixed use (26 percent) encompassing the East Main Light Rail Station area to the west of I-405 and in the northeast near 124th Avenue NE. Comprehensive Plan land use designations and zoning in the East Main area encourage mixed use TOD within ½ mile of Sound Transit's East Main Station. The mixed use designation is meant to provide a mix of residential, office, retail, and hotel uses supported by a robust ecological framework that will create an active and vibrant neighborhood. Development will support a safe and active ground-

[7] Note that the city's generalized zoning map does not include mixed use as a generalized zoning category. See *Appendix J* for more information.

level experience and access to an integrated network of open spaces and natural features with strong pedestrian connections throughout the neighborhood. This neighborhood will include walkable blocks and connectivity for pedestrians and cyclists to the Sound Transit East Main Station. Walking, bicycling, bus, and light rail are intended to be the primary transportation modes in this area.

See also the Wilburton Study Area section below.

Crossroads

Crossroads is envisioned as a bustling, densely populated, and richly diverse center characterized by an abundance of large apartment complexes, restaurants, and retail establishments. Comprehensive Plan land use designations in the Crossroads Mixed Use Center are primarily a combination of retail (21 percent) surrounding the Crossroads Shopping Center, office (23 percent) adjacent to the Crossroads Shopping Center and south of NE 20th Street, and mostly medium- and high-density multi-family (48 percent) elsewhere. Of the 88 acres designated office, 35 acres encompass the Crossroads golf course and Crossroads Park and are not expected to redevelop with office uses. Another 5 percent is designated mixed use north of NE 20th Street and 3 percent is designated medium- and high-density single-family. About half of zoning is classified as multi-family (50 percent), with the remainder split between office (25 percent), commercial (22 percent), and a limited amount of single-family (3 percent). See Figure 3-6, Table 3-11, and Table 3-12.

Shorelines

Approximately 12 acres of the Wilburton-East Main Mixed Use Center is a designated Urban Conservancy—Open Space shoreline. All 12 acres are part of the Mercer Slough wetlands in the southern part of the East Main TOD area. There are no designated shorelines in the Downtown, BelRed, Eastgate, Factoria, or Crossroads Mixed Use Centers. See Table 3-8 and Figure 3-8.

NEIGHBORHOOD CENTERS

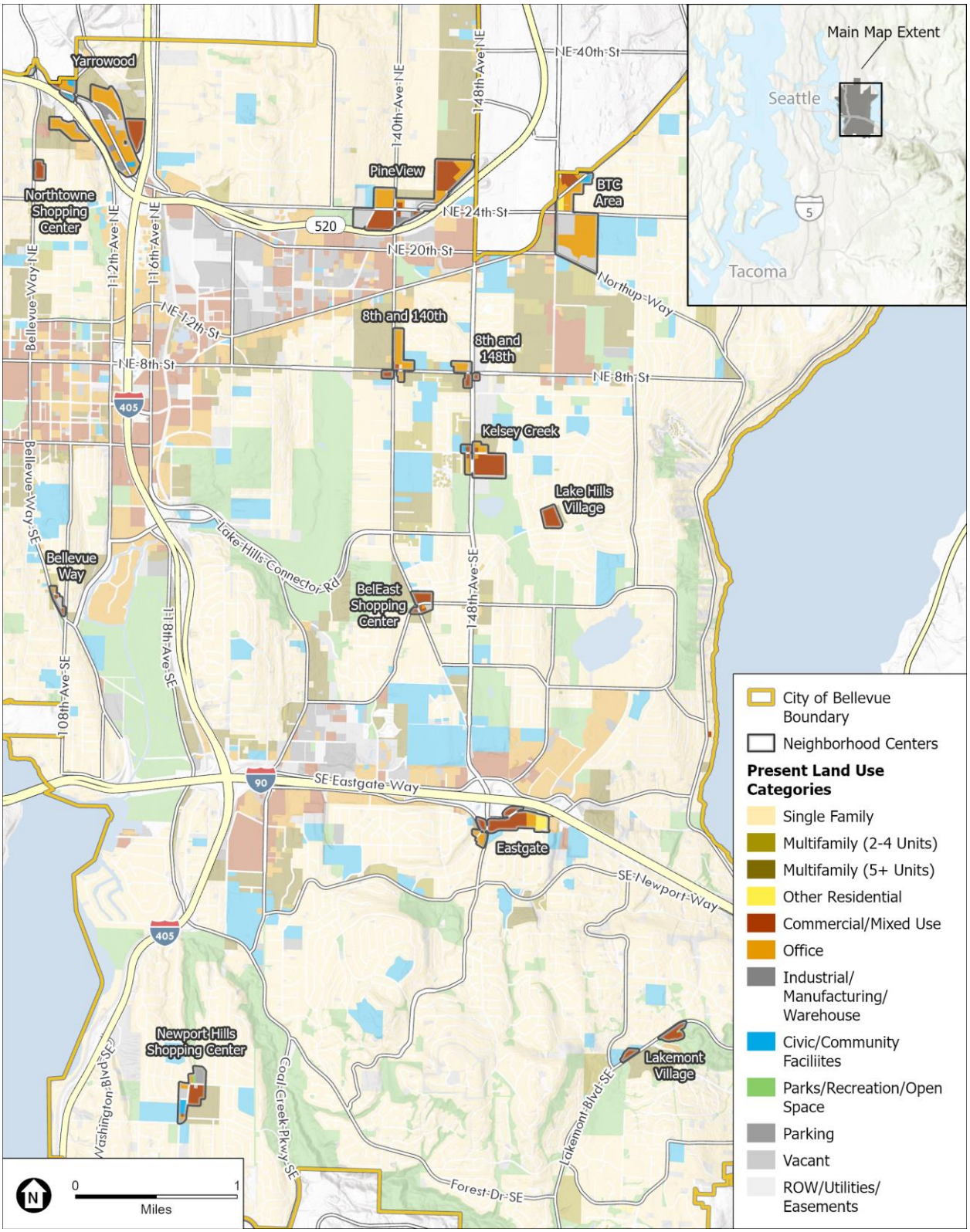
Fourteen Neighborhood Centers throughout the city complement the Mixed Use Centers with smaller, neighborhood-oriented retail centers. Bellevue's Neighborhood Centers provide goods and services to local residents and serve as important focal points and gathering spaces for the surrounding communities. Neighborhood Centers help establish neighborhood identity through the unique mix of local stores, design, and even public art. See **Figure 3-10**.

Current Land Use

About two-thirds of the Neighborhood Centers are currently commercial/mixed use or office uses (65 percent). The 8th and 140th Neighborhood Center in Crossroads, Bellevue Technology Center (BTC) Area in northeast Bellevue, and Yarrowood in Northwest Bellevue consist mostly of office parks (with some larger vacant areas in Yarrowood and the BTC Area). The three Neighborhood Centers in Lake Hills—BelEast Shopping Center, Kelsey Creek, and Lake Hills Village—and the Northtowne Shopping Center in Northwest Bellevue are primarily smaller scale retail with some office uses. Lakemont Village in Southeast Bellevue is almost entirely retail but includes small portions of the larger bordering parks and open spaces. The 8th and 148th Neighborhood Center in Crossroads and PineView in Bridle Trails (just north of BelRed) are more evenly split between retail and office uses.

Other centers are more mixed. The Eastgate center consists mostly of retail at Eastgate Plaza, office parks bordering the I-90 and 150th Avenue SE interchange, and an RV park near 156th Avenue SE. The Newport Hills Shopping Center in Newport is comprised of retail at the shopping center, medical and dental services, Newport Hills Community Church, and the Newport Hills Swim and Tennis Club. The Bellevue Way center in West Bellevue is a mix of commercial services (such as gas stations) and restaurants, office buildings, and vacant land. See Figure 3-10 and Table 3-3.

There are currently about 8,600 jobs (6 percent of jobs citywide), 3.2 million square feet of commercial space, and fewer than 200 housing units (less than 0.5 percent of units citywide) within the city's Neighborhood Centers. There is very little existing single- or multi-family housing in the Neighborhood Centers (mostly on the edges bordering larger residential areas), although 9 percent of total land area is devoted to residential uses. Approximately 3,000 housing units, however, are within ¼ mile of the Neighborhood Centers.



SOURCE: City of Bellevue 2023; King County Assessor 2023; BERK 2023

FIGURE 3-10 **Current Land Use, Neighborhood Centers**

There are currently 188 amenities in the Neighborhood Centers, about 37 percent of which are healthcare related. Another third of amenities are restaurants or grocery stores (34 percent), and about 17 percent are considered community retail or services. The six parks or open space with some land area in the Neighborhood Centers are primarily located just outside the centers (with only 1 percent of overall land area devoted to parks, recreation, or open space). A total of 22 community gathering spaces are located throughout the Neighborhood Centers, most of which are schools or places of worship (16 of the 22). Overall, there are about 121 amenities per 100 housing units in the Neighborhood Centers. See Figure 3-5 and Table 3-4.

Comprehensive Plan Land Use and Zoning

About three-quarters of the land in Neighborhood Centers is designated either office (56 percent) or retail (20 percent) on the Comprehensive Plan Land Use Map (see Table 3-6 and corresponding generalized zoning in Table 3-7). This generally mirrors the existing land use patterns. The 8th and 140th Neighborhood Center in Crossroads, BTC Area in northeast Bellevue, and Yarrowood in northwest Bellevue are primarily designated for office uses (similar to current uses). The three Neighborhood Centers in Lake Hills—BelEast Shopping Center, Kelsey Creek, and Lake Hills Village—and the Northtowne Shopping Center in northwest Bellevue are primarily designated for retail uses. The 8th and 148th Neighborhood Center in Crossroads, Newport Hills Shopping Center in Newport, and PineView in Bridle Trails are split between retail and office designations. A little more than three-quarters of the Eastgate Neighborhood Center (southeast of I-90 and 150th Avenue SE) is designated mixed use, with the remainder split between single-family and office designations. The Bellevue Way center in West Bellevue is split between retail and residential designations, with a small portion designated for office use. About 17 acres of the Yarrowood center is also designated for light industrial use, and the Lakemont Village center in southeast Bellevue is designated entirely as single-family. See Figure 3-6.

Local Neighborhood Centers are not expected to grow significantly according to the current Comprehensive Plan, but changes in neighborhood needs and retail demands may change land use over time. For example, older grocery stores that are larger than what is competitive in today's marketplace may adapt. The city has already seen redevelopment of the Lake Hills Village with a new mix of uses, and some form of redevelopment is expected at the Newport Hills Shopping Center.

Shorelines

Approximately 4 acres of the Kelsey Creek Neighborhood Center in Lake Hills is a designated Urban Conservancy—Open Space shoreline (about 12 percent of the center overall). There are no designated shorelines in any of the other 12 Neighborhood Centers. See Table 3-8 and Figure 3-8.

TRANSIT-PROXIMATE AREAS

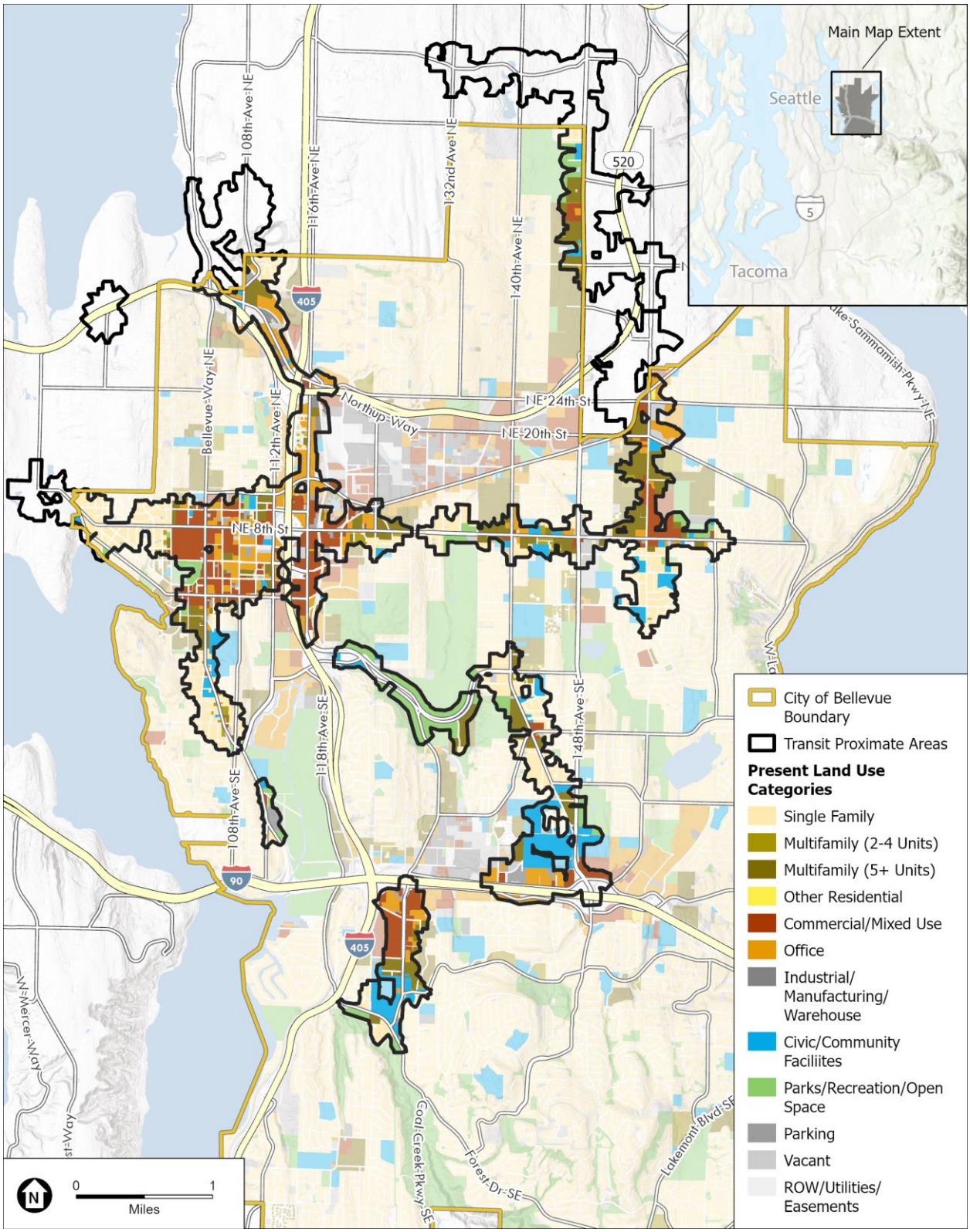
Existing transit-proximate areas include those areas of the city within ¼ mile of the city's frequent transit network (defined as frequent bus or train service at least every 15 minutes during the daytime and early evening). These generally include most of Downtown and the Eastgate Mixed Use Centers, the NE 8th Street corridor between the western city limit and Crossroads Mixed Use Center, Northup Way north of SR 520, Bellevue Way SE from Downtown to a little south of 112th Avenue NE, 156th Avenue NE south of the city limits to Main Street, 148th Avenue NE north of NE 40th Street, Factoria Boulevard SE between I-90 and Coal Creek Parkway SE, and from East Main to Eastgate via Lake Hills Connector and 145th Place SE. See **Figure 3-11** for a map of areas of the city that currently have good access to transit based on the 2021 Bus Rapid Transit (BRT) network – transit-proximate areas will include light rail after service begins.

Good Access to Transit

Good access to transit is defined as frequent bus or train service (every 15 minutes) during the daytime and early evening.

Current Land Use

Existing land uses in transit-proximate areas vary based on location. Transit-proximate areas that overlap the existing Mixed Use Centers consist of a wider variety of commercial, mixed use, and office-related uses consistent with the center designations. About one-third of transit-proximate areas are currently commercial, mixed use, or office-related uses (31 percent). Another 16 percent of transit-proximate areas—generally within or adjacent to the Mixed Use Centers—consist of multi-family apartments or condos with 5 units or more. About one-quarter of current uses are single-family residential (23 percent). These are primarily outside the designated centers, generally west and south of Downtown, between Downtown and Crossroads along the central portion of the NE 8th Street corridor, south of Crossroads along 156th Avenue NE, and north of Bellevue College along 145th Place SE. See **Figure 3-11** and Table 3-3.



SOURCE: City of Bellevue 2023; King County Assessor 2023; BERK 2023
NOTE: Transit-proximate areas are based on the 2021 Bus Rapid Transit (BRT) network (does not include future bus or light rail).

FIGURE 3-11 **Current Land Use, Transit-Proximate Areas**

As of 2019, almost two-thirds of jobs and a little less than one-third of housing units citywide were located in current transit-proximate areas (84,400 jobs or 61 percent of jobs citywide and 19,000 units of 30 percent of units citywide). A relatively high number of amenities relative to housing units are located in transit-proximate areas—there are about five amenities per 100 housing units in transit-proximate areas versus fewer than three amenities per 100 housing units citywide. In total, there are currently almost 1,000 amenities in transit-proximate areas. About one-third each are healthcare (hospitals, neighborhood clinics, or pharmacies) or food (restaurants, bars, and grocery stores) related. Another 22 percent are considered community retail or services, including bakeries, educational services, gyms, repair services, shopping malls, and technology-related amenities. One-tenth of the amenities in transit-proximate areas are either civic or community uses or parks, recreation, and open space areas. This includes several schools, including Bellevue College, four public secondary schools (Newport High School, Odle Middle School, Lake Hills Elementary, and Stevenson Elementary), and 11 private secondary schools. Thirty-three of the city's park, recreation, or open space facilities are also at least partially within the transit-proximate areas and account for about 9 percent of the land area; a little less than 7 percent of citywide park, recreation, and open space acres are within transit-proximate areas. There are almost 100 community gathering spaces in the transit-proximate areas, most of which are schools, places of worship, or active park and recreation facilities (74 of 95)—these account for about one-third (33 percent) of community gathering spaces citywide. See Figure 3-5 and Table 3-4.

Diverse land uses in transit-proximate areas of the city can reduce vehicle miles traveled, encourage physical activity for residents and employees, and improve equitable access to amenities and community gathering spaces. A variety of uses in these areas can also support activity throughout the day and greater social cohesion within the neighborhoods. Residents enjoy access to everyday retail and services (such as grocery stores, pharmacies, banks, or day cares), employees can eat at nearby restaurants, business travelers can stay in hotels adjacent to their office space, and the proximity of recreational activities and gyms helps keep residents and employees healthy, happy, and productive. The U.S. Green Building Council (USGBC) outlines broad categories of diverse use based on a LEED (i.e., Leadership in Energy and Environmental Design) measure for diverse use.[8] Appendix B provides more detailed information. Diverse uses in Bellevue were

[8] https://www.usgbc.org/credits/core-shell/v2012/ltc4 (see Option 2 and the table in Appendix 1). Not all LEED categories were used in this analysis based on available data.

derived from the city's inventories of amenities, parks, and public facilities (police and fire stations) and current land use from the King County Assessor. **Figure 3-12** maps diverse uses in transit-proximate areas. About three-quarters of the mapped diverse uses in transit-proximate areas are within the Mixed Use Centers, with about one-third in Downtown alone (34 percent).

Comprehensive Plan Land Use and Zoning

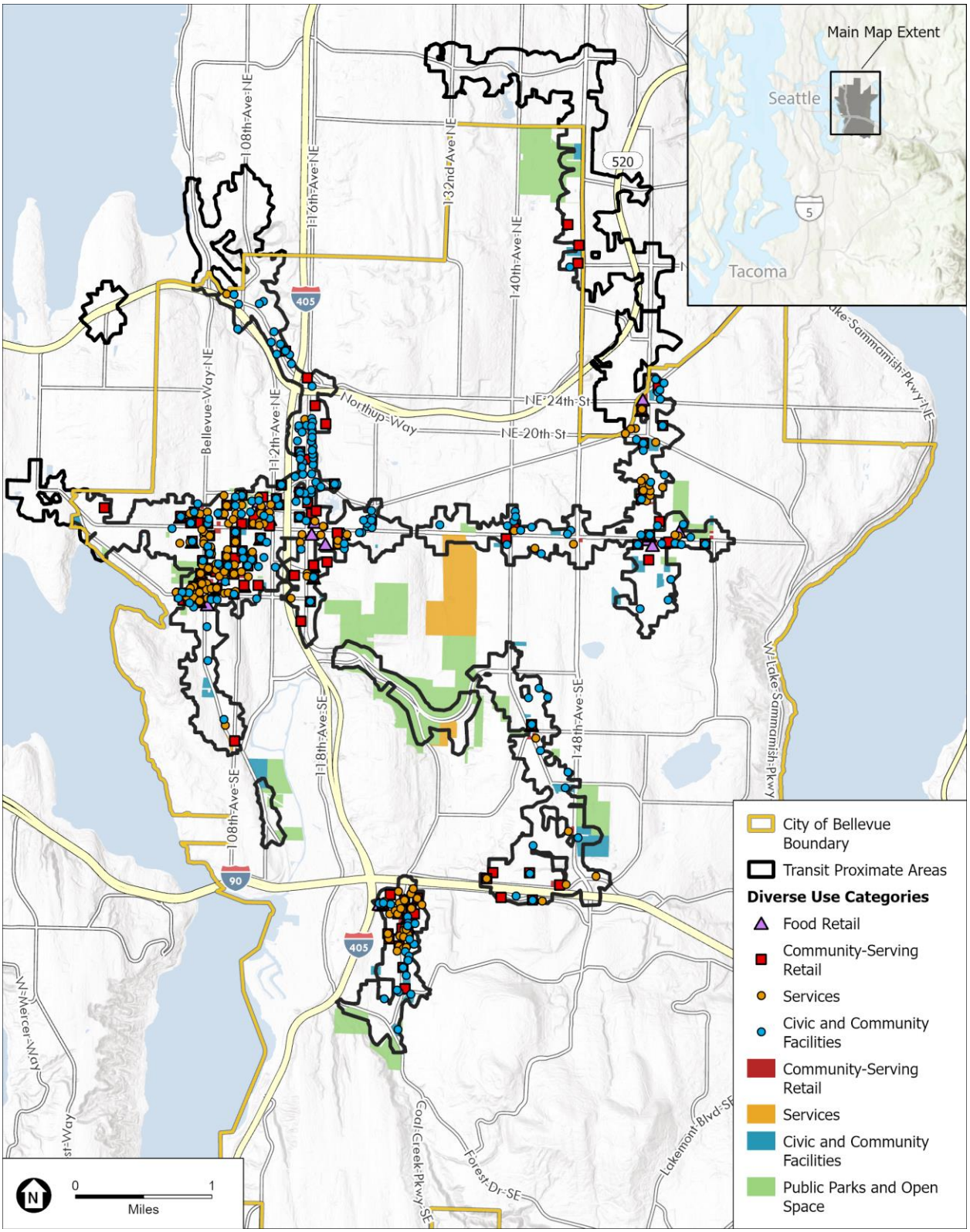
Comprehensive Plan land use designations in transit-proximate areas of the city vary by location. More than half of the transit-proximate areas are designated for residential uses, including 38 percent for single-family and 17 percent for multi-family. Single-family and multi-family designations are mostly located along transit that travels between the existing Mixed Use Centers. Of the 1,078 acres designated single-family, 209 acres are either parks or public facilities that are not expected to redevelop. Of the remaining acres, approximately 131 acres are designated low-density single-family, 342 acres are designated medium-density single-family, and 396 acres are designated high-density or urban single-family. Another 20 acres of land designated multi-family or office are parks or public facilities that are not expected to redevelop.

Mixed use designations account for 19 percent of transit-proximate areas overall. These areas are concentrated within the existing Mixed Use Centers, with about 70 percent of those in Downtown. Another 13 percent and 9 percent of transit-proximate areas are designated office or retail on the Comprehensive Plan Land Use Map, respectively. Office and retail designations primarily surround Northup Way north of SR 520, 116th Avenue NE south of NE 8th Street, Factoria Boulevard SE north of SE 41st Place, and 156th Avenue NE north of NE 8th Street. The remaining 4 percent of transit-proximate areas are designated medical along 116th Avenue NE to the north of NE 8th Street and south of SR 520. See Table 3-6 and Figure 3-6.

Zoning in transit-proximate areas is primarily a corresponding mix of single-family (38 percent) and multi-family (20 percent) residential, office (22 percent), and commercial (19 percent). See Table 3-7.

Shorelines

Approximately 56 acres of the southern portion of the transit-proximate areas are designated Urban Conservancy—Open Space shoreline associated with Lower Kelsey Creek's wetlands. This accounts for about 2 percent of the transit-proximate areas overall. Another 5 acres are designated Shoreline Residential along Lake Washington to the west and south of Downtown. See Table 3-8 and Figure 3-8.



SOURCE: City of Bellevue, 2023; King County Assessor, 2023; LEED Diverse Use Categories (Option 2 and Appendix 1), 2023; BERK 2023
NOTE: Transit-proximate areas are based on the 2021 BRT network (does not include future bus or light rail).

FIGURE 3-12 **Diverse Uses, Transit-Proximate Areas (2021)**

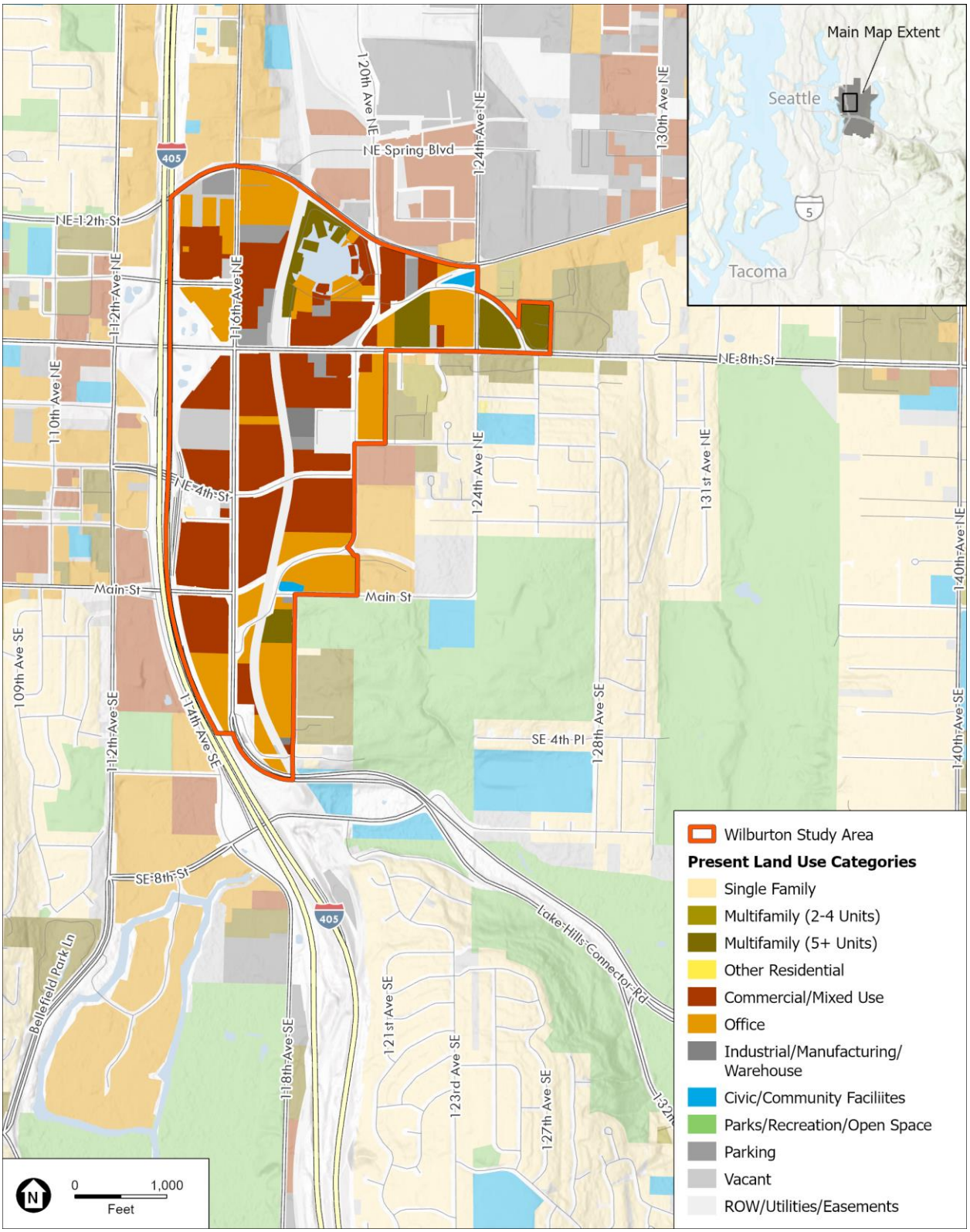
WILBURTON STUDY AREA

Current Land Use

Current uses in the Wilburton study area include a variety of single-purpose commercial and office uses. Medical uses, including major facilities for Overlake Medical Center and Kaiser Permanente, dominate the area on both sides of 116th Avenue NE and north of NE 8th Street. Bellevue's "auto row" includes a variety of car dealerships along both sides of 116th Avenue NE as well as NE 8th Street. Retail and restaurant uses are mostly located in the northern portion of the area, but there is large format or "big box" retail located along NE 4th Street from 116th Avenue NE to 120th Avenue NE. Office uses are scattered throughout the study area and include both individual office buildings and office parks. Three hotels and a limited number of multi-family residential developments (on Lake Bellevue, east of 120th Avenue NE, and just west of 118th Avenue SE) are located in the area. Parcels on Lake Bellevue are comprised of a mix of multi-family, commercial, and office uses. A few parcels are considered industrial uses, such as the Mutual Materials site and Bellevue School District bus depot. See Table 3-3 and **Figure 3-13**.

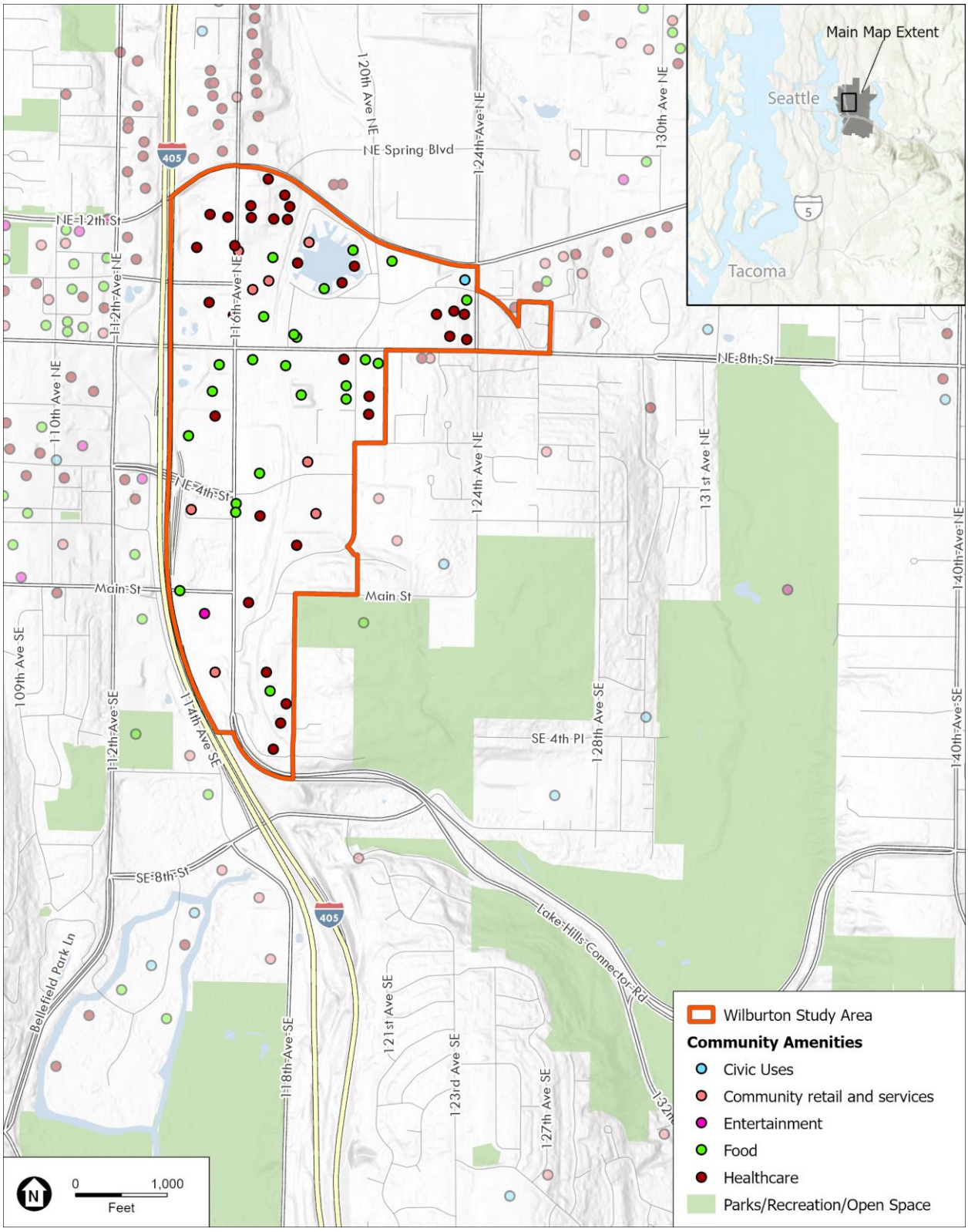
As of 2019, the Wilburton study area had about 9,400 jobs (7 percent of jobs citywide), 3.1 million square feet of commercial space, and a little over 400 housing units (less than 1 percent of units citywide). Similar to the Wilburton-East Main Mixed Use Center, a relatively high number of amenities relative to housing units are located in the Wilburton study area (a ratio of 40 amenities for every 100 housing units), driven in part by the low number of existing housing units.[9] More than half of the existing 164 amenities in the Wilburton study area are neighborhood clinics, hospitals, or pharmacies (56 percent). Another fifth are food related (21 percent), and there is one park facility (the Bel-Red Mini Park at NE 12th Street and 124th Avenue NE). Bellevue Botanical Garden and Wilburton Hill Park are adjacent to the southeast portion of the study area boundary. There are four community gathering spaces in the Wilburton study area in total, including Bel-Red Mini Park, Eastrail, and the Eastside Heritage Center. See Table 3-4, **Figure 3-14**, and **Figure 3-15**.

[9] There are approximately 36 units for every one amenity citywide.



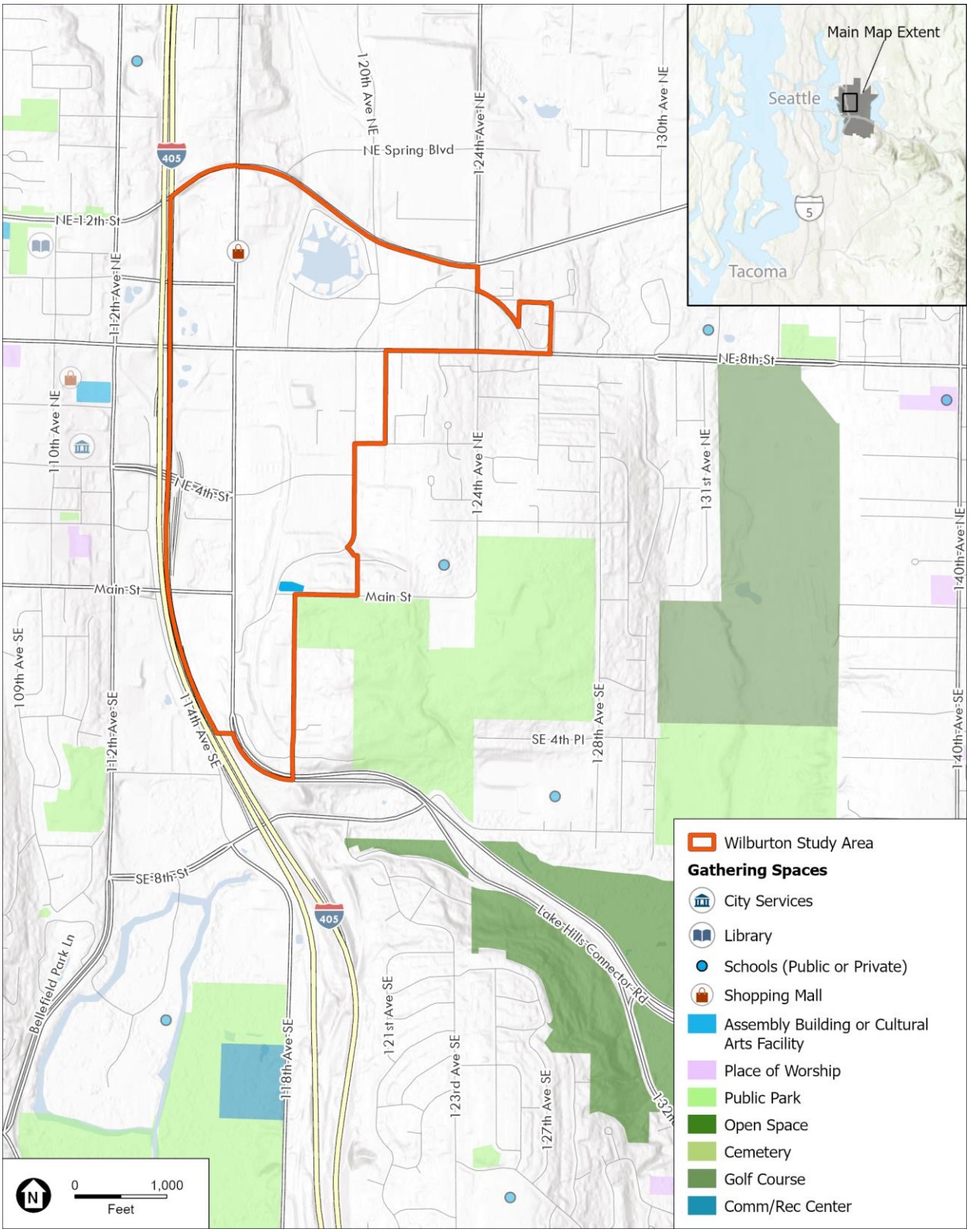
SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

FIGURE 3-13 **Current Land Use, Wilburton Study Area**



SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

FIGURE 3-14 **Community Amenities, Wilburton Study Area**



SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

FIGURE 3-15 **Community Gathering Spaces, Wilburton Study Area**

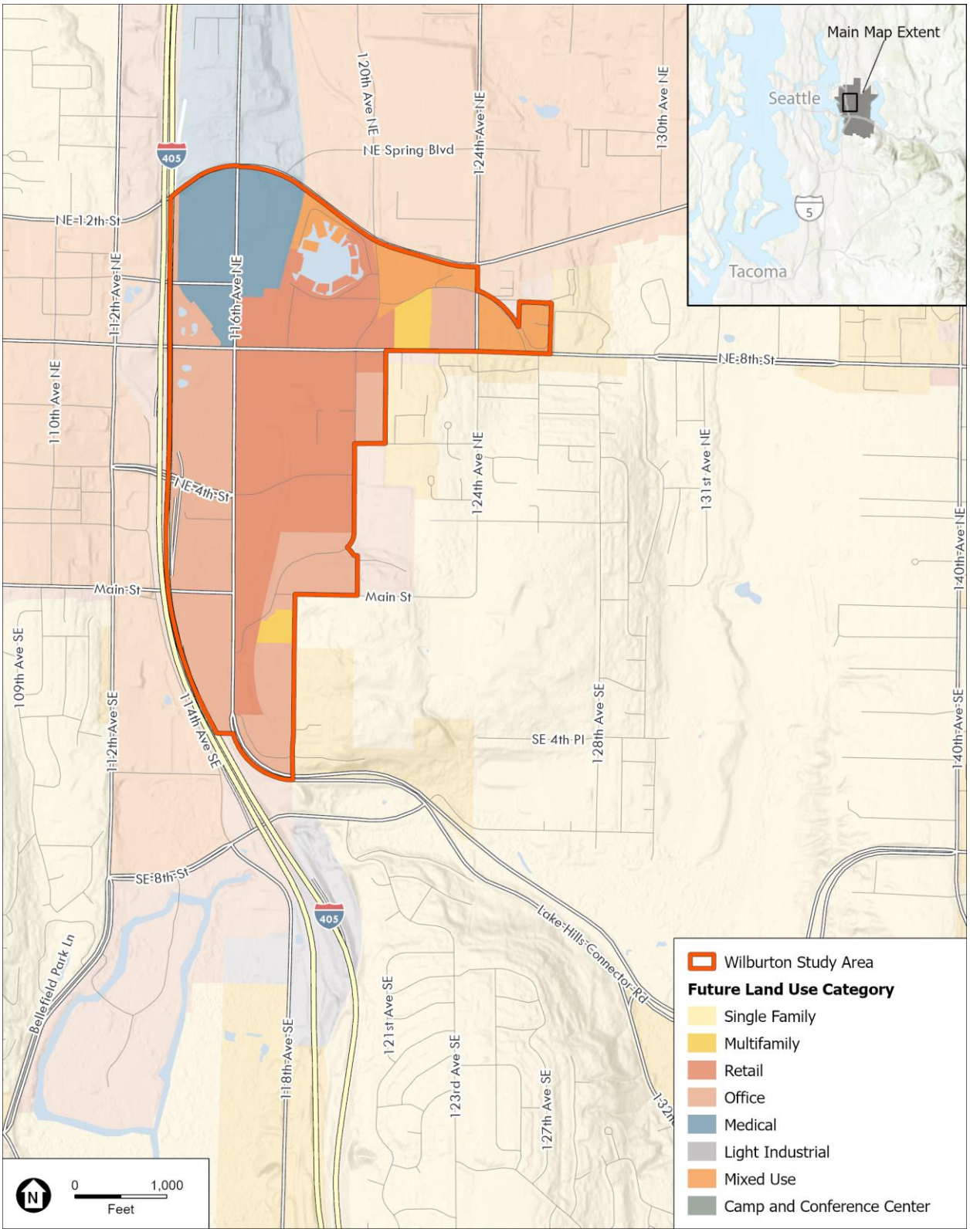
The Wilburton study area is also bisected north to south by a former BNSF rail corridor called the Eastrail (formerly known as the Eastside Rail Corridor). The Eastrail is currently being developed as an uninterrupted, 42-mile multi-use trail extending from Gene Coulon Memorial Beach Park in Renton, north through Bellevue, to Woodinville and the city of Snohomish in Snohomish County. Other nearby sections include the Cross Kirkland Corridor and the Redmond Central Connector.

The future Grand Connection will bisect the study area west to east. The Grand Connection is a place-making initiative that functions as a series of cohesive, connected, and memorable spaces and pedestrian-focused experiences through Downtown Bellevue. With a length of over 1.5 miles, the Grand Connection begins at the Lake Washington waterfront at Meydenbauer Bay Park, and winds through Old Bellevue and Downtown Park. It continues through Bellevue's retail and civic-focused parts of Downtown, across I-405, and ultimately connects with the regional Eastrail in the Wilburton study area. Ultimately the Grand Connection will influence the land use patterns of the Wilburton study area by improving connectivity to Downtown and creating a landmark piece of infrastructure.

Comprehensive Plan Land Use and Zoning

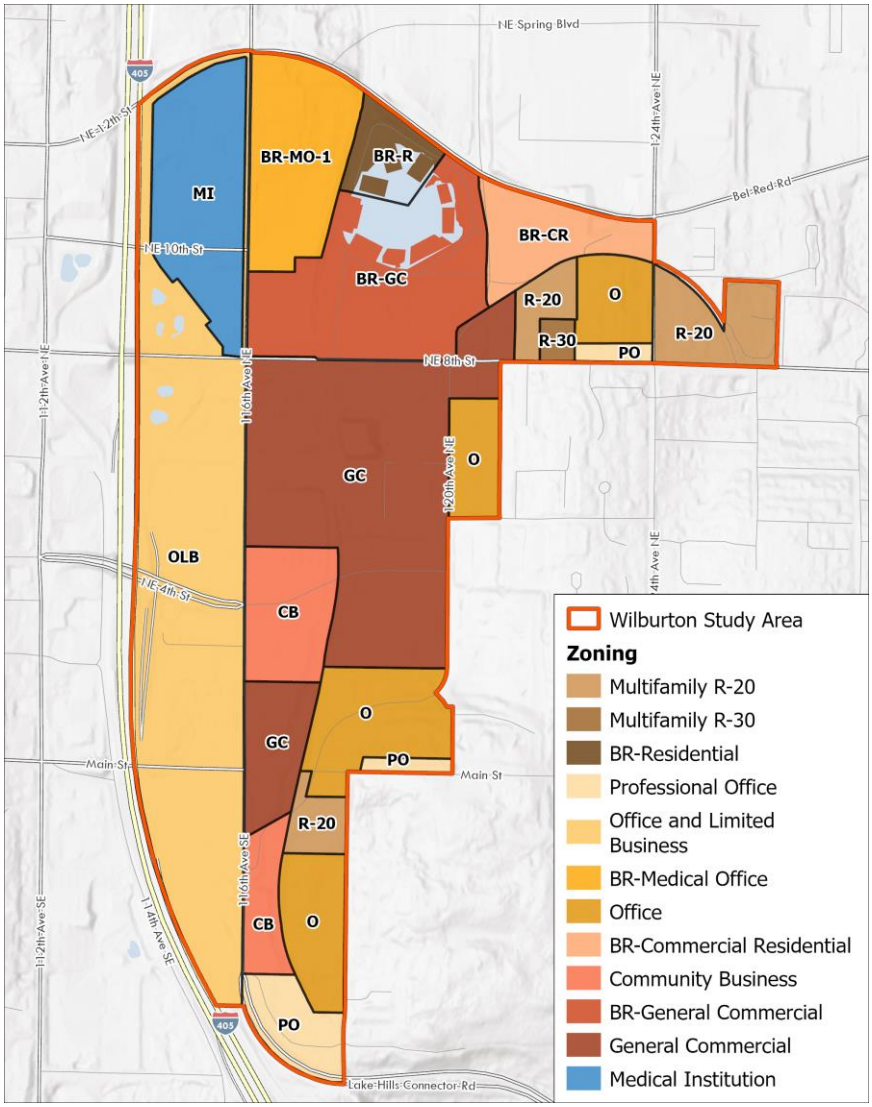
Comprehensive Plan land use designations in the Wilburton study area are primarily retail or office (37 percent each). The area north of NE 8th Street surrounding 116th Avenue NE is designated medical (14 percent) uses consistent with current uses in the area. Another 9 percent of the Wilburton study area is designated mixed use around 124th Avenue NE, and 3 percent is designated medium- or high-density multi-family on the eastern edge east of 120th Avenue NE. See Table 3-6 and **Figure 3-16**.

Current zoning in the Wilburton study area implements the existing land use and subarea policies of the Comprehensive Plan, including the Wilburton/NE 8th Street Subarea Plan (Comprehensive Plan Volume 2). It includes a mix of primarily office (44 percent) and commercial zones (41 percent), with the remainder split between multi-family (8 percent) and medical institution (7 percent) zones. See Table 3-7 and **Figure 3-17**.



SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 3-16 **Comprehensive Plan Land Use, Wilburton Study Area**



The **General Commercial (GC)** and **BelRed General Commercial (BR-GC)** zones allow a wide variety of businesses and support a mix of auto sales, large format retail, and small retail.

Community Business (CB) is a retail and service district.

The **Medical Institution (MI)** district and **BelRed Medical Office (BR-MO-1)** allow hospital and medical offices.

The **Professional Office (PO)**, **Office (O)**, and **Office Limited Business (OLB)** allow for a variety of types of office uses. PO allows the lowest intensity offices, designed to be compatible with nearby residential. Office uses are oriented toward arterials or commercial areas but may serve as a buffer between residential and commercial areas. OLB is an office district that also allows hotels, eating establishments, and some retail sales.

The **Multifamily Residential (R-20 and R-30)** zones allow attached dwellings at medium densities of 10-30 units an acre.

BelRed Commercial Residential (BR-CR) is the only zone that encourages mixed use development on individual sites and the study area as a whole. This area is located between NE Bel-Red Road and NE 12th Street.

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: See Table 3-2 for summary of generalized current zoning categories and overlay districts.

FIGURE 3-17 **Current Zoning, Wilburton Study Area**

Shorelines

There are no designated shorelines in the Wilburton study area. See Table 3-8 and Figure 3-8.

3.3 Potential Impacts

3.3.1 Thresholds of Significance

The following impact categories were used to identify potential adverse land use impacts in the city—capacity to accommodate growth targets, land use compatibility, displacement risk, and access to community assets. The alternatives are expected to result in a land use impact if:

- **Growth targets:** The action would result in insufficient capacity to accommodate adopted citywide growth targets, including requirements to accommodate affordable housing across income bands and a range of housing types. Growth targets are established citywide and so considered only as a citywide threshold.
- **Land use compatibility:** The action would result in a change to land use patterns or development intensities that preclude reasonable transitions between zones with less and more intensive impacts in terms of noise, air quality, light/glare, and shade/shadow.
- **Displacement:** The land use pattern would result in involuntary residential or commercial displacement as a result of redevelopment.
- **Access to community assets:** The action would discourage or reduce diverse uses within ¼ mile of major transit stops or would result in a land use pattern that limits convenient access to community gathering spaces for households or employees.

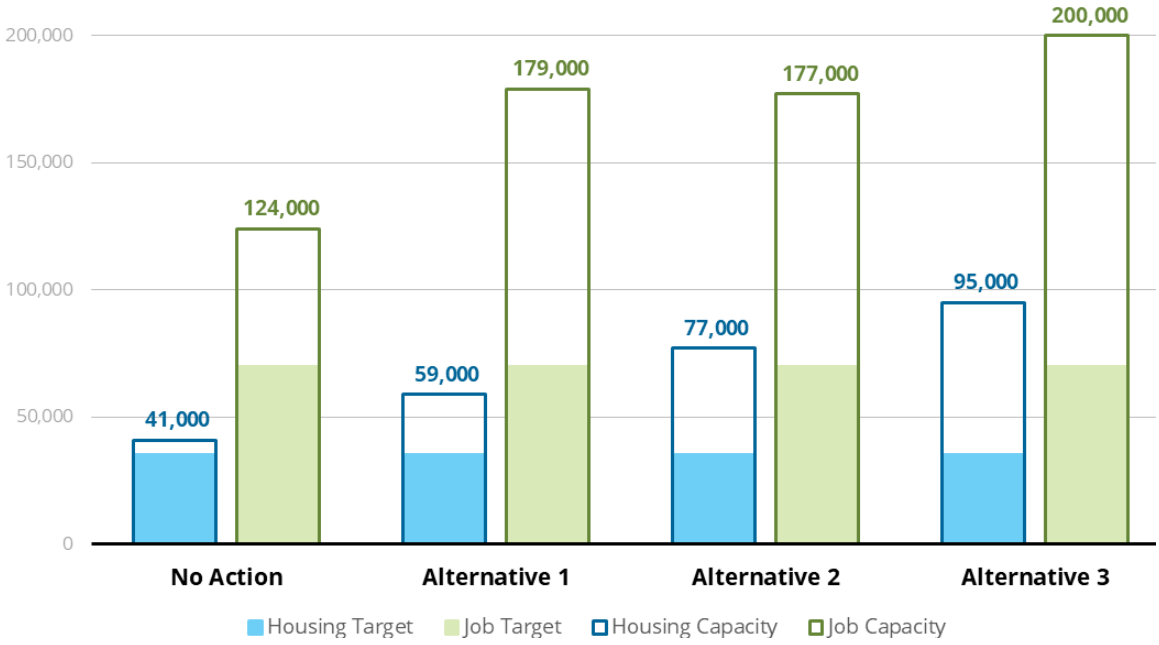
Land use impacts of the alternatives are considered significant if there is an acute/severe adverse impact within one of the impact categories defined below, or if there are cumulative land use impacts in multiple categories within the Mixed Use Centers, Neighborhood Centers, transit-proximate areas, or Wilburton study area. Transit-proximate areas are based on the 2021 BRT network and does not include future bus or light rail).

3.3.2 Impacts Common to All Alternatives

GROWTH TARGETS

New growth is expected to occur under all the alternatives, although the amount of growth and composition of the mix of land uses would vary by alternative. Activity levels would increase across the city with new businesses, residents, and employees. King County's

adopted Countywide Planning Policies (CPPs) establish a housing target of 35,000 units and job target of 70,000 by 2044 for Bellevue.[10] **Figure 3-18** summarizes the distribution of capacity for housing and job growth citywide compared to the adopted targets. Citywide, the housing and job capacity analyzed under each alternative are higher than the adopted targets, with the Wilburton study area accounting for between 15 and 18 percent of citywide housing capacity and 22 and 25 percent of citywide job capacity under the Action Alternatives. However, the No Action Alternative does not meet other new planning requirements for affordable housing across income bands or a range of housing types and so **an adverse growth target impact is expected under the No Action Alternative. No adverse land use impacts related to the citywide growth targets are expected under the Action Alternatives.**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Growth estimates are rounded to the nearest 1,000. The actual pace of growth could differ or be less than what is shown. Housing and job capacity used in this EIS analysis is higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report. See Chapter 2, *Alternatives*, and Chapter 4, *Relationship to Plans and Policies*, for a discussion of why these numbers are different.

FIGURE 3-18 **Net Capacity for Growth Citywide vs. Adopted Targets (2019-2044), All Alternatives**

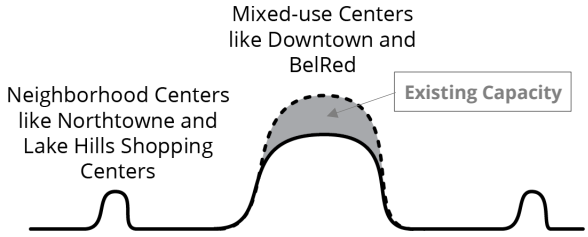
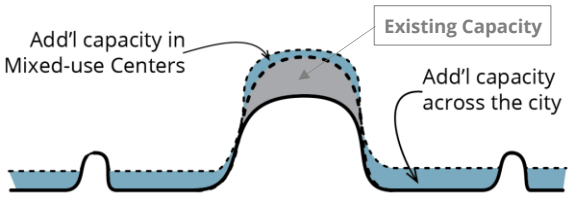
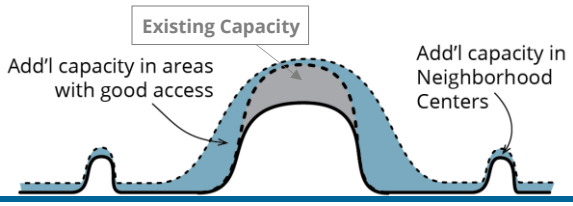
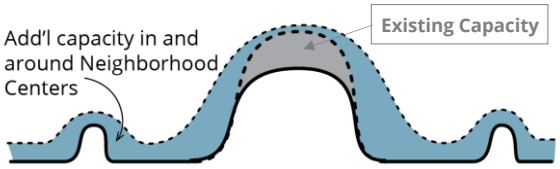
[10] Growth targets were adopted in 2019. Growth targets are based on actual growth projections prepared by the state whereas development capacity is based on assumptions about how much land is redevelopable and the type of projects that could be developed under existing zoning. Net capacity for growth under each of the alternatives is relative to 2019 housing and jobs. Housing and job capacity used in this EIS analysis is higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report. See Chapter 2, *Alternatives*, and Chapter 4, *Relationship to Plans and Policies*, for a discussion of why these numbers are different.

LAND USE COMPATIBILITY

Housing and employment growth under all alternatives will result in additional development activity **citywide**. The primary differences among the alternatives are in the proposed distribution and intensity of growth in various parts of the city and in the land use patterns projected to result. The actual pace and distribution of future growth would be influenced in part by the implementation of Comprehensive Plan policies, related regulations, and actions, and by decisions made by individual property owners and developers.

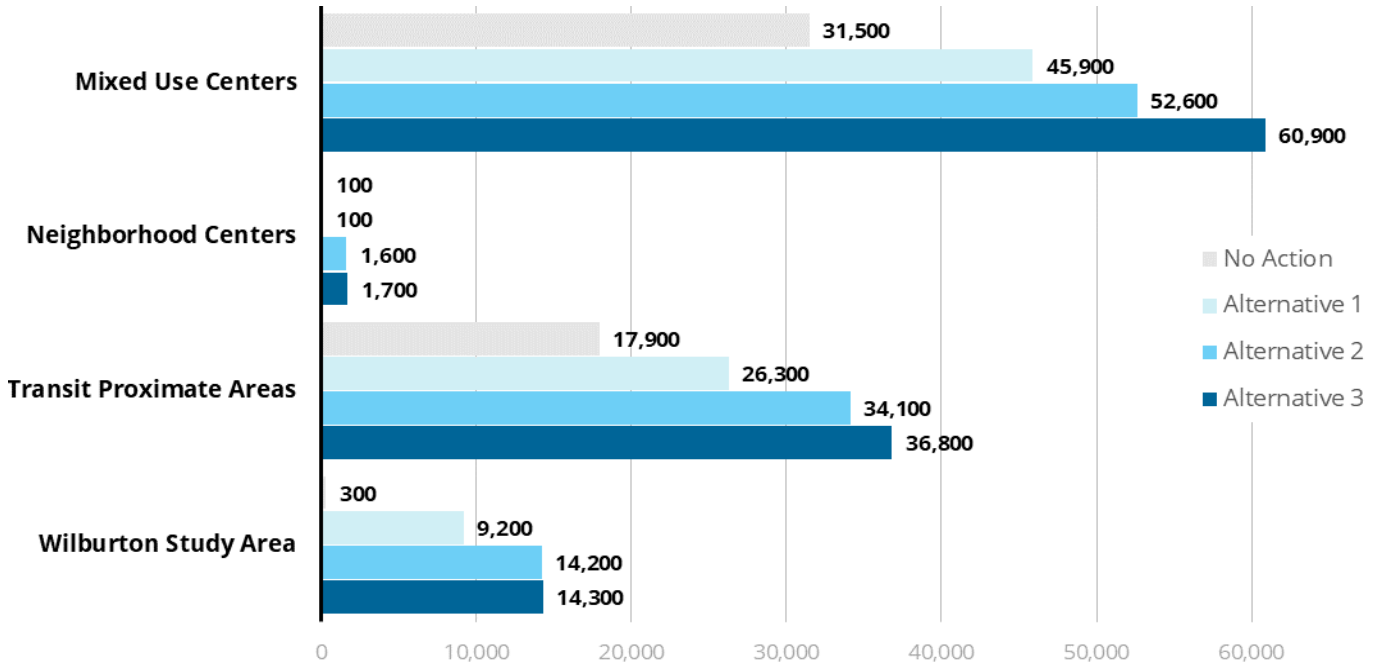
All alternatives would focus the majority of future growth into the existing Mixed Use Centers, which are currently characterized by higher densities and a more diverse mix of uses than other areas of the city. Outside of the existing centers, most other areas of the city would continue to be comprised of predominantly low-density residential uses plus a range of parks and vegetated spaces. Overall, this would reinforce the existing citywide range and distribution of land use patterns, although the precise mix of uses and locations of development would vary by alternative as discussed below. See **Figure 3-19**. The larger "bump" in the middle of these figures shows capacity for growth in the Mixed Use Centers, the smaller bumps show capacity in the Neighborhood Centers, and capacity in the remainder or the city is shown elsewhere. The grey area is existing capacity under the No Action Alternative, while the blue is additional capacity under the Action Alternatives beyond the No Action Alternative.

Figure 3-20 and **Figure 3-21** summarize capacity for new housing and job growth under each alternative by specific location (Mixed Use Centers, Neighborhood Centers, transit-proximate areas, and the Wilburton study area). Capacity within each of the specific locations is generally lowest under the No Action Alternative and highest under Alternative 3—Alternative 3 also adds housing capacity around the Neighborhood Centers, not necessarily within them (see the discussion under Section 3.3.6, *Impacts of Alternative 3*). All alternatives would focus most future housing and job capacity into the existing Mixed Use Centers. Note that the Mixed Use and Neighborhood Centers are mutually exclusive geographic areas, while the transit-proximate areas and Wilburton study area overlap with the boundaries of the Mixed Use and Neighborhood Centers.

No Action	Alternative 1
FOCUS OF GROWTH: Primarily within Downtown, BelRed, and East Main. No changes to city's existing growth framework.	**FOCUS OF GROWTH:** Primarily in Mixed Use Centers (Downtown, BelRed, Wilburton-East Main, Crossroads, Factoria, Eastgate). Gentle density added across the city.
	
Alternative 2	**Alternative 3**
FOCUS OF GROWTH: Both in Mixed Use Centers and in areas with good access to transit/jobs.	**FOCUS OF GROWTH:** In Mixed Use Centers, in areas of high opportunity (good access to transit/jobs or near Neighborhood Centers).
	

SOURCE: City of Bellevue 2023; BERK 2023

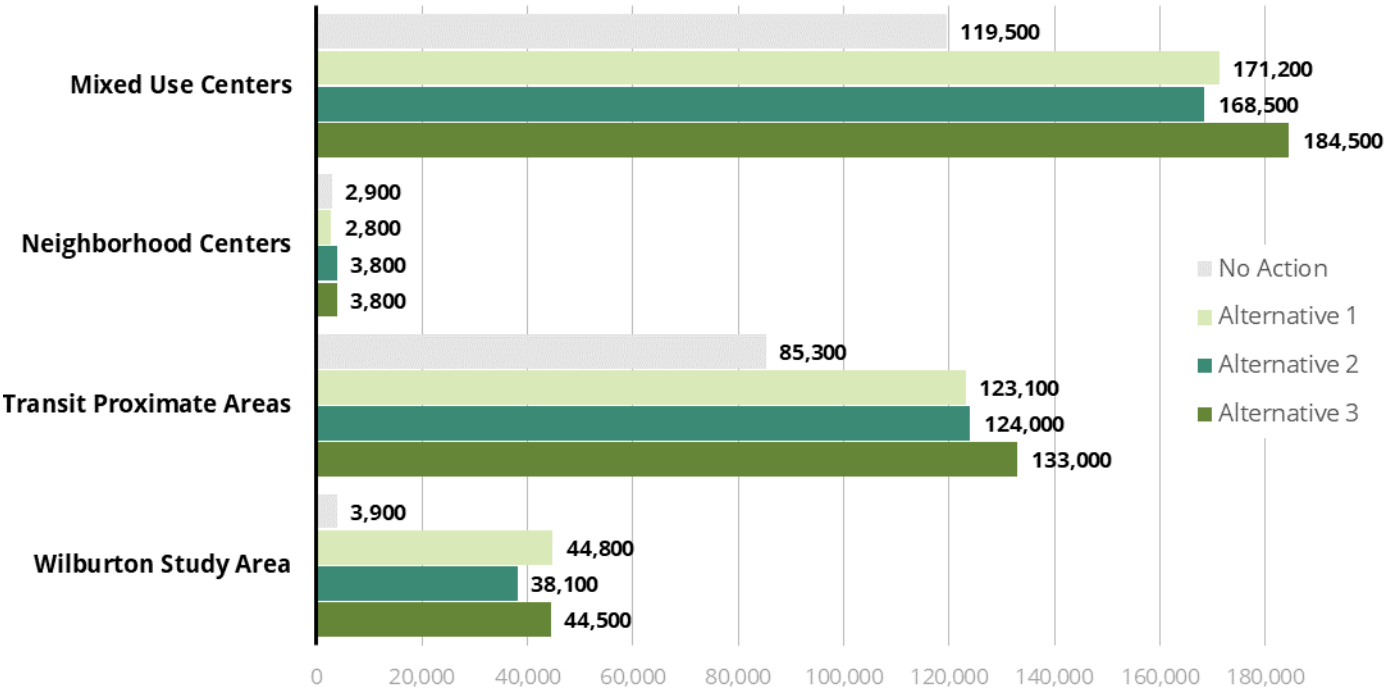
FIGURE 3-19 **Focus and Distribution of Growth Citywide, All Alternatives**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Growth estimates are rounded to the nearest 100. The actual pace of growth could differ or be less than what is shown. The Mixed Use and Neighborhood Centers are mutually exclusive geographic areas, while the transit-proximate areas and Wilburton study area overlap with the boundaries of the Mixed Use and Neighborhood Centers. The Wilburton study area is part of the Wilburton-East Main Mixed Use Center.

FIGURE 3-20 **Net Housing Capacity by Location (2019–2044), All Alternatives**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Growth estimates are rounded to the nearest 100. The actual pace of growth could differ or be less than what is shown. The Mixed Use and Neighborhood Centers are mutually exclusive geographic areas, while the transit-proximate areas and Wilburton study area overlap with the boundaries of the Mixed Use and Neighborhood Centers. The Wilburton study area is part of the Wilburton-East Main Mixed Use Center.

FIGURE 3-21 **Net Job Capacity by Location (2019–2044), All Alternatives**

Table 3-13 and **Table 3-14** compare percent share of citywide existing housing and jobs plus capacity by location under each alternative. The alternative with the highest percent share of housing or jobs is bolded for each location. A greater share of citywide capacity for housing and jobs would be shifted to the Mixed Use Centers under all alternatives. The Action Alternatives shift more housing to the Mixed Use and Neighborhood Centers than the No Action Alternative (with a corresponding decrease in the proportion of housing capacity in low-density residential areas under the Action Alternatives). Job capacity would continue to be focused in the Mixed Use Centers under any alternative, accounting for between 82 and 84 percent of jobs citywide, depending on the alternative. Downtown would continue to account for the greatest share of housing and job capacity within the Mixed Use Centers under any alternative, although a greater share of housing and job capacity would be shifted to other Mixed Use Centers under the Action Alternatives.

TABLE 3-13 **Percent Share of Citywide Total Housing and Jobs by Location (Existing + Capacity), All Alternatives**

Location	Housing					Jobs				
	Existing	Alt. 0	Alt. 1	Alt. 2	Alt. 3	Existing	Alt. 0	Alt. 1	Alt. 2	Alt. 3
Mixed Use Centers	27.7%	46.9%	**51.7%**	49.9%	49.4%	68.8%	81.9%	**84.0%**	83.7%	82.7%
Neighborhood Centers	0.3%	0.3%	0.2%	**1.3%**	1.2%	6.2%	**4.4%**	3.6%	3.9%	3.7%
Transit-Proximate Areas	29.7%	35.1%	36.8%	**37.7%**	35.1%	61.2%	64.8%	65.5%	**66.2%**	64.3%
Wilburton Study Area	0.6%	0.7%	7.8%	**10.4%**	9.2%	6.8%	5.1%	**17.1%**	15.1%	15.9%
Low-Density Residential	48.4%	**33.0%**	28.9%	27.0%	28.7%	4.8%	**2.4%**	2.0%	2.0%	1.9%

SOURCE: City of Bellevue 2023; BERK 2023

NOTES: The alternative with the highest percent share of housing or jobs is **bolded** for each location. Values do not sum to 100% by alternative as not all geographies are mutually exclusive.

TABLE 3-14 **Percent Share of Mixed Use Center Total Housing and Jobs by Center (Existing + Capacity), All Alternatives**

Location	Housing					Jobs				
	Existing	Alt. 0	Alt. 1	Alt. 2	Alt. 3	Existing	Alt. 0	Alt. 1	Alt. 2	Alt. 3
Downtown	56.5%	**58.1%**	48.7%	44.1%	39.9%	63.1%	**69.3%**	52.6%	53.2%	50.7%
BelRed	3.4%	19.3%	16.8%	15.2%	**22.3%**	5.7%	10.5%	13.2%	**15.4%**	14.6%
Eastgate	1.1%	1.0%	0.9%	**1.1%**	1.0%	6.4%	**3.2%**	2.7%	2.8%	2.6%
Factoria	6.8%	3.5%	3.9%	4.6%	**5.1%**	8.9%	3.7%	4.2%	3.7%	**5.8%**
Wilburton-East Main	2.3%	4.9%	17.8%	**23.2%**	20.9%	12.2%	10.8%	**24.1%**	21.8%	22.9%
Crossroads	29.9%	**13.0%**	11.5%	11.8%	10.7%	3.8%	2.5%	3.2%	3.2%	**3.4%**

SOURCE: City of Bellevue 2023; BERK 2023

NOTES: The alternative with the highest percent share of housing or jobs is **bolded** for each location. Values do not sum to 100% by alternative as not all geographies are mutually exclusive.

All alternatives include some amount of redevelopment. Future growth under all alternatives is likely to increase the frequency of different land use types locating close to one another, and similarly likely to increase the frequency of land use patterns that contain mixes of land uses with differing levels of intensity, both within the Mixed Use Centers and, to a varying extent, in other areas of the city. Current land use patterns also do not reflect the height or bulk allowed by the zoning code in some parts of the city (such as in the Factoria and Eastgate Mixed Use Centers), and under all alternatives the intensity of employment and mixed use growth would likely increase. As redevelopment occurs, there is potential for localized

land use compatibility impacts to occur where newer development is of greater height and intensity than existing development. These compatibility impacts, if they occur, are likely temporary and would resolve over time. The extent of these conflicts varies by alternative and can be reduced by the application of existing or new development and design standards. Chapter 6, *Aesthetics*, includes additional analysis of potential compatibility impacts related to neighborhood character, physical form (height, bulk, and scale), viewsheds, shadows, and light and glare.

Goals and policies in Bellevue's current Comprehensive Plan support diverse and mixed uses in the **Mixed Use Centers** to encourage these areas as compact, livable, and walkable parts of the city. Most of the centers are or will be served by served by the city's frequent transit network by 2044, and mixing uses in these areas makes it possible for people to conduct more of their daily business without driving—this reduces vehicle miles traveled, encourages physical activity for residents and employees, and improves equitable access to the numerous amenities and community gathering spaces located in the Mixed Use Centers. Some adjacencies, however, could cause adverse compatibility impacts on less-intense uses. Over time, infill development and redevelopment would occur in centers to accommodate increased growth under all of the alternatives, gradually increasing the intensity of development in portions of the centers that are not currently developed to their full capacity.

New mixed use development may be introduced to areas originally developed under single-use zoning under any of the alternatives. This could occur in centers where zoning has already changed since original construction, or where zoning could potentially change under any alternative if rezones to mixed use zones occur in the future. More mixing of uses increases the likelihood of localized adverse spillover effects such as residential or commercial activities that might lead to increased noise. These compatibility challenges would not be an uncommon or new phenomenon within Bellevue's more urbanized centers, but they would represent a potential adverse land use impact of future growth under any alternative. Such impacts can be avoided or mitigated by continuing to implement land use policies and zoning patterns that consider the potential for land use incompatibilities and avoid them through use of transitions in intensity, use restrictions, and/or avoiding proximity of certain kinds of zones. Complaint-based enforcement of the city's applicable regulations pertaining to noise, nuisance, and public safety would also continue to provide protection against some of these potential impacts.

The city's **Neighborhood Centers** support smaller, neighborhood-oriented retail, provide goods and services to local residents, and serve as important focal points and gathering spaces for the surrounding communities. Current land use patterns do not reflect the height or bulk allowed by the zoning code in some of the Neighborhood Centers, and under all alternatives the intensity of employment and growth would likely increase modestly in these areas. This could result in compatibility challenges with adjacent low-density residential neighborhoods under any of the alternatives. Such impacts, if they occur, are likely temporary and would resolve over time. The extent of these conflicts varies by alternative and can be reduced by the application of existing or new development and design standards.

Many of the existing and future **transit-proximate areas** of the city overlap with the Mixed Use and Neighborhood Centers (see the discussion above). Outside of the centers, most transit-proximate areas of the city would continue to be comprised of predominantly **low-density residential** uses plus a range of parks and vegetated spaces under all alternatives. Areas zoned for low-density residential (R-1 through R-7.5) would have capacity for between 7 and 15 percent of future housing growth under all alternatives. Under the Action Alternatives, duplexes, triplexes, cottage housing, or other low-density typologies would be allowed in these areas. This could result in localized land use compatibility impacts where newer development is of greater height and intensity than existing development. These compatibility impacts, while more likely under the Action Alternatives, would be minimal and can be mitigated through careful attention to zoning and development regulations.

Citywide, adverse land use compatibility impacts are expected under any of the alternatives.

Wilburton Study Area

Under all alternatives, the densest growth and greatest building heights in the **Wilburton study area** are focused in the core around the light rail station, Eastrail, and Grand Connection. These are also the most likely areas for redevelopment. Land use compatibility impacts are unlikely to occur under all alternatives to the north, southwest, or west where current and planned building heights, intensities, and uses are similar. To the north, redevelopment at higher intensities and with a greater mix of uses in BelRed's Spring District is already changing land use patterns in the area. Redevelopment of the Spring District will likely continue to proceed ahead of redevelopment in the Wilburton study area under any of

the alternatives. To the west and south, I-405 is a physical barrier between the Wilburton study area and Downtown Bellevue and East Main Station area. Potential land use compatibility impacts on the east and southeast are discussed below under each alternative.

Land use changes in the Wilburton study area will also be supported by high-capacity transit, the development of Eastrail and the Grand Connection, and improvements to 116th Avenue NE. These improvements will provide important transportation resources to support land use in all alternatives and, collectively, will provide pedestrian, bicycle, and transit connections for future residents and employees to commute to and from and circulate within the Wilburton study area. The integration of transit and nonmotorized travel modes minimizes the use of land for auto-related uses such as parking. The presence of people walking, biking, and waiting at transit stops adds activity to an area that supports a safe and vibrant environment. See Chapter 11, *Transportation*, for additional discussion of transportation impacts in the Wilburton study area.

Adverse land use compatibility impacts in the Wilburton study area are expected under any of the alternatives.

DISPLACEMENT

All alternatives provide capacity for housing, population, and employment growth and include some amount of new development or redevelopment. As future development occurs, some residents and businesses may be displaced through redevelopment or priced out as land prices and rents increase. Limited redevelopment under the No Action Alternative could push land costs and rents higher than the Action Alternatives, resulting in more potential for displacement as a result of rising costs. In contrast, potential displacement as a result of redevelopment could occur under all alternatives but may be lower in the No Action Alternative as a result of lower overall capacity for growth. However, capacity numbers are presented as net increases above existing; the presumption is that current housing and commercial space can be replaced and there could be additional housing and jobs above existing levels. Figure 3-20 and Figure 3-21 summarize capacity for new housing and job growth by specific location under each alternative. **Table 3-15** and **Figure 3-22** summarize capacity for growth in commercial square footage citywide and by specific location. Capacity for all types of growth within each of the specific locations is generally lowest under the No Action Alternative and highest under Alternative 3.

Displacement

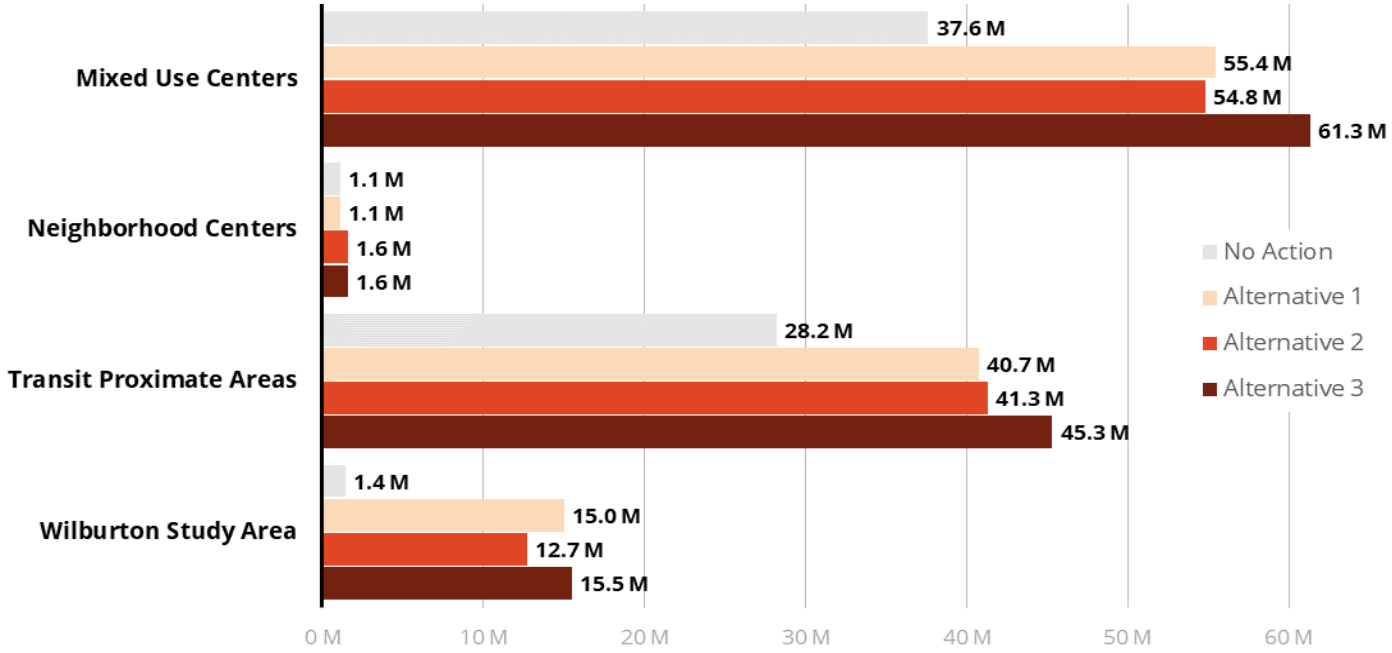
Displacement refers to the involuntary relocation of current residents or businesses. This can be caused by a number of factors such as rent increases, lease non-renewals or eviction to make way for new development, or changes in a neighborhood's character. This analysis primarily considers direct physical displacement of commercial or residential properties as a result of possible redevelopment or rising costs.

TABLE 3-15 **Net Capacity for Growth in Commercial Square Footage by Location, All Alternatives**

Location	Alternative 0 (No Action)	Alternative 1	Alternative 2	Alternative 3
Citywide	**40,000,000**	**58,500,000**	**58,300,000**	**67,300,000**
Mixed Use Centers	37,600,000	55,400,000	54,800,000	61,300,000
Neighborhood Centers	1,100,000	1,100,000	1,600,000	1,600,000
Transit-Proximate Areas	28,200,000	40,700,000	41,300,000	45,300,000
Wilburton Study Area	1.400,000	15,000,000	12,700,000	15,500,000

SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Growth estimates are rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown.



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Growth estimates are rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown. The Mixed Use and Neighborhood Centers are mutually exclusive geographic areas, while the transit-proximate areas and Wilburton study area overlap with the boundaries of the Mixed Use and Neighborhood Centers. The Wilburton study area is part of the Wilburton-East Main Mixed Use Center.

FIGURE 3-22 **Net Capacity for Growth in Commercial Square Footage by Location (2019–2044), All Alternatives**

Residential Displacement

Adopting policies to preserve affordable housing is one way to discourage and mitigate residential displacement as redevelopment occurs. The city would continue to offer incentives for development of affordable housing under all alternatives. Many incentives are available to developers of multi-family projects—including density bonuses, minimum parking reductions, and property tax exemptions.

Some of these currently apply anywhere multi-family development is allowed, while others are specific to certain neighborhoods and vary by location. The Action Alternatives integrate additional affordability or anti-displacement strategies like inclusionary housing to mitigate the impacts of displacement and supply more affordable housing overall. **Citywide, adverse residential displacement impacts are expected under all of the alternatives.** See also Chapter 7, *Housing*, for a more detailed discussion of residential displacement risk, including housing supply, affordability and naturally occurring affordable housing, homeownership opportunities, varied housing typologies, and proposed measures to mitigate residential displacement.

PSRC Displacement Risk

PSRC mapped displacement risk and the location of naturally occurring affordable housing region wide as part of the VISION 2050 Regional Growth Strategy. The index combines data at the Census Tract level about socio-demographics, transportation qualities, neighborhood characteristics, housing, and civic engagement to identify neighborhoods in the region at higher risk of displacement so policy makers can prevent it from happening in the future. PSRC's displacement risk index and mapping of naturally occurring affordable housing are discussed in more detail in Chapter 7, *Housing,* as part of the residential displacement analysis.

Commercial Displacement

Displacement can also affect local businesses and organizations and is more likely under the Action Alternatives than the No Action Alternative. No specific policies are proposed under any of the alternatives to preserve or support more affordable commercial space, defined by the city as 80 percent of the citywide overall rate. Commercial vacancy rates are also currently very low (see Figure 3-3)—this may indicate the current market is less likely to accommodate additional growth or moves which could stagnate job growth or exacerbate involuntary commercial displacement as redevelopment occurs. New mixed use developments would likely offer smaller, more urban spaces than many of the single-use commercial spaces available today—while the ultimate type and footprint of future commercial development could vary under any of the alternatives, existing business may need to adopt a more urban or mixed use-oriented business model to stay in these areas as redevelopment occurs. Land use patterns and policies to mitigate potential displacement and support small-scale commercial, retail, and mixed use development in various parts of the city vary by alternative and are discussed below. **Citywide, adverse commercial displacement impacts are expected under all of the alternatives.** See also Chapter 5, *Population and Employment*, for a discussion of employment growth and job mix.

Wilburton Study Area

All alternatives include some amount of new development or redevelopment in the Wilburton study area, although the amount, intensity, and mix of growth would be substantially higher under the Action Alternatives than the No Action Alternative. **Adverse residential and commercial displacement impacts in the Wilburton study area are expected under all alternatives** (although residential displacement would be limited as very little housing is currently in the Wilburton study area). Parcels of land with a low ratio of improvement value (the value of the buildings) compared to land value are the most likely to be replaced. As future development occurs, there is potential for the limited number of existing residential buildings in the study area to be torn down or replaced with larger buildings under any of the alternatives.

Some businesses may also be displaced through redevelopment or priced out as land prices and rents increase under any of the alternatives. These could include single-purpose low-intensity uses, small-scale retailers, and auto dealerships. Future development is expected to focus on parcels likely to redevelop, which includes several auto dealerships. Given their large parcel sizes, freeway exposure, location between Downtown and BelRed, and proximity to planned light rail, auto-dealership sites have high long-term redevelopment potential, and market factors may cause these sites to redevelop regardless of any changes to land use. Redevelopment along Eastrail and in conjunction with the Wilburton Trestle project at the Eastrail crossing at SE 5th Street could also occur under any of the alternatives.

Overall, potential displacement of some businesses in lower intensity formats (including but not limited to auto dealerships) could occur under all alternatives but may be lower in the No Action Alternative. Increases in commercial square footage under the Action Alternatives may be sufficient to accommodate any businesses that may be displaced since most current businesses are generally of the type that can be accommodated in mixed use environments. Increasingly, this is the case for auto dealerships as well. Although most auto dealerships across the county occupy low-slung buildings surrounded by large surface lots for parking, some dealerships have changed their form to a higher intensity, urban format as suburban commercial areas redevelop into urban, mixed use environments. Urban-format dealerships have become part of mixed use development by storing their cars in a parking garage or off-site locations and occupying storefronts along with other non-auto

retailers. Commercial rents in new buildings, however, may not be affordable to existing businesses (auto dealerships and others) and some businesses may not be able to return to the area after redevelopment even if the space is available.

ACCESS TO COMMUNITY ASSETS

All alternatives would focus the majority of future growth into the existing Mixed Use Centers, which currently have the highest concentration of amenities, diverse uses, and community gathering spaces. Figure 3-4 and Figure 3-5 map existing community amenities and gathering spaces citywide, respectively, and Figure 3-12 maps diverse uses within ¼ mile of transit-proximate areas.[11] Under all alternatives, future light rail stations and the resulting expanded frequent transit service areas (future transit-proximate areas) would improve access to existing and new amenities and gathering spaces. Future transit-proximate areas that overlap the Mixed Use Centers would likely continue to consist of the widest variety of commercial, mixed use, and office-related uses (consistent with the center designations). Parks and open space, schools, and places of worship would likely continue to be the primary community gathering spaces outside of the Mixed Use Centers both within future transit-proximate areas and throughout other parts of the city. Citywide, overall capacity for growth and resulting access to community assets would vary some by alternative as discussed below—for example, alternatives with greater capacity for housing and jobs within Neighborhood Centers and transit-proximate areas could increase access to a greater diversity of uses for more people.

Access to community assets within the **Wilburton study area**—including amenities, diverse uses, and community gatherings spaces—are discussed below by alternative.

No adverse impacts regarding access to community assets citywide or within the Wilburton study area are expected under any of the alternatives, although some alternatives would likely improve access more than others.

[11] See Table 3-14 for the broad categories of diverse use.

3.3.3 Impacts of Alternative 0 (No Action)

GROWTH TARGETS AND LAND USE COMPATIBILITY

The No Action Alternative has the lowest capacity for housing and jobs of all the land use alternative and applies future growth to existing conditions using the policies and zoning that are in place today. Comprehensive Plan land use under the No Action Alternative would be consistent with current plans, zoning, and development regulations. **Citywide**, Alternative 0 (No Action) would have capacity for 41,000 additional housing units (6,000 *above* the 35,000 CPP housing target)[12] and 124,000 additional jobs (54,000 *above* the 70,000 CPP target). There would also be estimated capacity for up to 40.0 million square feet of commercial development. Figure 3-18 compares net housing and job capacity to the adopted targets. Figure 2-2, *Alternative 0 (No Action) Density of Net Housing Capacity*, and Figure 2-3, *Alternative 0 (No Action) Density of Net Job Capacity*, map citywide density of housing and job capacity, respectively, under the No Action Alternative (see also Figure 3-20 and Figure 3-21 for growth by location). While housing and job capacity under the No Action Alternative are above the adopted targets, the No Action Alternative does not meet other new planning requirements for affordable housing across income bands or a range of housing types, and so **a moderately adverse land use impact related to the citywide growth target is expected under the No Action Alternative**.

Growth under the No Action Alternative would be consistent with recent development trends in Bellevue, and land use compatibility impacts would be similar to those described under Section 3.3.2, *Impacts Common to All Alternatives*. This means there is the potential for the mix of new and existing uses to generate adverse localized incompatibilities, either within the Mixed Use Centers or at their periphery where more intense development inside a center could occur adjacent to low-intensity uses outside the center. However, the city's adopted development regulations contain provisions to reduce impacts associated with Comprehensive Plan land use adjacencies and transitions. Therefore, **moderately adverse land use compatibility impacts are expected citywide under the No**

[12] While housing capacity is above the adopted target, the No Action Alternative does not meet other new planning requirements, including affordable housing across income bands and a range of housing types. See Chapter 7, *Housing*, and Chapter 4, *Relationship to Plans and Policies*.

Action Alternative but would be reduced to less-than-significant levels with the application of existing mitigation measures.

Wilburton Study Area

Under the No Action Alternative, the Wilburton study area has an estimated capacity for an additional 300 housing units, 3,900 jobs, and 1.4 million square feet of commercial development. As in other areas of the city, there would be no changes to designations on the Comprehensive Plan Land Use Map and no policy, zoning, or regulation changes in the study area under the No Action Alternative.

The mix of land uses under the No Action Alternative would likely remain similar to existing conditions as the area grows. Increased flow of traffic—whether transit-oriented, auto-oriented, or non-motorized—could increase the likelihood of redevelopment in a few areas. There is likely to be some redevelopment in the vicinity of the light rail station, but concentrated transit-oriented development is not expected under current plans and regulations. The extension of NE 6th Street to 116th Avenue NE would create a stronger connection between Wilburton and Downtown, which could lead to increased likelihood of redevelopment on NE 6th Street. The same could be true along Eastrail and in conjunction with the Wilburton Trestle project at the Eastrail crossing at SE 5th Street under the No Action Alternative.

Redevelopment of some areas may result in larger buildings where new construction maximizes development on parcels that are currently underutilized based on existing zoning, particularly in areas already planned in the BelRed Subarea Plan. This is most likely to occur for medical-related uses or near the light rail station in the northern end of the Wilburton study area or where redevelopment occurs on lots formerly used for auto sales.

Under the No Action Alternative, long-term land use compatibility impacts are unlikely within most of the Wilburton study area given the mix of land uses and building forms similar to existing conditions. However, future land use patterns would not support the incoming light rail station or planned investments in Eastrail, the Grand Connection, and 116th Avenue NE, and so **a moderately adverse land use compatibility impact in the Wilburton study area is expected under the No Action Alternative**. Compatibility impacts are unlikely to the east and southeast given current Comprehensive Plan land use designations, zoning, and site design requirements.

DISPLACEMENT

Growth under the No Action Alternative would be consistent with recent development trends in Bellevue—the mix and pattern of land uses would remain similar to existing conditions, and the city would continue to implement existing housing affordability and anti-displacement strategies as described under Section 3.3.2, *Impacts Common to All Alternatives*. As future development occurs, some residents and businesses may be displaced through redevelopment or priced out as land prices and rents increase. Limited redevelopment under the No Action Alternative would likely push land costs and rents higher, thus increasing potential displacement as a result of rising costs. In contrast, potential displacement as a result of redevelopment is likely lowest under the No Action Alternative as a result of lower overall capacity for growth (see Figure 3-20 and Figure 3-21).

Residential Displacement

Lower supply overall of new housing units under the No Action Alternative also means that fewer units could take advantage of current affordability incentives. Homeownership opportunities and housing typologies would also continue to be limited in single-family areas. In keeping with current trends, supply would likely continue to be constrained and pressure to redevelop existing and naturally occurring affordable housing into large, single-family residences unaffordable to low- and middle-income households would likely continue under the No Action Alternative. **Citywide, adverse residential displacement impacts are expected under the No Action Alternative.** See also Chapter 7, *Housing,* for a more detailed discussion of residential displacement risk.

Commercial Displacement

The No Action Alternative has the potential to displace existing businesses due to new growth. This is less likely than under the Action Alternatives given retention of current building typologies in some areas and less opportunity to add population supporting more business growth; overall capacity for growth in commercial square footage citywide and by specific location is lowest under the No Action Alternative (see Table 3-15 and Figure 3-22). Mixed use development would continue to be limited to the Mixed Use Centers and the Neighborhood Centers would continue to primarily offer single use commercial or retail space. Land use patterns in other parts of the city that support retention or development of small-scale

commercial space affordable to small business and entrepreneurs would be limited. **Citywide, moderately adverse commercial displacement impacts are expected under the No Action Alternative.** See also Chapter 5, *Population and Employment*, for a discussion of employment growth and job mix under the No Action Alternative.

Wilburton Study Area

Moderately adverse residential and commercial displacement impacts in the Wilburton study area are expected under the No Action Alternative. Impacts would be similar to those described under Section 3.3.2, *Impacts Common to All Alternatives*.

ACCESS TO COMMUNITY ASSETS

No impacts regarding access to community assets citywide or within the Wilburton study area are expected under the No Action Alternative. The No Action Alternative includes the lowest capacity of all alternatives citywide and within transit-proximate areas. **Citywide**, the range and distribution of land use patterns would be similar to existing patterns. Future transit-proximate areas that overlap the Mixed Use Centers would likely continue to consist of the widest variety of commercial, mixed use, and office-related uses (consistent with the center designations). Within the **Wilburton study area**, most amenities would continue to be healthcare or food related and community gathering spaces would be limited under the No Action Alternative. Parks and open space, schools, and places of worship would likely continue to be the primary community gathering spaces outside of the Mixed Use Centers (both within future transit-proximate areas and throughout other parts of the city).

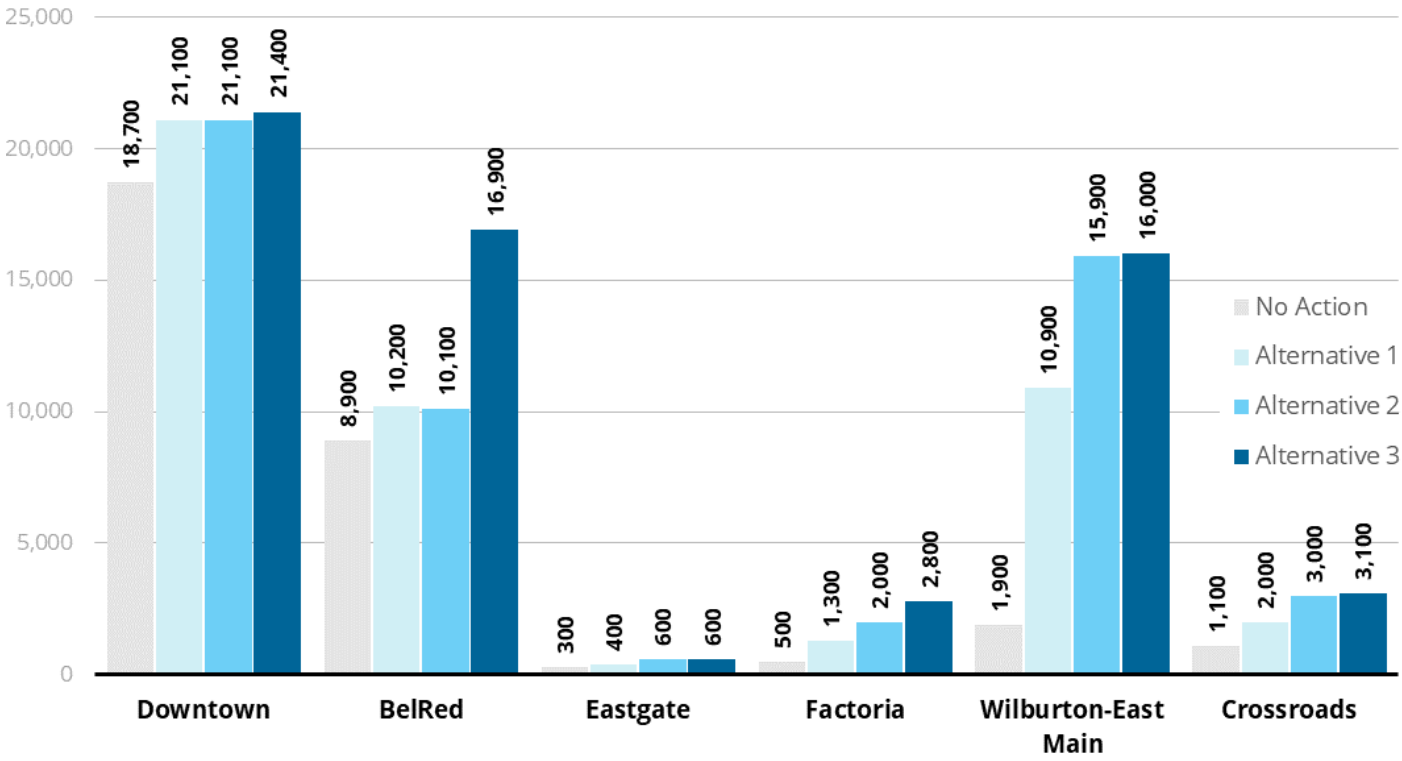
3.3.4 Impacts of Alternative 1

GROWTH TARGETS AND LAND USE COMPATIBILITY

Alternative 1 would increase citywide housing and job capacity over the No Action Alternative. **Citywide**, Alternative 1 would have capacity for 59,000 additional housing units (18,000 above the No Action Alternative and 24,000 *above* the CPP housing target) and 179,000 additional jobs (55,000 above the No Action Alternative and 109,000 *above* the CPP job target). There would also be estimated capacity for up to 58.5 million square feet of commercial

development. This is approximately 18,000 housing units, 55,000 jobs, and 18.5 million square feet of commercial development above the No Action Alternative. Figure 3-18 compares housing and job capacity to the adopted targets. Figure 2-4, *Alternative 1 Density of Net Housing Capacity*, and Figure 2-5, *Alternative 1 Density of Net Job Capacity*, map citywide density of housing and job capacity, respectively, under Alternative 1. **No adverse land use impacts related to the citywide growth targets are expected under Alternative 1.**

Most of the additional housing and job capacity under Alternative 1 would be added in the Mixed Use Centers—including significant capacity added in the Wilburton study area (see below)—and some gentle density increases across other parts of the city. Figure 3-20 and Figure 3-21 compare housing and job capacity, respectively, by location under Alternative 1. Additional residential density and mixed use growth would be focused in the Mixed Use Centers, including areas with existing capacity in Downtown, East Main, and BelRed and with a renewed focus on Wilburton, Crossroads, Eastgate, and Factoria (see Table 3-14 and **Figure 3-23**). In BelRed, each node with its allowance of higher intensity development would be expanded to include most areas within walking distance of the light rail stations. The highest percentage of citywide housing and jobs would be located in the Mixed Use Centers under Alternative 1 (see Table 3-13). This additional density would increase the likelihood of localized adverse spillover effects over the No Action Alternative (such as residential or commercial activities that might lead to increased noise). However, these compatibility challenges would not be an uncommon or new phenomenon within Bellevue's more urbanized centers. Housing and job growth in the Neighborhood Centers would be similar to the No Action Alternative. Land use compatibility impacts under Alternative 1 in the **Mixed Use Centers**, **Neighborhood Centers**, and **transit-proximate areas** of the city that overlap the centers would be similar to those described under Section 3.3.2, *Impacts Common to All Alternatives*.



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Growth estimates are rounded to the nearest 100. The actual pace of growth could differ or be less than what is shown.

FIGURE 3-23 **Net Housing Capacity by Mixed Use Center (2019–2044), All Alternatives**

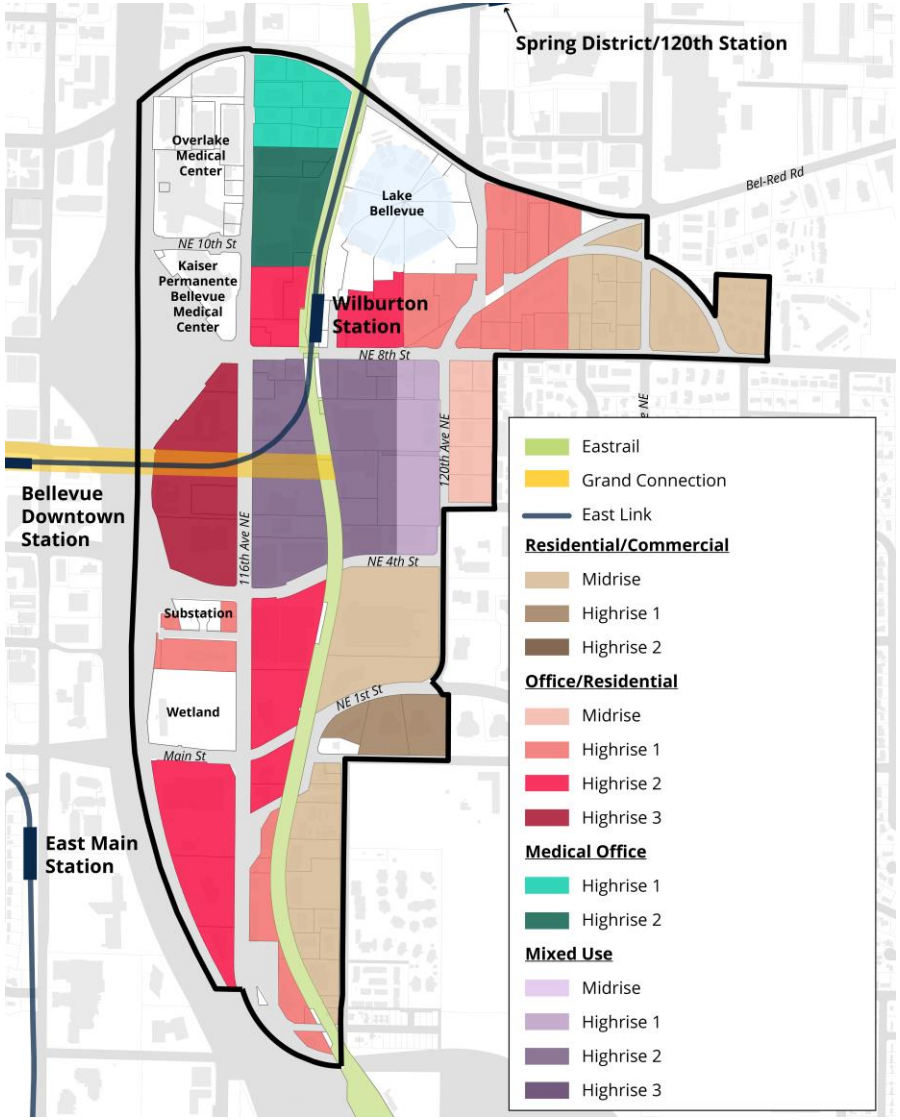
Alternative 1 also includes policies allowing a greater diversity of low-density housing types throughout the city, such as duplexes, triplexes, and cottage housing. As a result, Alternative 1 would likely result in a wider variety of housing options compared to the No Action Alternative in areas comprised primarily of **low-density residential** (generally outside of the Mixed Use and Neighborhood Centers). Given the gentle increases in density of the newly allowed housing types, land use compatibility impacts in these areas would be minimal and mitigated through careful attention to zoning and development regulations. A smaller percentage of citywide housing growth would occur in low-density residential areas of the city under Alternative 1 than the No Action Alternative (8 percent versus 9 percent) though overall capacity in these areas would increase by about 800 units.

Citywide, moderately adverse land use compatibility impacts are expected under Alternative 1 but would be reduced to less-than-significant levels with proposed mitigation.

Wilburton Study Area

Alternative 1 would add significant capacity in the **Wilburton study area,** with an estimated capacity for an additional 9,200 housing units, 44,800 jobs, and 15.0 million square feet of commercial development. This is approximately 8,900 housing units, 40,900 jobs, and 13.6 million square feet of commercial development above the No Action Alternative. Under Alternative 1, growth in the Wilburton study area is focused around the intersection of the Eastrail and Grand Connection south of the Wilburton Light Rail Station. These areas would include a mix of residential, office, and other commercial uses in a mixed use node within the core, primarily office uses surrounding the mixed use node as well as along 116th Avenue NE south of NE 8th Street, and primarily medical uses in the area north of NE 8th Street and east of 116th Avenue NE. Buildings could be up to 45 stories between I-405, NE 8th Street, NE 4th Street, and 116th Avenue NE and range from 16 to 25 stories in the core. Growth would be less intensive toward the edges, transitioning to lower building heights toward the north, south, and east study area edges. Development would be primarily residential in areas east and west of 124th Avenue NE and in the area south of NE 4th Street and east of Eastrail. See **Figure 3-24**.

Alternative 1 supports a transit-oriented development node around the light rail station. Mixed use development is much more likely under Alternative 1 than under the No Action Alternative or existing conditions. Office, housing, and hotel uses are much more likely to include ground floor active uses, particularly along NE 8th Street in proximity to the light rail station and along 116th Avenue NE, where the greatest intensity of building form is planned. This change in land use patterns is expected to significantly increase activity in the Wilburton study area but would support the incoming light rail station and planned investments in Eastrail, the Grand Connection, and 116th Avenue NE. Compatibility conflicts could occur due to changes in the mix of land use and changes related to the increased intensity and height of new development. Development just outside the western and northern edges of the Wilburton study area is primarily office and commercial development that is less sensitive to impacts. A significant grade change also buffers some of the residential development farther to the east where proposed building heights would generally be up to 10 stories.



Residential/Commercial Midrise. Residential mid-rise buildings including ground floor active uses up to around 7–10 stories.

Residential/Commercial Highrise 1. Residential high-rise towers including ground floor active uses up to around 16 stories.

Residential/Commercial Highrise 2. Residential high-rise towers including ground floor active uses up to around 25 stories.

Office/Residential – Midrise. Mid-rise buildings up to around 7–10 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 1. High-rise towers up to around 16 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 2. High-rise towers up to around 25 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 3. High-rise towers up to around 45 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Medical Office Highrise 1. High-rise towers up to around 16 stories, consisting mostly of medical office uses with some hotel, and ground floor active uses.

Medical Office Highrise 2. High-rise towers up to around 25 stories, consisting mostly of medical office uses with some hotel, and ground floor active uses.

Mixed Use – Midrise. Mid-rise buildings up to around 7–10 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 1. High-rise towers up to around 16 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 2. High-rise towers up to around 25 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 3. High-rise towers up to around 45 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 3-24 **Alternative 1 Proposed Land Uses in the Wilburton Study Area**

Within the Wilburton study area, there is potential for temporary land use conflicts, particularly in early redevelopment phases where new areas of greater height and intensity abut areas of existing development. However, careful attention in the creation of zoning, development regulations, and design standards could limit potential for land use compatibility conflicts both within the study area and in adjacent areas.

Adverse land use compatibility impacts in the Wilburton study area are expected under Alternative 1 but would be reduced to less-than-significant levels with proposed mitigation**.**

DISPLACEMENT

Citywide, residential and commercial displacement impacts are expected under Alternative 1 because of the increased overall capacity for growth (see Figure 3-20 and Figure 3-21) and expanded housing densities and typologies in some parts of the city.

Residential Displacement

Under Alternative 1, the city would continue to implement existing housing affordability and anti-displacement strategies as described under Section 3.3.2, *Impacts Common to All Alternatives*. Alternative 1 also includes mandatory inclusionary affordability policies in the growth corridor (Downtown, East Main, Wilburton, and BelRed) and increased incentives elsewhere to meet affordability targets. Compared to the No Action Alternative, Alternative 1 has capacity for more housing units overall and within the Mixed Use Centers and transit-proximate areas of the city (see Figure 3-20). As a result, more new housing would either be required to or could take advantage of the existing and new affordability and anti-displacement strategies. Additional low-density typologies like duplexes, cottage housing, and triplexes allowed in single-family areas of the city may also improve affordable homeownership opportunities. All of these measures combined could result in a net gain in affordable housing, even though direct physical displacement as a result of redevelopment would be more likely. **Citywide, moderately adverse residential displacement impacts are expected under Alternative 1** but would be reduced to less-than-significant levels with proposed mitigation. See also Chapter 7, *Housing*, for a more detailed discussion of residential displacement risk, including housing supply, affordability and naturally occurring affordable housing, homeownership opportunities, and varied housing typologies under Alternative 1.

Growth Corridor

The growth corridor refers specifically to Downtown, East Main, Wilburton, and BelRed. Mandatory inclusionary housing would be required in the growth corridor under Alternative 1.

Commercial Displacement

Alternative 1 also has more potential than the No Action Alternative to displace existing businesses due to a higher citywide capacity for job growth and commercial square footage (see Figure 3-21 and Figure 3-22 for growth citywide and by specific location). Like the No Action Alternative, mixed use development would continue to be primarily limited to the Mixed Use Centers, and the Neighborhood Centers would continue to primarily offer single-use commercial or retail space. As discussed under Section 3.3.2, *Impacts Common to All Alternatives*, new mixed use development under Alternative 1 would likely offer smaller, more urban spaces than some of the single-use commercial spaces available today—while the ultimate type and footprint of future commercial development could vary, existing business may need to adopt a more urban or mixed use-oriented business model to stay in these areas. Land use patterns in other parts of the city that support the retention or development of small-scale commercial space affordable to small business and entrepreneurs would be limited, and no specific policies are proposed under Alternative 1 to preserve or support more affordable commercial space. **Citywide, moderately adverse commercial displacement impacts are expected under Alternative 1.** See also Chapter 5, *Population and Employment*, for a discussion of employment growth and job mix under Alternative 1.

Wilburton Study Area

The amount, intensity, and mix of growth in the Wilburton study area would be substantially higher under Alternative 1 than the No Action Alternative. **Moderately adverse residential and adverse commercial displacement impacts in the Wilburton study area are expected under Alternative 1** (residential displacement would be limited as very little housing is currently in the Wilburton study area and would be reduced to less-than-significant levels with proposed mitigation). Existing employment space in the Wilburton study area would likely be replaced by newer, taller buildings with a mix of residential, office, retail, and medical uses. Potential displacement of businesses in the Wilburton study area (including but not limited to auto dealerships) would be more likely under Alternative 1 as employment space is replaced by newer, taller buildings with a mix of residential, office, retail, and medical uses generally available at higher commercial rents.

Increases in commercial square footage under Alternative 1 may be sufficient to accommodate any businesses that may be displaced since most current businesses are generally of the type that can be

accommodated in mixed use environments. Increasingly, this is the case for auto dealerships as well. Commercial rents in new buildings, however, may not be affordable to existing businesses (auto dealerships and others), and some businesses may not be able to return to the area even if space is available after redevelopment. See Section 3.3.2, *Impacts Common to All Alternatives*.

ACCESS TO COMMUNITY ASSETS

Compared to the No Action Alternative, Alternative 1 would likely result in a wider variety of housing options in future transit-proximate areas comprised primarily of low-density residential (generally outside of the Mixed Use and Neighborhood Centers). This would likely improve access to amenities, diverse land uses, and community gathering spaces for more of the city's population than under the No Action Alternative. Alternative 1 would also expand the BelRed Light Rail Station area nodes (Bel-Red/130th, Spring District/120th, and Overlake Village). Additional mixed use development and amenities are expected within these expanded nodes to support the increased activity levels. **Impacts citywide regarding access to community assets are expected to be moderately positive under Alternative 1.**

Alternative 1 would add significant capacity in the **Wilburton study area** focused around the Wilburton Light Rail Station, Eastrail, and Grand Connection. This change in land use patterns is expected to significantly increase activity in the study area, including both housing and job growth as well as amenities to support the increased activity levels. The composition of amenities would likely shift to reflect a more mixed use pattern of development with new community retail and services, entertainment, and food options. Expanded transit facilities throughout Bellevue and the region would improve access to these new and more diverse community amenities and gathering spaces for residents, employees, and visitors of the area. **Impacts regarding access to community assets within the Wilburton study area are expected to be positive under Alternative 1.**

3.3.5 Impacts of Alternative 2

GROWTH TARGETS AND LAND USE COMPATIBILITY

Housing and job capacity under Alternative 2 is similar to Alternative 1 but distributes more housing growth to areas of the city with good access to transit and jobs and within existing Neighborhood Centers. **Citywide**, Alternative 2 would have capacity for 77,000 additional housing units (36,000 above the No Action Alternative and 42,000 *above* the CPP housing target) and 177,000 additional jobs (53,000 above the No Action Alternative and 107,000 *above* the CPP job target). There would also be estimated capacity for up to 58.3 million square feet of commercial development (similar to Alternative 1). This is approximately 36,000 housing units, 53,000 jobs, and 18.3 million square feet of commercial development above the No Action Alternative. Figure 3-18 compares housing and job capacity to the adopted targets. Figure 2-6, *Alternative 2 Density of Net Housing Capacity*, and Figure 2-7, *Alternative 2 Density of Net Job Capacity*, map citywide density of housing and job capacity, respectively, under Alternative 2. **No adverse land use impacts related to the citywide growth targets are expected under Alternative 2.**

Most of the additional housing and job capacity under Alternative 2 would be added in the Mixed Use Centers, including significant capacity added in the Wilburton study area (see below) and more node expansion with increased density around the Bel-Red/130th Light Rail Station in BelRed than Alternative 1. Figure 3-20 and Figure 3-21 compare housing and job capacity, respectively, by location under Alternative 2. Compared to Alternative 1, a slightly smaller percentage of citywide housing and jobs would be located in the Mixed Use Centers, and a slightly higher percentage would be located in transit-proximate areas (although still higher than the No Action Alternative in both areas; see Table 3-13). Like Alternative 1, capacity for growth within the Mixed Use Centers would be less concentrated in Downtown than under the No Action Alternative (see Table 3-14 and Figure 3-23). Land use compatibility impacts under Alternative 2 in the **Mixed Use Centers** and **transit-proximate areas** of the city that overlap the centers would be similar to those described under Section 3.3.2, *Impacts Common to All Alternatives*.

Alternative 2 also expands middle-scale housing in areas of the city with good access to transit and jobs. This includes additional capacity for small apartment buildings and mixed use buildings near

Neighborhood Centers and transit and along arterials, increased allowable densities in all existing multi-family areas, and an increased range of allowable housing types in single-family areas that have good access to transit. As a result, a slightly higher percentage of citywide housing and slightly lower percentage of citywide jobs would be located in the Neighborhood Centers compared to the No Action Alternative or Alternative 1 (see Table 3-13). The intensity and mix of uses in the Neighborhood Centers would shift as infill development and redevelopment occur to reflect a more mixed use development pattern. This could result in localized land use compatibility impacts within the centers or with neighboring low-density residential neighborhoods where newer development is of greater height and intensity than existing development. Such impacts, if they occur, would likely be temporary and resolve over time. Impacts could also be mitigated through careful attention to zoning and development regulations.

Like Alternative 1, Alternative 2 also includes policies allowing a greater diversity of low-density housing types throughout the city. As described under Alternative 1, land use compatibility impacts in **low-density residential** areas would be minimal and mitigated through careful attention to zoning and development regulations. A similar percentage of citywide housing growth would occur in low-density residential areas of the city under Alternative 2 than the No Action Alternative (9 percent) though overall capacity in these areas would increase by about 3,400 units.

Citywide, moderately adverse land use compatibility impacts are expected under Alternative 2 but would be reduced to less-than-significant levels with proposed mitigation.

Wilburton Study Area

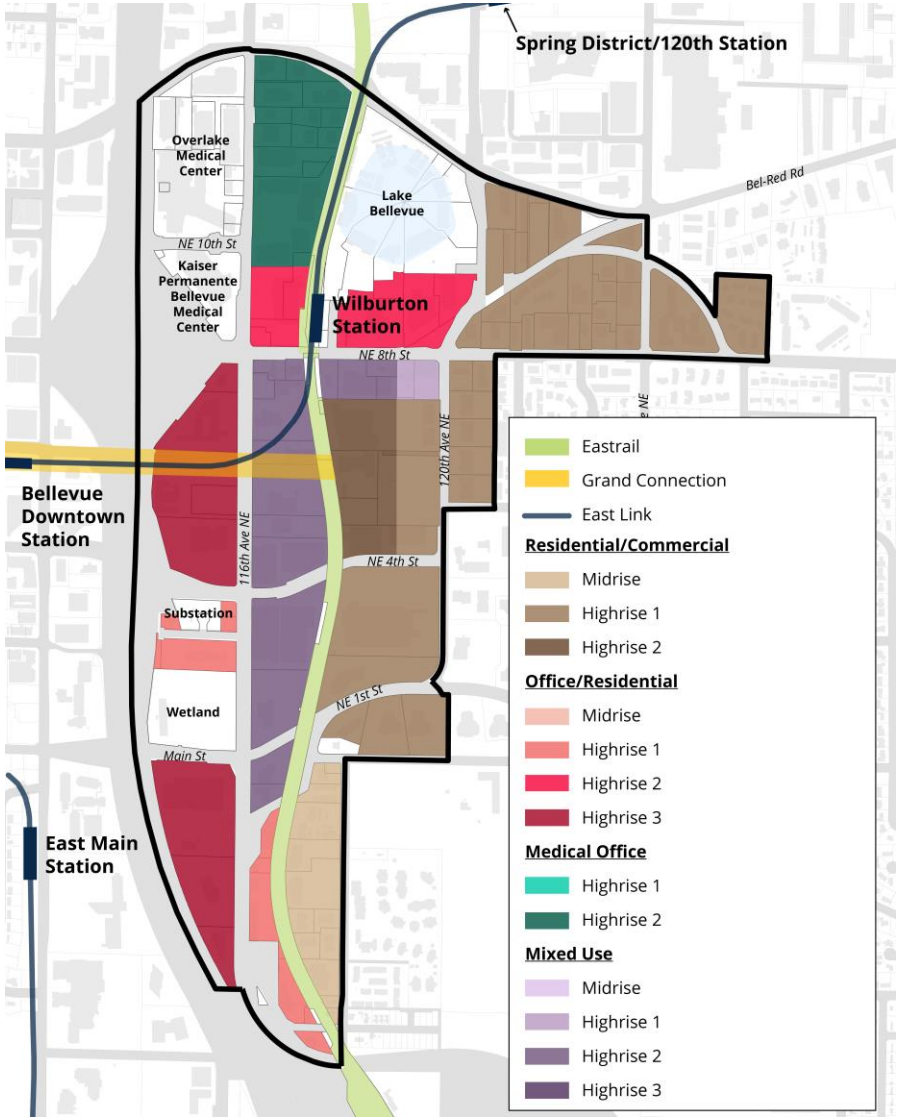
Compared to Alternative 1, Alternative 2 includes capacity for more housing but slightly fewer jobs in the **Wilburton study area** (although still a marked increase over the No Action Alternative). Alternative 2 includes estimated capacity for an additional 14,200 housing units, 38,100 jobs, and 12.7 million square feet of commercial development. This is approximately 13,900 housing units, 34,200 jobs, and 11.3 million square feet of commercial development above the No Action Alternative. Alternative 2 spreads the capacity for growth more evenly across the Wilburton study area with more development intensity in the eastern portion of the study area. Compared to Alternative 1, Alternative 2 includes more area for residential and less for office uses. Office uses would primarily be along the west side of 116th Avenue NE and north of NE 8th Street

with a mix of residential and office uses between 116th Avenue NE and Eastrail. Like Alternative 1, the area north of NE 8th Street and east of 116th Avenue NE would be designated primarily for medical use and primarily residential uses would be located east of Eastrail. Like Alternative 1, the proposed land use pattern would support the incoming light rail station and planned investments in Eastrail, the Grand Connection, and 116th Avenue NE. See **Figure 3-25**.

Land use compatibility impacts in the Wilburton study area are expected to be similar to Alternative 1. Compatibility conflicts could occur due to changes in the mix of land use and changes related to the increased intensity and height of new development. Even though adjacent development tends to be in commercial or office use, the character of new development would likely be significantly different. Proposed building heights on the east edge of the Wilburton study area could increase modestly compared to Alternative 1 (generally up to 16 stories)—however, changes in allowed housing typologies and densities in the multi-family areas immediately adjacent to the east edge of the Wilburton study area under Alternative 2 would lessen long-term compatibility impacts in these areas.

Within the Wilburton study area, there is greater potential for temporary land use conflicts under Alternative 2 than Alternative 1 because of increased height limits in various parts of the study area. Like Alternative 1, these impacts would be most pronounced in early redevelopment phases where new areas of greater height and intensity abut areas of existing development. However, careful attention in the creation of zoning, development regulations, and design standards could limit potential for land use compatibility conflicts both within the Wilburton study area and in adjacent areas.

Adverse land use compatibility impacts in the Wilburton study area are expected under Alternative 2 but would be reduced to less-than-significant levels with proposed mitigation**.**



Residential/Commercial Midrise. Residential mid-rise buildings including ground floor active uses up to around 7–10 stories.

Residential/Commercial Highrise 1. Residential high-rise towers including ground floor active uses up to around 16 stories.

Residential/Commercial Highrise 2. Residential high-rise towers including ground floor active uses up to around 25 stories.

Office/Residential – Midrise. Mid-rise buildings up to around 7–10 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 1. High-rise towers up to around 16 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 2. High-rise towers up to around 25 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 3. High-rise towers up to around 45 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Medical Office Highrise 1. High-rise towers up to around 16 stories, consisting mostly of medical office uses with some hotel, and ground floor active uses.

Medical Office Highrise 2. High-rise towers up to around 25 stories, consisting mostly of medical office uses with some hotel, and ground floor active uses.

Mixed Use – Midrise. Mid-rise buildings up to around 7–10 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 1. High-rise towers up to around 16 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 2. High-rise towers up to around 25 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 3. High-rise towers up to around 45 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 3-25 **Alternative 2 Proposed Land Uses in the Wilburton Study Area**

DISPLACEMENT

Citywide, adverse residential and commercial displacement impacts are expected under Alternative 2 because of increased overall capacity for growth (see Figure 3-20, Figure 3-21, and Figure 3-22) and expanded uses in additional parts of the city.

Residential Displacement

Residential displacement risks would be similar to those described under Alternative 1. Compared to Alternative 1, Alternative 2 has capacity for more housing units overall and within specific locations (see Figure 3-20) but includes voluntary inclusionary affordability policies in the Mixed Use and Neighborhood Centers. Alternative 2 also expands middle-scale housing in areas with good access to transit or jobs. These areas have high demand today, often causing teardown-rebuilds of existing single-family homes—redevelopment in these areas would likely continue under Alternative 2 but would result in more varied and affordable housing options than the No Action Alternative or Alternative 1. **Citywide, moderately adverse residential displacement impacts are expected under Alternative 2.** See also Chapter 7, *Housing*, for a more detailed discussion of residential displacement risk, including housing supply, affordability and naturally occurring affordable housing, homeownership opportunities, and varied housing typologies under Alternative 2.

Commercial Displacement

The potential to displace existing businesses is also higher under Alternative 2 than Alternative 1. Under Alternative 2, the intensity and mix of uses in the Neighborhood Centers would shift as infill development and redevelopment occur to reflect a more mixed use development pattern. As discussed under Section 3.3.2, *Impacts Common to All Alternatives*, new mixed use development under Alternative 2 would likely offer smaller, more urban spaces than some of the single-use commercial spaces available today—while the ultimate type and footprint of future commercial development could vary, existing business may need to adopt a more urban or mixed use-oriented business model to stay in these areas. More mixed use development and expanded densities in and around the Neighborhood Centers—which generally serve as smaller, neighborhood-oriented retail centers—would likely support a wider distribution of commercial space affordable to small business and entrepreneurs. However, no specific policies are proposed under

Alternative 2 to preserve or support more affordable commercial space, and **adverse commercial displacement impacts are expected citywide under Alternative 2.** See also Chapter 5, *Population and Employment*, for a discussion of employment growth and job mix under Alternative 2.

Wilburton Study Area

Moderately adverse residential and adverse commercial displacement impacts in the Wilburton study area are expected under Alternative 2. Impacts would be similar to those described under Alternative 1 and Section 3.3.2, *Impacts Common to All Alternatives*.

ACCESS TO COMMUNITY ASSETS

More new community amenities and gathering spaces are expected under Alternative 2 than Alternative 1 to support the increased activity levels in the Mixed Use and Neighborhood Centers and in areas of the city with good access to transit or jobs. A greater proportion of these are also expected in areas with good access to transit, thus improving access under Alternative 2 more than Alternative 1 for residents, employees, and visitors. Alternative 2 also includes more node expansion and increased density around the Bel-Red/130th Light Rail Station in BelRed than Alternative 1. Like Alternative 1, additional mixed use development and amenities are expected within these expanded nodes to support the increased activity levels. **Impacts citywide regarding access to community assets are expected to be moderately positive under Alternative 2.**

Impacts on the number and changing composition of community amenities and gathering spaces in the **Wilburton study area** are expected to be similar to Alternative 1. The type of new amenities throughout the Wilburton study area could be different under Alternative 2 than Alternative 1, especially in the more residential focused areas east of Eastrail. Overall, like Alternative 1, **impacts regarding access to community assets within the Wilburton study area are expected to be positive under Alternative 2.**

3.3.6 Impacts of Alternative 3

GROWTH TARGETS AND LAND USE COMPATIBILITY

Housing and job capacity is highest under Alternative 3. **Citywide**, Alternative 3 would have capacity for 95,000 additional housing units (54,000 above the No Action Alternative and 60,000 *above* the CPP housing target) and 200,000 additional jobs (76,000 above the No Action Alternative and 130,000 *above* the CPP job target). There would also be estimated capacity for up to 67.3 million square feet of commercial development. This is approximately 54,000 housing units, 76,000 jobs, and 27.3 million square feet of commercial development above the No Action Alternative. Figure 3-18 compares housing and job capacity to the adopted targets. Figure 2-8, *Alternative 3 Density of Net Housing Capacity*, and Figure 2-9, *Alternative 3 Density of Net Job Capacity*, map citywide density of housing and job capacity, respectively, under Alternative 3. **No adverse land use impacts related to the citywide growth targets are expected under Alternative 3.**

Most of the additional housing and job capacity under Alternative 3 would be added in the Mixed Use Centers, including significant capacity added in the Wilburton study area (see below) and increased development intensities within the BelRed Station area nodes. Figure 3-20 and Figure 3-21 compare housing and job capacity, respectively, by location under Alternative 3. Compared to Alternatives 1 and 2, a slightly smaller percentage of citywide housing and jobs would be located in the Mixed Use Centers and in transit-proximate areas (although still generally higher than the No Action Alternative in both areas; see Table 3-13). Like Alternatives 1 and 2, capacity for growth within the Mixed Use Centers would be less concentrated in Downtown than under the No Action Alternative (see Table 3-14 and Figure 3-23). Land use compatibility impacts under Alternative 3 in the **Mixed Use Centers** and **transit-proximate areas** of the city that overlap the centers would be similar to those described under Section 3.3.2, *Impacts Common to All Alternatives*.

Compared to Alternative 2, Alternative 3 adds more capacity for housing types like small apartment buildings and mixed use buildings within walking distance of Neighborhood Centers (including along arterials that go through them) and allows small apartment buildings and similar-scale residential buildings close to major employment centers like Downtown. Alternative 3 also includes policies allowing a

greater diversity of low-density housing types throughout the city (like the other Action Alternatives). As a result, a slightly higher percentage of citywide housing and slightly lower percentage of citywide jobs would be located in the Neighborhood Centers compared to the other alternatives (see Table 3-13). The intensity and mix of uses in the **Neighborhood Centers** and **near employment centers** would shift as infill development and redevelopment occur to reflect a more mixed use development pattern. Land use compatibility impacts within these areas would be similar to those described for the Neighborhood Centers under Alternative 2.

Alternative 3 also increases allowed density in the lowest density areas of the city (SF-L and SF-M zones; see Table 3-2). As a result, a slightly higher percentage of citywide housing would be located in low-density residential areas compared to Alternative 2 (see Table 3-13). Overall, a greater percentage of citywide housing growth would occur in low-density residential areas of the city under Alternative 3 than any of the other alternatives (15 percent), and overall capacity in these areas would increase by about 10,900 units. The potential for localized land use compatibility impacts in **low-density residential** areas—particularly the lowest-density areas of the city—where newer development is of greater height and intensity than existing development would be greatest under Alternative 3. These compatibility impacts would likely be temporary and resolve over time. Impacts could also be mitigated through careful attention to zoning and development regulations.

Citywide, adverse land use compatibility impacts are expected to be greatest under Alternative 3 but would be reduced to less-than-significant levels with proposed mitigation.

Wilburton Study Area

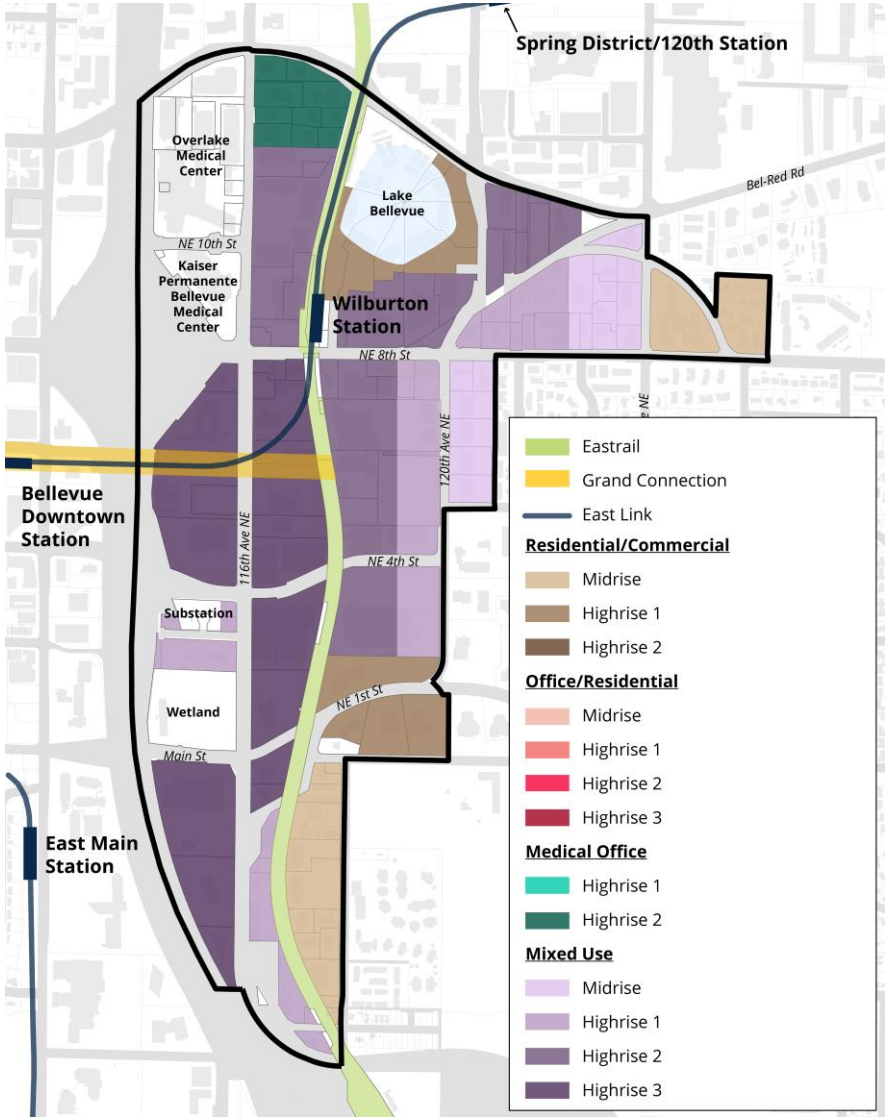
Alternative 3 includes the greatest combined capacity in the Wilburton study area with an estimated capacity for an additional 14,300 housing units, 44,500 jobs, and 15.5 million square feet of commercial development. This is approximately 14,000 housing units, 40,600 jobs, and 14.1 million square feet of commercial development above the No Action Alternative. Under Alternative 3, growth in the study area is focused around the Wilburton Light Rail Station, Eastrail, and Grand Connection (like Alternative 1) but with several new mixed use nodes located throughout the study area. Additional growth would also be allowed on parcels around Lake Bellevue. Most of the study area would allow a mix of residential, office, and commercial uses. New multimodal connections would create smaller, more walkable blocks throughout the Wilburton study

area with a greater emphasis on these connections in the mixed use node. Primarily residential uses would be allowed east of 124th Avenue NE, along Lake Bellevue, and along 118th Avenue SE and NE 1st Street, and the area north of NE 8th Street and east of 116th Avenue NE designated primarily for medical use would be smaller under Alternative 3 than under Alternative 1 or 2. See **Figure 3-26**.

The potential for land use compatibility impacts in the Wilburton study area is greatest under Alternative 3. Compatibility conflicts could occur due to changes in the mix of land use and changes related to the increased intensity and height of new development. Compared to Alternatives 1 and 2, building heights are increased along both sides of 120th Avenue NE north of NE 8th Street heading toward the Spring District (including the Lake Bellevue parcels)—changes in allowed housing typologies and densities in the multi-family areas immediately adjacent to the east edge of the study area and in the areas zoned SF-M farther east under Alternative 3 would lessen long-term compatibility impacts in these areas. Building heights would also be increased along the northwest edge of the Wilburton study area adjacent to the Overlake Medical Center, along the southwest edge of the study area adjacent to I-405 and near East Main, and around the Grand Connection between 116th Avenue NE and Eastrail (similar to Alternative 2). There is also more opportunity for residential towers (up to around 45 stories) around the Grand Connection east of 116th Avenue NE under Alternative 3 than under the other alternatives.

Within the study area, temporary land use conflicts are also more likely under Alternative 3 than under the other alternatives. Like Alternatives 1 and 2, these impacts would be most pronounced in early redevelopment phases where new areas of greater height and intensity abut areas of existing development. However, careful attention in the creation of zoning, development regulations, and design standards could limit potential for land use compatibility conflicts both within the Wilburton study area and in adjacent areas.

Adverse land use compatibility impacts in the Wilburton study area are expected under Alternative 3 but would be reduced to less-than-significant levels with proposed mitigation**.**



Residential/Commercial Midrise. Residential mid-rise buildings including ground floor active uses up to around 7–10 stories.

Residential/Commercial Highrise 1. Residential high-rise towers including ground floor active uses up to around 16 stories.

Residential/Commercial Highrise 2. Residential high-rise towers including ground floor active uses up to around 25 stories.

Office/Residential – Midrise. Mid-rise buildings up to around 7–10 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 1. High-rise towers up to around 16 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 2. High-rise towers up to around 25 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Office/Residential – Highrise 3. High-rise towers up to around 45 stories, consisting mostly of office uses, with some hotel, residential and medical uses, and ground floor active uses.

Medical Office Highrise 1. High-rise towers up to around 16 stories, consisting mostly of medical office uses with some hotel, and ground floor active uses.

Medical Office Highrise 2. High-rise towers up to around 25 stories, consisting mostly of medical office uses with some hotel, and ground floor active uses.

Mixed Use – Midrise. Mid-rise buildings up to around 7–10 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 1. High-rise towers up to around 16 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 2. High-rise towers up to around 25 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

Mixed Use – Highrise 3. High-rise towers up to around 45 stories, consisting mostly of a mix of residential and office uses, with some hotel and medical uses, and ground floor active uses.

SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 3-26 **Alternative 3 Proposed Land Uses in the Wilburton Study Area**

DISPLACEMENT

Citywide, adverse residential and commercial displacement impacts are likely highest under Alternative 3 as a result of the highest overall capacity for growth (see Figure 3-20, Figure 3-21, and Figure 3-22) and expanded uses in additional parts of the city.

Residential Displacement

Residential displacement risks would be similar to those described under Alternative 2. Compared to Alternative 2, Alternative 3 has capacity for more housing units overall and within specific locations (see Figure 3-20) but includes mandatory inclusionary affordability policies in the Mixed Use Centers. Alternative 3 also expands middle-scale housing near Neighborhood Centers (not just within them), encourages the creation of new Neighborhood Centers, and increases allowed density in the lowest density areas of the city. As a result, Alternative 3 would likely result in the largest net gain in affordable housing even though displacement risks are greatest. **Citywide, moderately adverse residential displacement impacts are expected under Alternative 3.** See also Chapter 7, *Housing*, for a more detailed discussion of residential displacement risk, including housing supply, affordability and naturally occurring affordable housing, homeownership opportunities, and varied housing typologies under Alternative 3.

Commercial Displacement

The potential to displace existing businesses is also highest under Alternative 3. Under Alternative 3, the intensity and mix of uses within and near existing and new Neighborhood Centers would shift as infill development and redevelopment occur to reflect a more mixed use development pattern. This density and mix could extend farther along and near the transit-rich arterials running through these areas as well. More mixed use development and expanded densities in and around existing and new Neighborhood Centers would likely support the widest distribution of commercial space affordable to small business and entrepreneurs citywide. As discussed under Section 3.3.2, *Impacts Common to All Alternatives*, new mixed use development under Alternative 3 would likely offer smaller, more urban spaces than some of the single-use commercial spaces available today—while the ultimate type and footprint of future commercial development could vary, existing business may need to adopt a more urban or mixed use-oriented business model to stay in these areas. No specific policies are proposed under

Alternative 3 to preserve or support more affordable commercial space and **adverse commercial displacement impacts are expected citywide under Alternative 3.** See also Chapter 5, *Population and Employment*, for a discussion of employment growth and job mix under Alternative 3.

Wilburton Study Area

Moderately adverse residential and adverse commercial displacement impacts in the Wilburton study area are expected under Alternative 3. Impacts would be similar to those described under Alternative 1 and Section 3.3.2, *Impacts Common to All Alternatives*.

ACCESS TO COMMUNITY ASSETS

More community amenities and gathering spaces are expected under Alternative 3 than any of the other alternatives to support the increased activity levels in the Mixed Use and Neighborhood Centers and in areas of high opportunity (including areas within walking distance of Neighborhood Centers). Like Alternative 2, many of these will be focused in areas with good access to transit; however, Alternative 3 also encourages the creation of new Neighborhood Centers in areas that currently lack access to essential services within a short distance, thus improving access under Alternative 3 for more residents, employees, and visitors. Alternative 3 also includes the most node expansion and increased density around the Spring District/120th, Bel-Red/130th, and Overlake Village Light Rail Stations in BelRed. Like the other Action Alternatives, additional mixed use development and amenities are expected within these expanded nodes to support the increased activity levels. **Impacts citywide regarding access to community assets are expected to be positive under Alternative 3** (more so than under Alternatives 1 or 2).

Impacts on the number and changing composition of community amenities and gathering spaces in the **Wilburton study area** are expected to be similar to Alternatives 1 and 2. The greatest number of new amenities are expected in the Wilburton study area under Alternative 3 corresponding to the highest combined housing and job growth of all alternatives. Like Alternatives 1 and 2, **impacts regarding access to community assets within the Wilburton study area are expected to be positive under Alternative 3.**

3.3.7 Summary of Impacts

CITYWIDE

Table 3-16 summarizes and compares adverse land use impacts citywide under each of the alternatives.

TABLE 3-16 **Summary of Land Use Impacts by Alternative, Citywide**

Impact Threshold	No Action	Alternative 1	Alternative 2	Alternative 3
Growth Targets	▽	None	None	None
Land Use Compatibility	▽	▽	▽	▼
Residential Displacement	▼	▽	▽	▽
Commercial Displacement	▽	▽	▼	▼
Access to Community Assets	None	△	△	▲

SOURCE: BERK 2023

NOTES: Land use impacts are considered either adverse (▼), moderately adverse (▽), moderately positive (△), or positive (▲).

Growth Targets: Citywide, housing and job capacity are above the adopted target under all the alternatives. However, **a moderately adverse impact related to other citywide housing growth requirements is expected under the No Action Alternative** as it does not meet new planning requirements for affordable housing across income bands or a range of housing types. **No adverse land use impacts are identified related to the growth targets under the Action Alternatives** with the application of additional measures to improve housing affordability and choice. See Chapter 7, *Housing*, for more detailed discussion of housing impacts.

Land Use Compatibility: All alternatives include some amount of redevelopment with corresponding potential for land use compatibility impacts. Future growth under all alternatives is likely to increase the frequency of different land use types locating close to one another, and similarly likely to increase the frequency of land use patterns that contain mixes of land uses with differing levels of intensity, both within the Mixed Use Centers and, to a varying extent, in other areas of the city. More mixing of uses increases the likelihood of localized adverse spillover effects such as residential or commercial activities that might lead to increased noise. These compatibility challenges would not be an uncommon or new phenomenon within Bellevue's more urbanized centers and can be avoided or mitigated by continuing to implement the Land Use Code.

Areas zoned for low-density residential would have capacity between 7 and 15 percent of future housing growth under all alternatives, resulting in limited potential for adversely impacting changes in land use and development intensity or mix in these areas. Localized land use compatibility impacts where newer development is of greater height and intensity than existing development are likely temporary and would resolve over time. The extent of these conflicts varies by alternative and can be reduced by the application of existing or new development and design standards. **Citywide, adverse land use compatibility impacts are expected under any of the alternatives** but would be reduced to less-than-significant levels with the application of existing and proposed mitigation**.**

Displacement: As future development occurs, some residents and businesses may be displaced through redevelopment or priced out as land prices and rents increase. **Adverse residential and commercial displacement impacts are expected under all of the alternatives**; potential displacement could occur under all alternatives but may be lower in the No Action Alternative as a result of its lower overall capacity for growth. While it is impossible to avoid all involuntary displacement, housing affordability and choice throughout the city would be greater under the Action Alternatives than the No Action (with the widest variety of options throughout the city under Alternative 3), thus reducing the risk of involuntary residential displacement. In addition, the Action Alternatives include policies to support more affordable housing, and higher density housing in various parts of the city would make it easier and more economically feasible for private developers to incorporate affordable housing as part of market-rate development projects (see also Chapter 7, *Housing*). Alternatives 2 and 3 also increase densities and opportunities for mixed use development that could support additional commercial space affordable to small business and entrepreneurs (with the distribution of such spaces wider under Alternative 3 than Alternative 2).

Access to Community Assets: All alternatives would focus most future growth into the existing Mixed Use Centers, which have the highest concentration of amenities, diverse uses, and community gathering spaces. **No adverse impacts regarding access to community assets are expected under any of the alternatives**. The Action Alternatives also allow a wider variety of land uses and housing typologies in transit-proximate areas comprised primarily of low-density residential (generally outside of the Mixed Use and Neighborhood Centers). This would likely improve access to amenities, diverse land uses, and community gathering spaces for more of the city's population than under the No Action Alternative.

WILBURTON STUDY AREA

Table 3-17 summarizes and compares potential adverse land use impacts in the Wilburton study area under each of the alternatives.

TABLE 3-17 **Summary of Land Use Impacts by Alternative, Wilburton Study Area**

Impact Threshold	No Action	Alternative 1	Alternative 2	Alternative 3
Land Use Compatibility	▽	▼	▼	▼
Residential Displacement	▽	▽	▽	▽
Commercial Displacement	▽	▼	▼	▼
Access to Community Assets	None	▲	▲	▲

SOURCE: BERK 2023

NOTES: Land use impacts are considered either adverse (▼), moderately adverse (▽), moderately positive (△), or positive (▲). Growth targets are not considered in this chart as they are a citywide threshold.

The Action Alternatives add significant capacity in the **Wilburton study area**. Changes in land use patterns are expected to significantly increase activity in the study area, including both housing and job growth as well as amenities to support the increased activity levels. The composition of amenities would likely shift to reflect a more mixed use pattern of development with new community retail and services, entertainment, and food options. Expanded transit facilities throughout Bellevue and the region would improve access to these new and more diverse community amenities and gathering spaces for residents, employees, and visitors of the area.

Land use compatibility impacts are unlikely to occur under all alternatives to the north, southwest, or west where current and planned building heights, intensities, and uses are similar. Future land uses patterns under the No Action Alternative would not support the incoming light rail station or planned investments in Eastrail, the Grand Connection, or 116th Avenue NE, and so **a moderately adverse land use compatibility impact in the Wilburton study area is expected under the No Action Alternative**. The Action Alternatives would support these investments within the Wilburton study area, but potential **adverse compatibility impacts to the east and southeast are expected under the Action Alternatives.** Careful attention in the creation of zoning, development regulations, and design standards could limit potential for land use compatibility conflicts under the Action Alternatives both within the Wilburton study area and in adjacent areas. Changes in allowed housing typologies and densities in the

multi-family areas immediately adjacent to the east edge of the Wilburton study area under Alternatives 2 and 3 and in the areas zoned SF-M farther east under Alternative 3 would also lessen long-term compatibility impacts in these areas. **Adverse land use compatibility impacts in the Wilburton study area are expected under any of the alternatives** but would be reduced to less-than-significant levels with existing and proposed mitigation**.**

No adverse impacts regarding access to community assets are expected in the Wilburton study area.

3.4 Avoidance, Minimization, and Mitigation Measures

The analysis in this section identifies a range of adverse land use-related impacts but does not identify these as probable significant adverse impacts, meaning no additional mitigation strategies need to be defined. The city would continue to rely upon use of regulations in its Land Use Code (Title 20), Development Code (Title 22 including State Environmental Policy Act (SEPA) rules and policies in Section 22.02), and documents such as the Critical Areas Handbook. The Action Alternatives incorporate additional features to mitigate potentially adverse impacts beyond those described under the No Action Alternative.

3.4.1 Incorporated Plan Features

CITYWIDE FEATURES

- All alternatives would focus the majority of future growth into the existing Mixed Use Centers where compatibility challenges would not be an uncommon or new phenomenon and can be avoided or mitigated by continuing to implement the Land Use Code.
- The Action Alternatives incorporate inclusionary affordability policies and increased incentives across the city to encourage more affordable housing at a range of income levels and mitigate residential displacement. Inclusionary affordability would be mandatory in the growth corridor under Alternative 1 and in the Mixed Use Centers under Alternative 3. Alternative 2 includes tiered voluntary incentives in Mixed Use and Neighborhood Centers. All three Action Alternatives include increased voluntary affordability incentives available elsewhere across this city.

- Alternatives 2 and 3 increase densities and opportunities for mixed use development that could support additional commercial space affordable to small business and entrepreneurs (with the distribution of such spaces wider under Alternative 3 than Alternative 2).
- All alternatives would focus the majority of future growth into the existing Mixed Use Centers, which have the highest concentration of amenities, diverse uses, and community gathering spaces.
- Alternative 3 encourages the creation of new Neighborhood Centers in areas that currently lack access to essential services within a short distance.

3.4.2 Regulations and Commitments

Development Regulations. Bellevue's Land Use Code (Title 20) establishes zoning and development regulations. These regulations contain provisions governing the design of buildings, site planning, and provisions to minimize land use incompatibilities. Commercial and mixed use zones generally contain provisions relating to building form and design, such as standards related to height, bulk, scale, density, setbacks, floor area ratio (FAR), screening, floor plate size, landscaping, etc. Regulations are in place to address such issues related to the implementation of the No Action Alternative.

SEPA Review. Bellevue City Code Section 22.02 contains environmental procedures that govern the issues to be addressed during development review under the State Environmental Policy Act (SEPA). SEPA specifically addresses issues related to height, bulk, scale, and land use compatibility. Future site-specific development would be subject to additional SEPA review.

Affordable Housing Policies. The city would continue to offer incentives for development of affordable housing under all alternatives. Many incentives are available to developers of multi-family projects—including density bonuses, minimum parking reductions, and property tax exemptions. Some of these currently apply anywhere multi-family development is allowed, while others are specific to certain neighborhoods and vary by location. See also Chapter 7, *Housing*.

3.4.3 Other Mitigation Measures

The city could pursue the following types of actions for addressing possible future conditions, particularly related to commercial displacement impacts:

- Consider amendments to zoning regulations in existing and future Mixed Use and Neighborhood Centers to address transitions more directly. See also Chapter 6, *Aesthetics*.
- Consider addressing transitions between Mixed Use and Neighborhood Centers and surrounding areas as part of ongoing neighborhood planning efforts.
- Consider selling or leasing city-owned property for projects that support affordable residential to reduce displacement impacts.
- Consider providing technical assistance to small businesses and entrepreneurs who are looking for affordable commercial space. This could include assistance with site selection, leasing negotiations, and financing.
- Consider incentives that encourage affordable commercial space for small businesses, especially in areas at high risk of displacement. For example, the city could reduce parking requirements in certain locations. Reducing parking standards for small businesses can also reduce the construction costs for new development. Also, consider setting average or maximum sizes for new ground floor spaces that result in space sizes that are more affordable for small businesses, which can facilitate small-business relocation and attraction.
- Consider anti-displacement measures prior to designating new Neighborhood Centers in areas that currently lack access to essential services within a short distance that are also at high risk of displacement. Anti-displacement measures could include:
  - Potential "right to return" policies that seek to give preference to residential or small business uses that face displacement in redeveloping areas.
  - Potential tenant relocation assistance. Demolition of existing housing to make way for new development may displace existing tenants who then incur moving costs. Local governments—authorized by WAC 365-196-835 and detailed in RCW 59.18.440—can pass an ordinance that requires developers, public funds, or a combination of the two to provide relocation funds for these displaced tenants. Tenants at or below 50 percent of the county median income,

adjusted for family size, qualify for available funds. Resident relocation assistance as a result of public action is required, with details outlined in RCW 8.26.

  - Potential community benefit agreements: Development agreements or community benefit agreements. These are voluntary, negotiated contracts between developers and municipalities or between developers and a community-based organization representing the interests of the community. They can support affordable housing, affordable commercial space, community gathering spaces, and other public amenities.

- Consider partnering with existing organizations or facilities to improve equitable availability of community gathering spaces across the Mixed Use and Neighborhood Centers and in transit-proximate areas outside of the centers.

WILBURTON STUDY AREA

The Action Alternatives would require the development of new or revised zoning and development regulations for the Wilburton study area. New zoning and development standards associated with these alternatives would likely be informed by development standards established for other subareas within Bellevue's growth corridor. New regulations would need to address permitted uses, dimensional requirements, an FAR amenity incentive system, the conversion of non-conforming uses and properties, parking and circulation, landscaping, and the development of streets and sidewalks. These regulations would need to be crafted with the intent of creating land use compatibility within and adjacent to the study area.

3.5 Significant, Unavoidable Adverse Impacts

Over time, additional growth and development will occur in Bellevue, and a generalized increase in development intensity is expected under all alternatives—this gradual conversion of low-intensity uses to higher intensity development patterns is unavoidable but an expected characteristic of urban population and employment growth. Citywide housing and job capacity are above the adopted target under all alternatives, although the No Action Alternative does not meet other new planning requirements for affordable housing across income bands or a range of housing types. **No potentially significant adverse land use impacts are identified related to the**

growth targets under the Action Alternatives with the application of additional measures to improve housing affordability and choice.

Future growth is likely to result in temporary or localized land use compatibility issues as development occurs. The potential impacts related to these changes may differ in intensity and location in each of the alternatives and many are expected to resolve over time. **No significant adverse land use compatibility impacts are expected** with implementation of existing and new development regulations, zoning requirements, and design guidelines.

Some residents and businesses may be displaced through redevelopment or priced out as land prices and rents increase. Limited redevelopment under the No Action Alternative could push land costs and rents higher than the Action Alternatives, resulting in more potential for displacement as a result of rising costs. In contrast, potential displacement could occur under all alternatives but may be lower in the No Action Alternative as a result of lower overall capacity for growth. While it is impossible to avoid all involuntary displacement, proposed measures to improve housing affordability and choice throughout the city and to encourage mixed use development would **mitigate potential adverse residential displacement impacts to less-than-significant levels under the Action Alternatives.** Mandatory or voluntary measures to encourage a variety of commercial spaces and anti-displacement measures—such as a "right to return" policy, tenant relocation assistance, or community benefit agreements—would also help **mitigate potential adverse impacts of commercial displacement to less-than-significant levels as redevelopment occurs under the Action Alternatives.**

Access to amenities, diverse uses, and community gathering spaces will also likely improve over time as the city's transit network expands and additional density is added. **No adverse impacts regarding access to community assets citywide or within the Wilburton study area are expected under any of the alternatives**, although the Action Alternatives would likely improve access more than the No Action Alternative.

CHAPTER 4 Relationships to Plans and Policies

4.1 Introduction

This chapter describes plans, policies, and regulations that inform the Comprehensive Plan Periodic Update. These include the Growth Management Act (GMA), Puget Sound Regional Council's (PSRC) VISION 2050, and the King County Countywide Planning Policies (CPPs). These documents establish regulatory and policy frameworks with which comprehensive plans must be consistent. Bellevue's current Comprehensive Plan, Shoreline Master Program (SMP), and Capital Investment Plan (CIP) are also discussed to provide a basis for evaluating potential impacts associated with the alternatives.

This analysis considers the general direction of each alternative's proposed policy changes to Bellevue's Comprehensive Plan. The Final EIS will further evaluate any specific policy or regulatory proposals that emerge from the city's planning process.

4.2 Affected Environment

This section summarizes the key concepts in state, regional, and city growth management policies.

4.2.1 Washington State Growth Management Act

The Washington State GMA was adopted in 1990 to address concerns about the impacts of uncoordinated growth on Washington communities and the environment. The GMA includes 13 planning

goals to guide the development and adoption of comprehensive plans and development regulations. A 14th goal was added to the GMA to reference provisions of the Shoreline Management Act. These goals address the following topics:

1. Encourage growth in urban areas.
2. Reduce sprawl.
3. Encourage multimodal transportation systems.
4. Encourage a variety of housing types, including affordable housing.
5. Encourage economic development.
6. Recognize property rights.
7. Ensure timely and fair permitting processes.
8. Protect agricultural, forest, and mineral lands.
9. Retain and enhance open space and support recreation opportunities.
10. Protect the environment.
11. Encourage citizen involvement in planning processes.
12. Ensure adequate public facilities and services.
13. Encourage historic preservation.
14. Reference provisions of the Shoreline Management Act.

The GMA is the preeminent legislation for land use planning in Washington state and it requires that local governments prepare comprehensive plans to accommodate 20 years of expected growth. Required elements of a comprehensive plan include land use, housing, capital facilities, utilities, transportation, economic development, and parks and recreation. Local governments may include other elements if they wish.

Jurisdictions must be up to date with the requirements of the GMA, including the periodic update requirements, to be eligible for grants and loans from certain state infrastructure programs. Bellevue's most recent major periodic update to its Comprehensive Plan was in 2015. It is currently undergoing a periodic update to establish a new planning horizon in the year 2044.

The GMA also requires coordination and consistency between comprehensive plans of cities and counties with common borders or related regional issues. In 2020, multicounty planning policies (MPPs) were adopted in PSRC's VISION 2050 for the Central Puget Sound

region, and Countywide Planning Policies (CPPs) were adopted for all jurisdictions in King County in 2021. The MPPs in VISION 2050 and the King County CPPs provide frameworks for coordinated and consistent comprehensive planning across the region and within King County and are discussed in more detail below.

4.2.2 VISION 2050

PSRC develops policies and coordinates decisions about regional growth, transportation, and economic development planning within King, Pierce, Snohomish, and Kitsap counties. PSRC's VISION 2050 includes the GMA-required MPPs for the four-county region and a regional strategy to plan for growth through 2050. The 216 MPPs are organized by topic area to provide direction for more efficient use of public and private investments and inform updates to Countywide Planning Policies and local comprehensive plan updates.

VISION 2050 presents a Regional Growth Strategy to create healthy, equitable, vibrant communities well-served by infrastructure and services. It calls for focusing new housing and jobs within Regional Growth Centers and near high-capacity transit. Regional Growth Centers are intended to be focal points of vibrant city life and activity that provide a dense mix of housing, employment, commercial, and cultural amenities. Centers also serve as major transit hubs for the region. Downtown Bellevue is designated as a Metro Regional Growth Center under VISION 2050 and as such it receives priority for funding. Other topic areas within VISION 2050 include regional collaboration, environment, climate change, development patterns, housing, economy, transportation, and public services.

The Regional Growth Strategy defines roles for different types of places in accommodating the region's population and employment growth, which inform countywide growth targets, local plans, and regional plans. It classifies cities and unincorporated urban areas into a range of regional geographies based on their size, function, and access to high-capacity transit. Bellevue is classified as a Metropolitan City, which is defined as a civic, cultural, and economic hub, containing at least one Regional Growth Center. Bellevue is one of two Metropolitan Cities and is a major employment centers in King County (Seattle being the other). VISION 2050 directs a large share of the region's projected growth (36 percent of population and 44 percent of jobs) into Metropolitan Cities to improve jobs/housing balances throughout the region. Other regional geographies include Core Cities, High Capacity Transit Communities, Cities and Towns, and Urban Unincorporated Areas.

4.2.3 King County Countywide Planning Policies

King County's CPPs blend the direction in the GMA with regional values expressed in VISION 2050 and local priorities to guide cities in their development of comprehensive plans. Key topics covered by the CPPs include urban centers, housing, transportation, public facilities, and economic development. They encourage compact and coordinated land use patterns, with a focus on preserving open spaces and natural areas. They also promote the use of public transportation and encourage the development of walkable communities.

The CPPs aim to increase the availability of affordable housing for all residents, with a focus on providing housing for low- and moderate-income households. The policies encourage development of diverse housing options that are accessible to a range of household types, including single-family homes and apartments/condominiums, as well as middle housing such as townhouses, duplexes, and accessory dwelling units (ADUs). The CPPs' economic vision emphasizes providing opportunities for everyone, including BIPOC- (i.e., black, indigenous, people of color), immigrant-, and women-owned businesses.

The CPPs also establish housing and growth targets for the county and cities in alignment with VISION 2050's Regional Growth Strategy. Housing and job growth targets are set for each jurisdiction to plan for within the county for the planning period between 2019 and 2044. However, other policies related to expanding housing options and neighborhood choice can result in cities needing to increase their capacity for housing development further to encourage a greater variety of housing typologies. Bellevue's minimum growth targets as set in the CPPs are for 35,000 new housing units and 70,000 new jobs between 2019 and 2044.

The county's 2021 Urban Growth Capacity (UGC) Report, prepared in conjunction with the CPPs, compared estimated housing and employment growth from 2006 to 2018 relative to 2006–2035 growth targets and remaining capacity for each jurisdiction. Growth targets are based on actual growth projections prepared by the State of Washington Office of Financial Management, whereas development capacity is based on assumptions about how much land is redevelopable and the type of projects that could be developed under existing zoning. Current housing and job capacity used in this EIS analysis are higher than the capacity that was reported in the 2021 UGC Report. This is because:

- The city's calculation of capacity does not include the market factor used in the UGC Report that reduced total capacity by about 15 percent overall.
- Since publishing the UGC Report, the city has added capacity in East Main and on faith-owned properties.
- Permits have been issued for projects that are developing at a higher density than what was assumed in the UGC Report.
- Some properties that were not considered redevelopable in the UGC Report have since been redeveloped.
- The city's threshold for classifying a property as "redevelopable" is slightly more generous than what was used in the UGC Report to try to capture all potential development in the city.

Appendix 6 of King County's CPPs includes criteria for designating countywide growth centers (no countywide growth centers are designated currently in King County). Criteria include having an existing density of at least 18 activity units (residents or jobs) and a planned density of at least 30 activity units. Countywide growth centers are also expected to be between 160 and 500 acres in size; include frequent, all-day transit service; and be able to demonstrate the area's regional or countywide role and its future market potential to support the planned densities.

4.2.4 City of Bellevue Comprehensive Plan

The vision in the current Bellevue Comprehensive Plan is to create a city with a vibrant and growing Downtown and new business / residential centers in BelRed, Wilburton, and Eastgate, as well as to enhance the livability and connections between neighborhoods, and to deliver high-quality services in partnership with the community:

> Bellevue embraces the future while respecting our past. In 2035 Bellevue is a vibrant international center for innovation and commerce with safe, attractive neighborhoods that feature some of America's finest schools. Most of Bellevue's jobs and many of its new housing opportunities are found Downtown with its thriving arts scene, and in new business/residential centers at BelRed, Wilburton, and Eastgate, which feature their own unique cultural amenities and urban landscapes. Our neighborhoods epitomize Bellevue's reputation as a "City in a Park" with visually breathtaking vistas, viewpoints, and recreation areas.

Despite the city's growth, neighborhoods remain connected to one another, offering diverse housing choices, gathering spaces, and local and regional commercial services. Bellevue's people—its ultimate strength—define both the city and their neighborhood.

Bellevue's current Comprehensive Plan includes the following citywide elements: Introduction and Vision; Citizen Engagement; Land Use; Neighborhoods; Housing; Capital Facilities; Utilities; Transportation; Economic Development; Environment; Human Services; Parks, Recreation, and Open Space; Urban Design and the Arts; and Shoreline Management.

Key policies in the Bellevue Comprehensive Plan guide the city's growth and emphasize quality of life and a sustainable natural environment. Growth will be focused in denser Mixed Use Centers served by a full range of transportation options, like Downtown, BelRed, and Eastgate, while maintaining and strengthening the vitality, quality, and character of Bellevue's distinctive neighborhoods. Mixed Use Centers are described as mixed use areas that "*are anticipated to accommodate a significant proportion of the city's projected growth.*"

The current Comprehensive Plan includes 16 neighborhood areas planned for through 14 subarea plans.[1] Subarea plans are an opportunity to look at planning issues at a neighborhood scale and focus planning efforts in small areas of the city. The 16 neighborhood areas include changes to subarea boundaries to better reflect current neighborhood areas that align with community expectations and to facilitate long-range planning—these new boundaries are applied as neighborhood area plans are updated. The 14 subarea plans in Volume 2 of the current Comprehensive Plan include:

- BelRed
- Bridle Trails
- Crossroads
- Downtown
- Eastgate
- Factoria
- Newcastle
- Newport Hills
- Northeast Bellevue
- Northwest Bellevue
- Richards Valley
- Southeast Bellevue
- Southwest Bellevue
- Wilburton/NE 8th Street

The Wilburton study area analyzed in this EIS is located within the Wilburton/NE 8th Street Subarea.

[1] The Comprehensive Plan Periodic Update is focused on updated Volume 1 of the Comprehensive Plan, including the Comprehensive Plan Land Use Map.

4.2.5 Shoreline Master Program

Shoreline Master Programs (SMPs) are local land use policies and regulations that guide the public and private use of Washington shorelines. These policies and regulations provide for public access to public waters and shorelines, protect natural resources, and plan for water-dependent uses.

Shoreline Master Programs are subject to the Shoreline Management Act (RCW 90.58). The goals and policies of the Shoreline Master Program are included in comprehensive plans under the GMA (RCW 36.70A):

1. To prevent the inherent harm in uncoordinated and piecemeal development of the city's shorelines.
2. To protect, preserve, and enhance the ecology, environment, and amenities of the city's shorelines for use and enjoyment of present and future generations by limiting, insofar as practical, any resultant damage to the ecology and environment of the shoreline area.
3. To protect the public's opportunity to enjoy optimal access to the physical and aesthetic qualities of the shoreline consistent with the overall best interest of the city and the state.
4. To increase and encourage water-enjoyment recreation for the public on the city's shorelines when appropriate and consistent with the public interest.
5. To give preference to uses that are consistent with control of pollution and prevention of damage to the nature environment or are unique to or dependent upon use of the shoreline.
6. To give priority to single-family residences.
7. To give priority to non-single-family uses such as water-dependent recreational development, and other development that will provide an opportunity for substantial numbers of people to enjoy the shorelines of the state.
8. To discourage new or expanded commercial uses and activities on the city's shorelines except where those commercial uses or activities are associated with water-dependent uses.

Bellevue's shoreline jurisdiction is regulated through zoning and shoreline environment designations established in Bellevue City Code (BCC) 20.25E. The Shoreline Jurisdiction includes Lake Washington, Lake Sammamish, Lower Kelsey Creek, Mercer Slough, and Phantom Lake, as well as associated wetlands and shorelands 200 feet from the ordinary high-water mark (including the floodway and 200 feet of any

adjacent floodplain) of each of the listed water bodies. **Table 4-1** summarizes the purpose of each designation.

TABLE 4-1 **Shoreline Master Program Shoreline Environment Designations**

Shoreline Designation	Purpose
Aquatic	Protect, manage, and restore the unique characteristics and resources of the areas waterward of the ordinary high-water mark.
Urban Conservancy—Open Space	Protect, retain, or restore those shoreline areas that are relatively free of urban development or that include intact or minimally degraded shoreline functions intolerant of urban development.
Urban Conservancy	Maintain shoreline ecological functions and foster opportunities to restore shoreline ecological functions while allowing compatible uses and development, such as public and private access to the shoreline.
Shoreline Residential—Canal	Maintain single-family residential development adjacent to artificially created canals in the Newport Shores community.
Shoreline Residential	Accommodate single- or multi-family residential development and appurtenant structures that are consistent with the Bellevue SMP.
Recreational Boating	Provide a variety of water-dependent and water-oriented uses, with primary focus on activities associated with recreation.

SOURCE: City of Bellevue 2023; BERK 2023

4.2.6 Capital Investment Program Plan

The Capital Investment Program (CIP) Plan is a schedule of major public facility improvements to be implemented over a seven-year period. The CIP Plan includes details on project design, land acquisition, construction costs, and financing sources. The City Council approved the most recent Bellevue CIP Plan in December 2020.

The CIP Plan organizes projects into topics including transportation, parks, general government, public safety, community development, economic development, neighborhood enhancement program, neighborhood investment strategy, water, sewer, and storm drainage.

The Capital Facilities Element of the Comprehensive Plan references the CIP Plan and provides broader policy guidance for capital facility planning.

4.3 Potential Impacts

4.3.1 Thresholds of Significance

The following thresholds of significance are considered in this chapter:

- **Consistency with Washington State Growth Management Act goals.** The action would result in an incompatibility with the Washington State Growth Management Act.
- **Consistency with VISION 2050 and the multicounty planning policies.** The action would result in an incompatibility with VISION 2050 and the multicounty planning policies.
- **Consistency with King County Countywide Planning Policies.** The action would result in incompatibility with the King County Countywide Planning Policies.

Under WAC 365-196-210(8), consistency occurs when "*no feature of a plan or regulation is incompatible with any other feature of a plan or regulation. Consistency is indicative of a capacity for orderly integration or operation with other elements in a system*." For this analysis, consistency means that the alternative can occur and be implemented together with the selected goal or policy without contradiction. Inconsistencies or contradictions with state, regional, or county plans and policies are considered to have a significant adverse impact.

4.3.2 Consistency with Growth Management Act

The Bellevue Comprehensive Plan contains the elements required by GMA and was designed to meet provisions in the law as of 2015. The city has adopted development regulations to implement the goals and policies of the Comprehensive Plan.

This Draft EIS includes four growth alternatives for consideration in the 2024 periodic update. All alternatives would focus most future growth into the existing Mixed Use Centers, which is consistent with GMA policies that encourage a compact pattern of urban development to prevent sprawl (see Chapter 3, *Land Use Patterns and Urban Form*). The primary differences between the Action Alternatives described in this EIS are in the proposed distribution and intensity of growth in various parts of the city. Developable land with appropriate zoning is sufficient to accommodate population and

employment growth targets under all the alternatives.[2] However, Alternative 0 (No Action) assumes no substantial updates to the Comprehensive Plan strategy and would therefore not align with newer GMA requirements, such as provisions for housing across income bands and a range of housing types (see Chapter 7, *Housing*).

The alternatives are evaluated for compatibility with GMA goals in **Table 4-2**.

TABLE 4-2 **Evaluation of Consistency with GMA Goals**

GMA Goal	Discussion
(1) Encourage growth in urban areas	**All alternatives** focus growth in urban areas, with an emphasis on Mixed Use Centers. **Alternative 3** would accommodate the most growth.
(2) Reduce sprawl	**All alternatives** support the goal to reduce sprawl by incorporating growth within the city limits and focusing growth in Mixed Use Centers. The **Action Alternatives** also include gentle density increases across the city in the form of low-density housing types. **Alternatives 2 and 3** also focus growth near transit and in Neighborhood Centers. By focusing growth in Bellevue, sprawl is reduced and rural areas outside of the city are less likely to be impacted by regional growth.
(3) Encourage an efficient and multimodal transportation system	**Alternatives 2 and 3** provide growth opportunities close to transit and invest in multimodal transportation improvements in high-density areas. **Alternative 1** includes modest expansions of multimodal transportation. **Alternative 0 (No Action)** does not make changes to the current Comprehensive Plan, which includes some policy support for multimodal transportation.
(4) Plan for and accommodate housing that is affordable, at different densities, and preserve housing stock	**Alternative 0 (No Action)**, continues the current Comprehensive Plan policies forward, including some policies for affordable, diverse housing and preservation of housing stock. However, the No Action Alternative does not meet new requirements for affordable housing across income bands and a range of housing types. The **Action Alternatives** accomplish this by allowing gentle density increases across the city and adopting new affordable housing policies and incentives.
(5) Promote economic development	**All alternatives** include capacity for many new jobs. **Alternative 3** would have the most capacity for jobs (200,000), and **Alternative 0 (No Action)** would have the least capacity (124,000).
(6) Recognize property rights	**None of the alternatives** would conflict with property rights.
(7) Ensure timely and fair permit procedures	Bellevue would continue to process permits consistent with its adopted code under **all alternatives**.

[2] Growth targets were adopted in 2019. Net capacity for growth under each of the alternatives is relative to 2019 housing and jobs. Housing and job capacity used in this EIS analysis is higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report. See **Section 4.2.3** for a discussion of why these numbers are different.

GMA Goal	Discussion
(8) Protect agricultural, forest, and mineral lands	Since **all alternatives** provide capacity for growth within an incorporated urban area, they all contribute to the protection of resource lands by limiting sprawl on a regional level.
(9) Retain and enhance open space and support recreation opportunities	**All alternatives** would continue to invest in parks and open space consistent with adopted levels of service. Greater growth will increase the demand for recreation with **Alternative 0 (No Action)** the least and **Alternative 3** the most.
(10) Protect the environment	**All alternatives** would continue to include Comprehensive Plan policies for protection of the environment. **All alternatives** would also limit regional sprawl by adding growth to an urban area, which has impacts on regional vehicle emissions, energy use, and land use. **Alternatives 2 and 3** could best support this goal by allowing for the most density, for locating growth near transit, and for investing in multimodal transportation infrastructure.
(11) Foster citizen participation	**All alternatives** foster public participation and have been developed through a robust outreach process. This outreach will continue through the selection of a preferred alternative and development of a Final EIS.
(12) Ensure adequate public facilities and services	As growth increases under **all alternatives**, public facilities and services will experience greater demand. Service and capital planning will continue to support provision of adequate facilities and services consistent with the city's adopted levels of service.
(13) Encourage historic preservation	Future development under **all alternatives** will be required to comply with state and federal regulations for historic preservation.
(14) Shoreline management	Future development under **all alternatives** will be required to comply with federal, state, and local shoreline regulations.

SOURCE: RCW 36.70A.020 and 36.70A.480; BERK 2023

4.3.3 Consistency with VISION 2050

VISION 2050 designates Bellevue as a Metropolitan City and Downtown Bellevue as a Metro Regional Growth Center. With population and employment growth focused in the Downtown and BelRed Mixed Use Centers, the growth strategy in Bellevue's Comprehensive Plan is consistent with the intent of VISION 2050 to concentrate growth in centers. The Action Alternatives align with the Regional Growth Strategy, but vary in their patterns of growth distribution, requirements, or incentives for affordable housing, and in their allowance for a variety of housing types located near transit corridors or in existing low-density areas of the city. The alternatives are further evaluated for compatibility with specific VISION 2050 policies in **Table 4-3**.

TABLE 4-3 **Evaluation of Consistency with VISION 2050**

VISION 2050 Policy	Discussion
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.	**All alternatives** focus growth within the urban growth area, with most future growth focused in the existing Mixed Use Centers. A greater share of citywide housing and jobs would be shifted to the Mixed Use Centers under all alternatives (between 49%–52% and 82%–84%, respectively, depending on the alternative). The **Action Alternatives** provide the most opportunity for choice in housing types by allowing more variety in low-density areas and more development overall. While the Comprehensive Plan includes policies across alternatives to support multimodal transportation, **Alternatives 2 and 3** support this best.
MPP-DP-2 Reduce disparities in access to opportunity for the region's residents through inclusive community planning and targeted public and private investments that meet the needs of current and future residents and businesses.	**All alternatives** would focus most future growth into the existing Mixed Use Centers, which generally overlap transit-proximate areas of the city. **Alternatives 2 and 3** emphasize growth near transit and the Neighborhood Centers. Adding growth near transit, jobs, and amenities can support access to opportunity. The **Action Alternatives** also support a wider range of housing types and affordable housing, which would provide more options for households to live in Bellevue and access local opportunities. Bellevue is conducting an ongoing and robust community outreach process for the Comprehensive Plan Periodic Update that will continue under **all alternatives**.
MPP-DP-3 Enhance existing neighborhoods to provide a high degree of connectivity in the street network to accommodate walking, bicycling, and transit use, and sufficient public spaces.	**All alternatives** include policies and regulations for multimodal connectivity. **Alternatives 2 and 3** invest the most resources in supporting this policy. **All alternatives** focus most future growth capacity into the existing Mixed Use Centers, which generally overlap transit-proximate areas of the city. **Alternatives 2 and 3** also emphasize additional growth near transit.

VISION 2050 Policy	Discussion
MPP-DP-9 Support urban design, historic preservation, and arts to enhance quality of life, support local culture, improve the natural and human-made environments, promote health and well-being, contribute to a prosperous economy, and increase the region's resiliency in adapting to changes or adverse events.	**All alternatives** include policies and regulations to support urban design, historic preservation, and the arts.
MPP-DP-11 Identify and create opportunities to develop parks, civic places (including schools), and public spaces, especially in or adjacent to centers.	Under **all alternatives**, Bellevue would need to address park, trail, and school development to meet adopted levels of service.
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.	**All alternatives** would focus most future growth into the existing Mixed Use Centers, which generally overlap transit-proximate areas of the city. The **Action Alternatives**, and particularly **Alternative 3**, provide the most opportunity for growth in Bellevue. **Alternatives 2 and 3** also emphasize additional growth near transit and in the Neighborhood Centers. In the Wilburton study area, all **Action Alternatives** support growth near the future light rail station, particularly **Alternatives 2 and 3**. However, under the **No Action Alternative**, housing in the Wilburton study area would account for less than 1% of citywide total housing capacity, and jobs would account for about 5% of citywide total job capacity.
MPP-RGS-9 Focus a significant share of population and employment growth in designated regional growth centers.	**All alternatives** would focus most future growth into the existing Mixed Use Centers. Between 23% and 46% of housing capacity and between 41% and 72% of job capacity would be focused in Downtown depending on the alternative. Overall, Downtown would continue to account for the greatest share of housing and job capacity within Bellevue's Mixed Use Centers under any alternative, although a greater share of capacity would be shifted to other Mixed Use Centers under the **Action Alternatives**.
MPP-RGS-11 Encourage growth in designated countywide growth centers.	King County has designated 5 "Candidate" Countywide Centers in Bellevue. The county's candidate designation letter included several recommendations, including planning for affordable housing and more housing options in these centers. **All alternatives** would focus most future growth into these Mixed Use Centers / Candidate Countywide Centers (see **Table 4-5**).
MPP-RGS-12 Avoid increasing development capacity inconsistent with the Regional Growth Strategy in regional geographies not served by high-capacity transit.	**Alternatives 2 and 3** focus growth near transit, while this is less emphasized under **Alternatives 0 and 1**.

SOURCE: PSRC 2020; BERK 2023

4.3.4 Consistency with King County Countywide Planning Policies

King County's adopted CPPs set minimum growth targets of 35,000 housing units and 70,000 jobs in Bellevue by 2044. All of the alternatives contain enough capacity for growth to meet these targets. The three Action Alternatives are consistent with the goals set by the CPPs, including housing diversity and choice, connections to businesses and community gathering spaces, access to amenities, a variety of transportation options, and environmental sustainability and resilience.[3] The alternatives are evaluated for compatibility with overarching CPP goals in **Table 4-4**.

TABLE 4-4 **Evaluation of Consistency with CPPs Goals**

CPP Goals	Discussion
Environment Overarching Goal: The quality of the natural environment in King County is restored and protected for future generations.	Concentrating growth in Bellevue will prevent sprawl in other areas of the county, allowing more natural areas to be protected. Density, particularly near transit, is also associated with lower vehicle emissions, energy use, and land use per capita. **All alternatives** will continue to include policies to protect the environment. **Alternatives 2 and 3** could best support this goal by allowing for the most density, for locating growth near transit, and for investing in multimodal transportation infrastructure.
Development Pattern Overarching Goal: Growth in King County occurs in a compact, centers-focused pattern that uses land and infrastructure efficiently and that protects Rural and Resource Lands.	**All alternatives** focus growth in the Mixed Use Centers. These Mixed Use Centers have been designated as Candidate Countywide Centers by King County. **Alternatives 2 and 3** would also encourage additional growth near transit and in the Neighborhood Centers.
Urban Growth Area Goal Statement: The Urban Growth Area boundary is stable, and capacity within it shall increase over time to accommodate growth consistent with the Regional Growth Strategy and growth targets through land use patterns and practices that create vibrant, equitable, and sustainable communities	**All alternatives** continue to focus growth in the urban area with an emphasis on Mixed Use Centers. **Alternatives 2 and 3** would also encourage additional growth near transit and in the Neighborhood Centers.

[3] Growth targets were adopted in 2019. Net capacity for growth under each of the alternatives is relative to 2019 housing and jobs. Housing and job capacity used in this EIS analysis is higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report. See **Section 4.2.3** for a discussion of why these numbers are different. While housing capacity is above the adopted target, the No Action Alternative does not meet other new planning requirements, including affordable housing across income bands and a range of housing types. See also Chapter 7, *Housing*.

CPP Goals	Discussion
Centers Goal Statement: King County grows in a manner that reinforces and expands upon a system of existing and planned high-capacity transit in central places within which concentrated residential communities and economic activities can flourish.	**All alternatives** continue to focus growth in the Mixed Use Centers. **Alternatives 2 and 3** would also encourage additional growth near transit and in the Neighborhood Centers. In the Wilburton study area, the **Action Alternatives** focus capacity near transit, particularly **Alternatives 2 and 3**.
Rural Area Goal Statement: The rural area geography is stable, and the level and pattern of growth within it provide for a variety of landscapes and open space lands, maintain diverse low-density communities, and support rural economic activities based on sustainable stewardship of the land.	Under **all alternatives**, reducing sprawl through increased growth and density in Bellevue would support the stability of rural areas. All the **Action Alternatives** also increase housing diversity in Bellevue. This provides greater opportunities for households to find housing that meets their needs within the city, creating less pressure on or near rural lands.
Resource Lands Goal Statement: Resources Lands are valuable long-term assets of King County and are renowned for their productivity and sustainable management.	Under **all alternatives**, reducing sprawl by concentrating growth in areas like Bellevue would also protect resource lands elsewhere in King County.
Housing Overarching Goal: Provide a full range of affordable, accessible, healthy, and safe housing choices to every resident in King County.	**All alternatives** provide policies in support of affordable, accessible, healthy, and safe housing. However, the **No Action Alternative** does not meet new requirements for affordable housing across income bands and a range of housing types. The **Action Alternatives** accomplish this by allowing gentle density increases across the city and adopting new affordable housing policies and incentives. **Alternative 3** has capacity for the most housing units overall.
Economy Overarching Goal: All people throughout King County have opportunities to prosper and enjoy a high quality of life through economic growth and job creation.	**All alternatives** have capacity for job growth above the adopted target (70,000 new jobs by 2044). **Alternative 3** has the greatest capacity at 200,000 new jobs.
Transportation Overarching Goal: The region is well served by an integrated, multimodal transportation system that supports the regional vision for growth, efficiently moves people and goods, and is environmentally and functionally sustainable over the long term.	**All alternatives** support a multimodal transportation system. **Alternatives 2 and 3** best support this goal by encouraging additional growth near transit and by providing multimodal transportation investments in dense areas.
Public Facilities and Services Overarching Goal: County residents in both urban and rural areas have timely and equitable access to the public services needed to advance public health and safety, protect the environment, and carry out the Regional Growth Strategy.	Growth under **all alternatives** would increase demand for public facilities and services. Bellevue would continue to plan for facilities and services consistent with adopted levels of service.

SOURCE: King County Countywide Planning Policies 2021; BERK 2023

The CPPs direct cities to concentrate growth in designated regional, countywide, and local centers. Downtown Bellevue is currently designated as a Metro Regional Growth Center under VISION 2050 and receives priority for investments in the four-county region accordingly. Downtown Bellevue is approximately 426 acres and currently has about 192 activity units per acre (jobs + population). Under the No Action Alternative, Downtown could reach up to 496 activity units, with other alternatives hovering around that same number (489–495).

The CPPs offer an additional county-level designation of centers to focus resources. Appendix 6 of the CPPs includes the criteria for designating countywide growth centers. To be designated as a countywide growth center, an area must have an existing density of at least 18 activity units and a planned density of at least 30 activity units. Countywide growth centers are also expected to be between 160 and 500 acres in size, include frequent, all-day transit service, and provide evidence of the center's regional or countywide role and future market potential to support the planned densities. The city submitted five Mixed Use Centers to King County for consideration as Countywide Centers in August 2021 (all of the Mixed Use Centers except for Downtown, which is already a PSRC-designated Metro Regional Growth Center); these were reviewed by King County and given "candidate" status as of December 1, 2021.

Table 4-5 compares gross capacity in Bellevue's Mixed Use Centers to the activity unit and geographic size requirements. All the Mixed Use Centers are within the size thresholds for countywide growth centers and meet the planned activity unit density criteria under all alternatives.

TABLE 4-5 **Mixed Use Centers vs. Countywide Growth Center Designation Criteria**

Center	Size (Acres)	Activity Units per Acre				
		Existing (2021)	No Action	Alternative 1	Alternative 2	Alternative 3
BelRed	426 ✓	48 ✓	104 ✓	141 ✓	153 ✓	190 ✓
Eastgate	173 ✓	48 ✓	46 ✓	50 ✓	53 ✓	53 ✓
Factoria	212 ✓	55 ✓	56 ✓	80 ✓	81 ✓	120 ✓
Wilburton-East Main	362 ✓	39 ✓	79 ✓	249 ✓	262 ✓	281 ✓
Crossroads	427 ✓	34 ✓	55 ✓	68 ✓	75 ✓	78 ✓

SOURCE: King County Countywide Planning Policies, Appendix 6, 2021; City of Bellevue 2023; BERK 2023

NOTES: Activity units is the sum of residential population and jobs. Existing activity units are listed as reported in the city's 2021 Countywide Center application to King County. Estimated population is based on a citywide average household size of approximately 2.48 and vacancy rate of approximately 7%.

✓ Meets criteria.
X Does not meet criteria.

4.4 Avoidance, Minimization, and Mitigation Measures

4.4.1 Incorporated Plan Features

Many policies in the current Comprehensive Plan and provisions in the development code will continue to apply across all alternatives, including those that support GMA, regional, and county goals. This includes policies and regulations that support wider objectives relating to compact and transit-oriented development patterns, housing, multimodal transportation, economic development, environmental protection, parks and open space, public facilities and services, citizen participation, historic preservation, and urban design.

All alternatives provide enough capacity to meet growth targets and would focus most future growth into the existing Mixed Use Centers (which generally overlap transit-proximate areas of the city), consistent with the GMA, the VISION 2050 Regional Growth Strategy, and King County CPPs. The Action Alternatives also include policies to support affordable housing at various income levels and a wider range of housing typologies. Housing affordability and accessibility is a clear priority in the GMA, VISION 2050, and King County CPPs.

4.4.2 Regulations and Commitments

State and Regional Review. The GMA requires cities and counties to notify the Department of Commerce (at least 60 days in advance) of their intent to adopt comprehensive plans and development regulation amendments. State law also requires PSRC to review and certify local comprehensive plans.

Bellevue Comprehensive Plan. Bellevue adopted its Comprehensive Plan, complying with the GMA, in December 1993, and has amended the plan periodically since that time. The plan contains the elements required by the GMA and the city's adopted Land Use Code (Title 20) and environmental procedures (BCC 22.02) that implement the plan. All alternatives would maintain consistency with the broad objectives of the Comprehensive Plan by continuing and reinforcing the city's preferred growth strategy, while the Action Alternatives would support additional goals and policies related to housing opportunity and affordability.

4.4.3 Other Mitigation Measures

Mixed Use Centers are intended to accommodate most of the city's projected housing and employment growth. Minor changes in the Comprehensive Plan—such as the update of Figure LU-3 and revisions to reflect new targets for the 2019–2044 planning period—would be incorporated into the implementation of the Action Alternatives to ensure full consistency between the Comprehensive Plan and proposed policies and land use designations. The Comprehensive Plan may need to consider additional guidance for each of the Mixed Use Centers to support additional development in those areas under the Action Alternatives and within and around the Neighborhood Centers under Alternatives 2 and 3. Related system plans—such as the Land Use Code, Transit Master Plan, and the Storm and Surface Water System Plan—would need to be updated to ensure full consistency.

The Action Alternatives would require the development of new or revised zoning and development regulations for the city and Wilburton study area. Revisions may be considered in a phased approach as infrastructure and other services become available, and new zoning and development standards in the Wilburton study area would likely be informed by development standards established for other subareas. The Action Alternatives also consider revisions to the Wilburton/NE 8th Street Subarea Plan for consistency.

When the Preferred Alternative is selected for the Final EIS, it should be evaluated for alignment with the GMA, VISION 2050, and King County CPPs.

4.5 Significant Unavoidable Adverse Impacts

Alternative 0 (No Action) would not include changes to Comprehensive Plan policies or regulations, so inconsistencies with state and regional goals and requirements to support affordable housing and a wider range of housing typologies would occur. Such conflicts would be avoided by amending the Comprehensive Plan, as proposed under any of the three Action Alternatives.

CHAPTER 5 Population and Employment

5.1 Introduction

This chapter examines existing population demographics and employment data in Bellevue and considers the potential impacts of each alternative. Population data are from the Washington State Office of Financial Management (OFM), City of Bellevue neighborhood profiles (2021), Census 2020, and 2021 American Community Survey (ACS) 5-year estimates. For the Wilburton study area, Esri Community Profile Estimates (2022) are used where data are otherwise not available for this geography. Note that Esri Community Profile Estimates are based on small amounts of data and therefore may not be reliable. Data on employment are from the City of Bellevue and the Washington State Employment Security Department. Data on exposure to traffic and contaminated sites are from the U.S. Environmental Protection Agency (EPA) EJScreen tool.

This chapter focuses on the capacity and types of jobs in each alternative as well as the location of population in proximity to areas that may have pollution from traffic or contaminated sites. The chapter also includes analysis of the alternatives with respect to the city's Economic Development Plan.

The mitigation section includes features of the alternatives, other city programs and regulations, and other ways to address demographic and employment impacts.

5.2 Affected Environment

5.2.1 Current Policy and Regulatory Framework

The King County Countywide Planning Policies (2021) include a citywide target of 35,000 new housing units and 75,000 new jobs in Bellevue above 2019 conditions, by 2044. Additional information on the policy and regulatory framework can be found in Chapter 4, *Plans and Policies*.

The city's Economic Development Plan, adopted in 2020, includes a range of desired outcomes, one of which is:

- Employment opportunities and paths to prosperity for a wide range of residents and workers.

Relevant strategies in the plan include:

- **R 1.** Retain and recruit a healthy and diverse retail mix, including neighborhood- and resident-serving businesses throughout the city.
- **R 2.** Encourage the preservation of existing spaces and the creation of new spaces that are suitable for independent retail, neighborhood services, restaurant, and beverage establishments.
- **CE 1.** Enhance Bellevue's leading position in the digital creative sector and encourage linkages with the traditional creative sector where possible
- **SB 3.** Encourage the preservation of existing spaces and the creation of new spaces that are suitable for small businesses.

The plan also includes a Foundational Strategy to "encourage a variety of housing choices within the city."

5.2.2 Current Conditions

POPULATION DEMOGRAPHICS

Population, Households, and Occupancy

The following is a summary of population, household, and occupancy data. Additional housing information can be found in Chapter 7, *Housing*.

The Washington OFM estimates Bellevue's 2022 population at 153,900 people, making it the second-largest city in King County. The estimated population of the Wilburton study area is 546, according to Esri's Community Profile for 2022.[1]

Per OFM 2022 estimates, there are approximately 65,891 housing units in Bellevue. Per 2021 ACS 5-year estimates, 93.9 percent of units in Bellevue are occupied. The average household size for the city overall is 2.48 persons (2021 ACS 5-year estimates). The average household size for renter-occupied units, per 2021 ACS 5-year estimates, is 2.25, and the average household size for owner-occupied units is 2.68.

According to City of Bellevue calculations, there were 64,000 housing units in the 2019 base year. 31,300 housing units (40 percent) were within low-density residential neighborhoods, while 29,700 were located within Mixed Use Centers (38 percent); 27,900 (36 percent) housing units were in transit-proximate areas, which overlap with Mixed Use and Neighborhood Centers in some places (see **Figure 5-1**). 400 units were in the Wilburton study area.

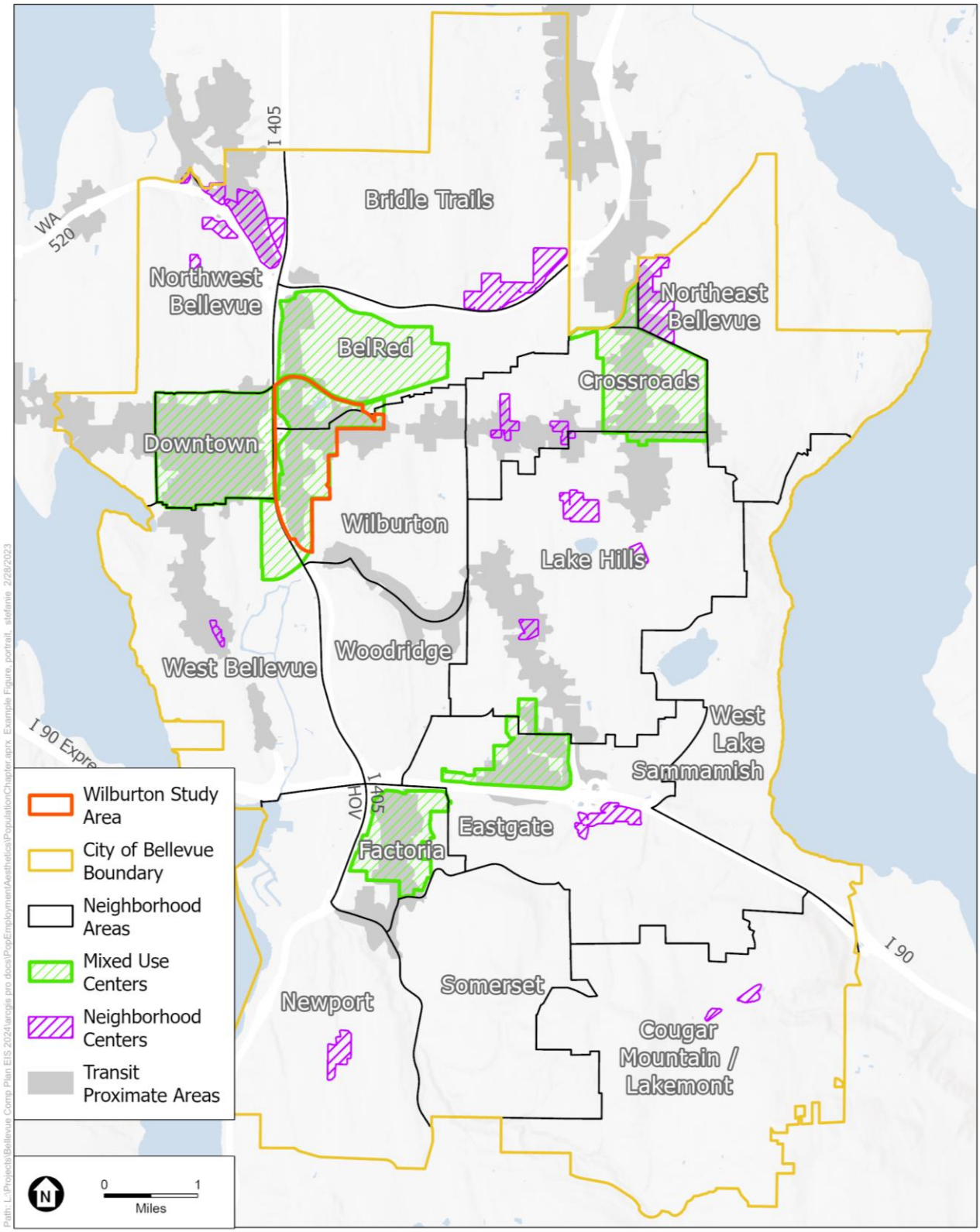
Per the 2021 Bellevue "Neighborhood Profiles," the average household size and vacancy rate vary by neighborhood. Vacancy rate by neighborhood is as high as 12 percent in Downtown and as low as 2 percent in Crossroads and BelRed. The Wilburton study area has an estimated 2022 vacancy rate of 2.9 percent. Average household size ranges from 1.7 (BelRed) to 3.1 (Cougar Mountain/Lakemont and Somerset). In the Wilburton study area, Esri estimates that the 2022 average household size is 1.63.

Age

The median age in Bellevue is 37.9 years, with 21 percent of the population under 18 and 14 percent of the population over 65 (American Community Survey 2021 5-year estimates).

This varies by neighborhood: neighborhoods with the highest share of youth under 18 include Cougar Mountain/Lakemont, Eastgate, Newport, Somerset, and West Lake Sammamish, while the lowest share is in BelRed and Downtown. In several neighborhoods, more than 15 percent of the population is over age 65: this includes BelRed, Newport, Northeast Bellevue, Northwest Bellevue, Somerset, and West Lake Sammamish (City of Bellevue Neighborhood Profiles 2021).

[1] Esri's Community Profile data are based on a small amount of data and may not be reliable. The senior living facilities in the Wilburton study area may not be included in this figure.



SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 5-1 **City of Bellevue Geographies**

The median age in the Wilburton study area is 40.1 as of 2022, per Esri Community Profile estimates. There are few existing residences in the Wilburton study area, and the two senior living facilities (Aegis Living and Husky Senior Care) likely contribute to a higher median age than the city overall.

Race/Ethnicity

In the city overall, per Census 2020 estimates, white residents make up 44 percent of the population, Asian residents 41 percent, Black or African American residents 3 percent, American Indian or Native American residents less than 1 percent, and Native Hawaiian or Other Pacific Islander less than 1 percent. Five percent of residents identify as two or more races, and 1 percent identify as some other race. Seven percent of the population is Hispanic or Latino (see **Table 5-1**).

TABLE 5-1 **Bellevue Population: Race and Ethnicity**

Census Race and Ethnicity Category	Citywide (%)	Wilburton Study Area (%)
Not Hispanic or Latino	93%	95%
White	*44%*	*44%*
Black or African American	*3%*	*3%*
American Indian or Alaska Native	*<0.5%*	*<0.5%*
Asian	*41%*	*43%*
Native Hawaiian or Other Pacific Islander	*<0.5%*	*<0.5%*
Some Other Race	*1%*	*2%*
Two or More Races	*5%*	*8%*
Hispanic or Latino	7%	5%

SOURCE: Census 2020; Esri Community Profile Estimates 2022 (Wilburton study area). Note that Esri Community Profiles are based on a small amount of data and may not be reliable.

Per Bellevue Neighborhood Profiles (2021), Crossroads has the highest percentage of nonwhite residents (64 percent) and Hispanic/Latino residents (13 percent) of any neighborhood in Bellevue. Asian residents make up more than 40 percent of the population in the Bridle Trails, Crossroads, Northwest Bellevue,

Somerset, and Wilburton neighborhoods.[2] The Factoria and Wilburton neighborhoods have the highest percentage of Black residents, at 6 percent and 5 percent, respectively.

The Wilburton study area population is 44 percent white and 43 percent Asian, and 5 percent of residents identify as Hispanic or Latino (Esri Community Profiles).

Compared to the city as a whole, the BelRed, Cougar Mountain/ Lakemont, Downtown, Newport, Northeast Bellevue, West Bellevue, West Lake Sammamish, and Woodridge neighborhoods have a higher share of white residents (Bellevue Neighborhood Profiles 2021).

Language

According to 2021 ACS 5-year Estimates, about 46 percent of Bellevue residents over age 5 speak a language other than English at home, and 15 percent speak English less than "very well"; 27 percent speak Asian or Pacific Island languages, 4 percent speak Spanish, 12 percent speak Indo-European languages other than Spanish, and 1 percent speak other languages (see **Table 5-2**).

TABLE 5-2 **Bellevue Population: Language**

	Citywide (%)
Speak English less than "very well"	15%
Speak a language other than English at home:	46%
Speak Asian or Pacific Island Languages	*27%*
Speak Spanish	*4%*
Speak Other Indo-European Languages	*12%*
Speak Other Languages	*1%*

SOURCE: American Community Survey 2021 (5-year estimates). These data only include residents over age 5.

As described in Bellevue's 2021 Neighborhood Profiles, all Bellevue neighborhoods have at least 9 percent of the population who speak English less than "very well", with Crossroads having the highest proportion (25 percent). Other neighborhoods with a high percentage of residents who speak English less than "very well" include Woodridge (16 percent), Somerset (16 percent), Bridle Trails

[2] The Wilburton neighborhood and Wilburton study area are not the same geography. The Wilburton study area is a subsection of the Wilburton neighborhood.

(17 percent), Wilburton (18 percent), Lake Hills (18 percent), and Factoria (19 percent).

The Crossroads neighborhood also has the largest proportion of residents speaking another language at home (59 percent): 28 percent of Crossroads residents speak an Asian or Pacific Island language, 10 percent speak Spanish, 25 percent speak an Indo-European language (other than Spanish), and 2 percent speak other languages.

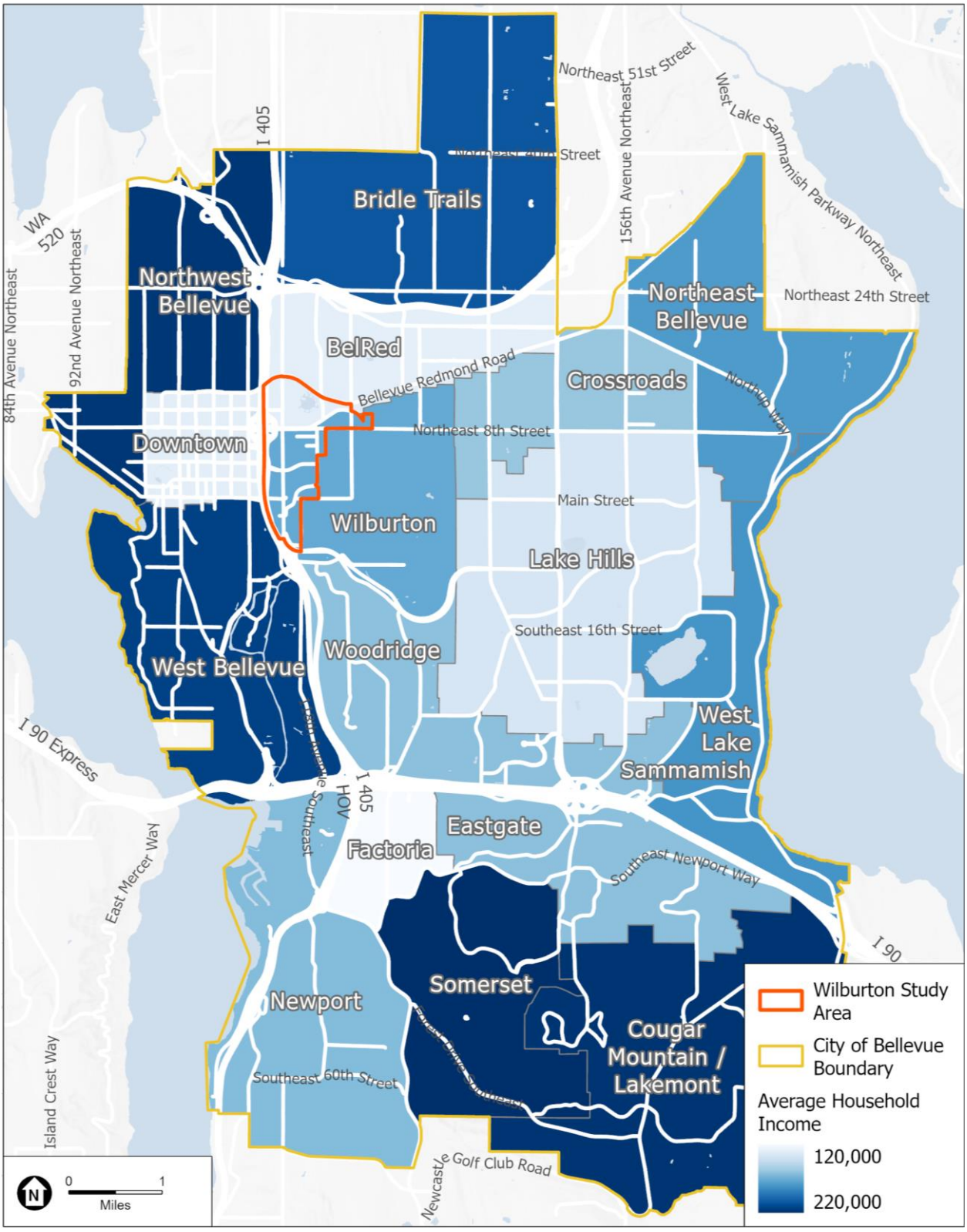
Neighborhoods with more than 25 percent of the population speaking an Asian or Pacific Island language include Cougar Mountain/Lakemont, Crossroads, Eastgate, Factoria, Northwest Bellevue, Somerset, and Wilburton. Somerset has the highest percentage of Asian or Pacific Island language speakers, at 37 percent. Spanish speakers are most prevalent in the Crossroads (10 percent) and Lake Hills (10 percent) neighborhoods. Neighborhoods with the highest share of population speaking an Indo-European language other than Spanish include Bridle Trails (21 percent) and Crossroads (20 percent).

In 13 of the 16 Bellevue neighborhoods, Mandarin Chinese is the most spoken non-English language. In the other three neighborhoods (BelRed, Crossroads, and Lake Hills), Spanish is the most spoken non-English language.

Income

Per 2021 ACS 5-year estimates, the average (mean) household income in Bellevue is $192,078, and the median income is $140,252 (see **Figure 5-2**). This is substantially higher than the King County mean income ($145,743) and median income ($106,326). In the Wilburton study area, per Esri 2022 estimates, the mean household income is $167,039 and the median is $125,378.

Per the 2021 Neighborhood Profiles, neighborhoods with the lowest mean household income include Factoria ($122,313), BelRed ($131,799), and Downtown ($132,215). The highest average household incomes are in Somerset ($221,222), Cougar Mountain/ Lakemont ($219,219), and Northwest Bellevue ($218,6230). Some neighborhoods may have lower mean household incomes due to a larger share of one-person households, whereas some higher earning neighborhoods may have more households with dual incomes.



SOURCE: City of Bellevue Neighborhood Profiles (2021)

FIGURE 5-2 **Mean Income by Neighborhood**

EMPLOYMENT

According to the Bellevue Economic Development Plan (adopted in 2020), the job growth trend in Bellevue is outpacing population growth. Bellevue has also become the second largest business center in Washington, after Seattle. However, since the publication of the Bellevue Economic Development Plan, employment has declined following national trends, likely due to impacts of the Covid-19 pandemic. While some major Bellevue employers have slowed hiring or reduced their employee numbers in recent years, Bellevue is expected to remain an economic engine for the region.

Jobs

Bellevue is a regional employment center with more than twice as many jobs as housing units. Job numbers grew between 2013 and 2018, with more than 17,500 new jobs created in Bellevue (according to the city's Economic Development Plan). Approximately 5,000 of these jobs were in Information Technology, which is consistent with Bellevue's reputation as a major technology innovation and engineering center.

As of 2019, there were nearly 149,000 jobs[3] in Bellevue (according to the Puget Sound Regional Council), with approximately 47 percent in Office jobs, 15 percent in Retail, 8 percent in Food, 8 percent in Services, 7 percent in Medical, 6 percent in Education, 4 percent in Government, 3 percent in Industrial, and 3 percent in Other sectors (see **Table 5-3)** (City of Bellevue 2023).

The Wilburton study area includes about 9,400 jobs (7 percent of all jobs in Bellevue), with about 41 percent of these jobs in the Medical sector and 23 percent in the Office sector (see **Table 5-4**) (City of Bellevue 2023). Several large medical facilities and office buildings are located in the Medical Institution and Medical Office zones within the Wilburton study area.

[3] This jobs number is based on covered employment (work that is covered by unemployment benefits when a worker becomes unemployed). King County uses covered employment to determine whether Bellevue is meeting its housing target. Other data sources may use other methods and therefore have differing job numbers.

TABLE 5-3 **Jobs by Sector Citywide, 2019**

Sector	Percent of Total Jobs
Education	5.8%
Food	7.5%
Government	3.6%
Industrial	3.1%
Medical	7.0%
Office	46.6%
Retail	15.3%
Services	8.0%
Other	3.1%
Total	***100.0%***

TABLE 5-4 **Jobs by Sector in the Wilburton Study Area, 2019**

Sector	Percent of Total Jobs
Education	0.8%
Food	9.3%
Government	1.3%
Industrial	0.3%
Medical	40.7%
Office	22.9%
Retail	19.1%
Services	4.2%
Other	1.5%
Total	***100.0%***

In 2019, Mixed Use Centers in Bellevue contained 95,000 jobs (69 percent of all jobs in Bellevue) and Neighborhood Centers included 8,600 jobs (6 percent of all jobs in Bellevue). About 61 percent of citywide jobs were within transit-proximate areas and 5 percent were in low-density residential areas (City of Bellevue 2023). Note that these geographies overlap to some extent (see Figure 5-1).

According to Bellevue's 2021 Neighborhood Profiles, the highest proportion of worker occupation type in any given neighborhood is Management, Business, Science, and Arts. At least 52 percent of workers in each Bellevue neighborhood work in these occupations, with the highest percentage Downtown (78 percent). Services occupations are most prevalent in Factoria (20 percent) and Lake Hills (18 percent), and Sales and Office occupations are most common in Newport (21 percent) and Northwest Bellevue (20 percent).

Commercial Square Footage

Existing commercial square footage citywide totaled 50,700,000 square feet in 2019. Of this, 62 percent is in Mixed Use Centers. The Wilburton study area currently has 3,100,000 commercial square feet (6 percent of citywide) (City of Bellevue 2023).

52 percent of commercial square feet lies within transit-proximate areas, and 11 percent is within low-density residential areas. Only 6 percent of commercial square feet are in Neighborhood Centers (City of Bellevue 2023).

Of all Bellevue neighborhoods, Downtown has the most commercial square footage at 17,300,000 square feet. BelRed has the second highest (8,500,0000 square feet), and Eastgate has the third highest (6,400,000 square feet) (City of Bellevue 2023).

5.3 Potential Impacts

This section reviews potential population and employment impacts for each alternative. Table 5-6, below, provides a high-level summary of the findings.

5.3.1 Thresholds of Significance

In addition to a general analysis of population and employment impacts, two thresholds of significance are included in this chapter:

- **Economic vision:** The action would result in conflicts between the mix of jobs and the city's economic vision.
- **Exposure to contaminated sites and traffic:** The action would result in population growth in areas with high exposure to contaminated sites and proximity to traffic. This threshold focuses on the exposure of people to these impacts, rather than the impact to the environment itself, which is detailed in Chapter 8, *Air Quality and GHG Emissions*.

5.3.2 Impacts Common to All Alternatives

POPULATION

All alternatives, including the No Action Alternative, will result in housing growth; however, the amount of capacity varies across alternatives. For the No Action Alternative and the Action Alternatives, the capacity for housing growth is higher than the citywide growth target of 35,000 new housing units by 2044. The potential impacts identified for the No Action Alternative and Action Alternatives include analysis of the "build-out" housing unit capacity associated with each alternative. It is not expected that the "build-out" housing capacity would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with each of the alternatives. A discussion of the alternatives' impacts on housing and displacement can be found in Chapter 7, *Housing*.

Alternative 3 shows the greatest housing capacity of the alternatives: 95,000 more housing units than 2019. Using the 2022 citywide occupancy rate (93 percent) and household size (2.48), this equates to a population capacity range of 95,000 residents (No Action Alternative) to 219,000 (Alternative 3) residents. All the alternatives create more opportunities for affordable housing (see Chapter 7, *Housing*) and therefore could result in more housing opportunities for households with incomes below 80 percent Area Medium Income (AMI). This is especially true under the Action Alternatives. The Action Alternatives also provide for more diversity in housing types, which could attract a wider range of incomes and household sizes to Bellevue.

Population in the Wilburton study area is also expected to grow under all the alternatives, with capacity for 300 new housing units (or approximately 580 residents[4]) under the No Action Alternative, and substantially more new units (between 9,200 and 14,300) under the Action Alternatives. The housing capacities in Alternatives 2 and 3 equate to a population capacity of 27,330–27,530 residents in the Wilburton study area.

[4] For the Wilburton study area, all housing capacity under all alternatives is for multi-family housing. For this reason, all population analysis for the Wilburton study area uses the average household size for multi-family units of 2.07. The citywide occupancy rate of 93 percent is also used for these calculations.

EMPLOYMENT

All alternatives would result in a greater capacity for jobs. For the No Action Alternative and the Action Alternatives, the capacity for job growth is higher than the citywide growth target of 70,000 new jobs by 2044. The potential impacts identified for the No Action Alternative and Action Alternatives include analysis of the "build-out" job capacity associated with each alternative. It is not expected that the "build-out" job capacity would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with each of the alternatives.

The city's job target of 70,000 jobs by 2044 is consistent across all alternatives. This increase in jobs could result in an influx of residents of working age. Alternative 3 would see the largest job capacity of the alternatives, with a capacity for 200,000 new jobs. All the Action Alternatives would have capacity for more than double the regional target.

All alternatives increase the role of Mixed Use Centers as key areas of employment, with between 76 and 79 percent of total job capacity (compared to 62 percent of existing jobs). The share of job capacity in Neighborhood Centers also remains fairly constant, at 3 to 4 percent across all alternatives (compared to 4 percent of existing jobs).

All the alternatives also result in an increase in the share of job capacity in transit-proximate areas (from 61 percent today to 64–66 percent). All alternatives, including No Action, result in a decrease in the share of job capacity in low-density residential areas (5 percent of existing jobs, down to 2 percent of job capacity in all alternatives). The job mix would vary under each alternative due to different zoning and land use policies.

Under all the Action Alternatives, the Wilburton study area share of citywide job capacity increases substantially. As reflected in the No Action Alternative, 5 percent of Bellevue's job capacity is in the Wilburton study area. Under the Action Alternatives, the Wilburton study area would have capacity for 15 to 17 percent of potential Bellevue jobs. This capacity for new Wilburton study area jobs for the Action Alternatives would range between 38,100 and 44,800. The No Action Alternative, in comparison, sees a total capacity for 3,900 jobs.

CITY'S ECONOMIC VISION AND JOB MIX

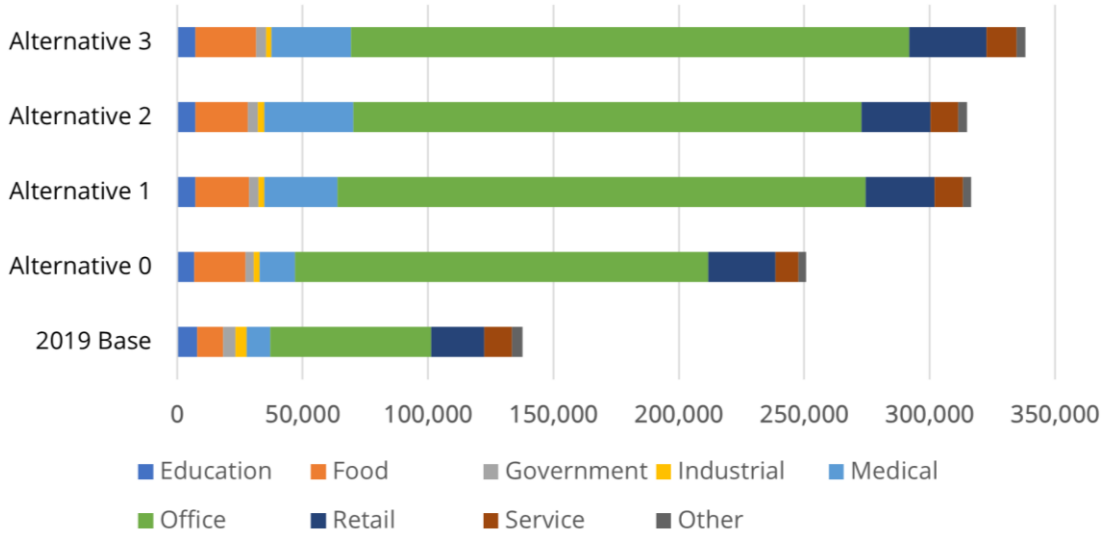
Strategies in the Economic Development Plan (as described in Section 5.2.1, *Current Policy and Regulatory Framework*) suggest that a

mix of job types, a diverse retail mix, and thriving digital and creative industries are priorities relating to employment. The plan also supports encouraging a variety of housing choices.

As of 2019, there were 148,560[5] jobs in Bellevue, with approximately 47 percent in Office jobs, 15 percent in Retail, 8 percent in Food, 8 percent in Services, 6 percent in Education, 4 percent in Government, 3 percent in Industrial, 7 percent in Medical, and 3 percent in Other sectors.

Under the No Action Alternative, the job capacity citywide includes 66 percent Office, 11 percent Retail, 8 percent Food, 4 percent Services, 3 percent Education, 1 percent Government, 1 percent Industrial, 5 percent Medical, and 1 percent Other.

The mix of job capacity under the Action Alternatives is consistent for the Services (3–4 percent), Education (2 percent), Government (1 percent), Food (7 percent), and Industrial (1 percent) sectors. Under all the Action Alternatives, Office jobs take up the greatest share of capacity (64–67 percent), with Alternative 1 having the greatest share of Office job capacity. The share of Medical job capacity is also higher under the Action Alternatives (9–11 percent), with Alternative 2 having the greatest share of Medical job capacity (11 percent). See **Figure 5-3**.



SOURCE: City of Bellevue 2023

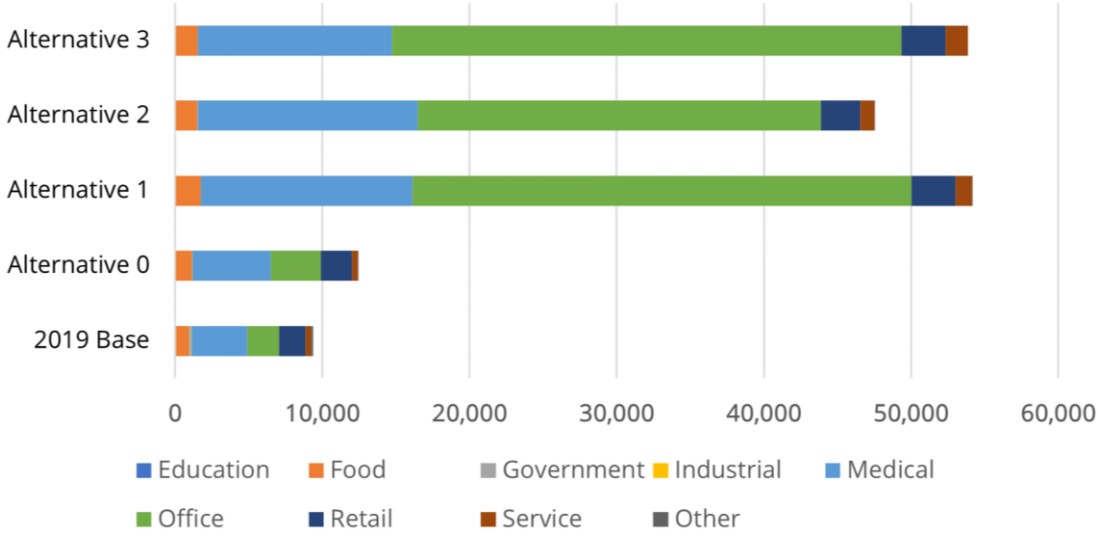
FIGURE 5-3 **Total Job Capacity (Citywide)**

[5] Source: Puget Sound Regional Council, covered employment. Covered employment includes jobs that are covered by unemployment insurance.

Note that although the alternatives create capacity for different job sectors at varying amounts, not all job types would be created at the same rate. The alternatives do not add jobs but set the regulatory conditions that create capacity for jobs.

In the Wilburton study area, capacity for jobs under the No Action Alternative is above the 2019 conditions: the Office sector has 23 percent of current jobs but 27 percent of job capacity, and the Medical sector has 41 percent of current jobs but 43 percent of capacity. The Services, Education, Retail, and Government sectors capacity under the No Action Alternative is slightly smaller than the share of jobs under current conditions, and the Food sector capacity matches the existing share of jobs at 9 percent.

Under the Action Alternatives for the Wilburton study area, the Office sector takes up a larger share (58–64 percent) and the Medical sector's share decreases (24–31 percent). Alternative 3 has the greatest change with 64 percent Office jobs and 24 percent Medical jobs. The Action Alternatives have a consistent share of Retail (6 percent), Services (3 percent), Education (less than 1 percent), Government (less than 1 percent), Food (3 percent), and Industrial (less than 1 percent). See **Figure 5-4**.



SOURCE: City of Bellevue 2023

FIGURE 5-4 **Total Jobs (Wilburton Study Area)**

Citywide, all the alternatives grow the share of Office job capacity substantially above existing jobs and reduce the share of Retail, Services, Education, Government, and Industrial job capacity over existing jobs. Food job capacity remains fairly consistent with the current share of jobs at between 7 percent and 8 percent. Retail and

Services job capacity is above existing jobs in all the alternatives. Medical job capacity in all alternatives is higher than the number of existing medical jobs and takes up a larger share of job capacity under the Action Alternatives.

An increased emphasis on Office jobs could support the city's priority to support thriving digital industries but could also have the effect of displacing creative industries (Alternative 3 adds the most capacity for Office jobs). While Retail job *capacity* makes up a lower share than the share of existing Retail *jobs*, all alternatives show capacity for a greater number of Retail jobs than existed in 2019, with the most capacity in Alternative 3. A decrease in the capacity and share of capacity in some industries (Education, Government, and Industrial), however, could reduce the overall diversity of job types under all alternatives. All the Action Alternatives support more housing diversity by adding more variety in allowed housing types and incentives.

EXPOSURE TO CONTAMINATED SITES AND PROXIMITY TO TRAFFIC

The EPA EJScreen tool provides multiple datasets on pollution that are included in this analysis:

- Traffic Proximity
- Superfund Proximity
- Risk Management Plan (RMP) Facility Proximity (facilities that use extremely hazardous substances)
- Hazardous Waste Proximity

The tool compares each Census block group with all others in the country. So, for example, a Census block group that is in the 80th percentile for traffic proximity has a greater proximity to traffic than 80 percent of other Census block groups in the country.

Most of the areas in Bellevue in the 80th–100th percentile for traffic proximity center around I-405 or I-90. An area around Bel-Red Road also includes some block groups between the 80th and 100th percentile for traffic proximity. All the alternatives include capacity for units in Downtown, BelRed, and Factoria, potentially exposing more residents to the air quality impacts of traffic. The Action Alternatives also add unit capacity to the Wilburton study area and an area of Newport with proximity to I-405. All the alternatives include housing unit capacity within 500 feet of highways, and the Action Alternatives add the most unit capacity. The Action

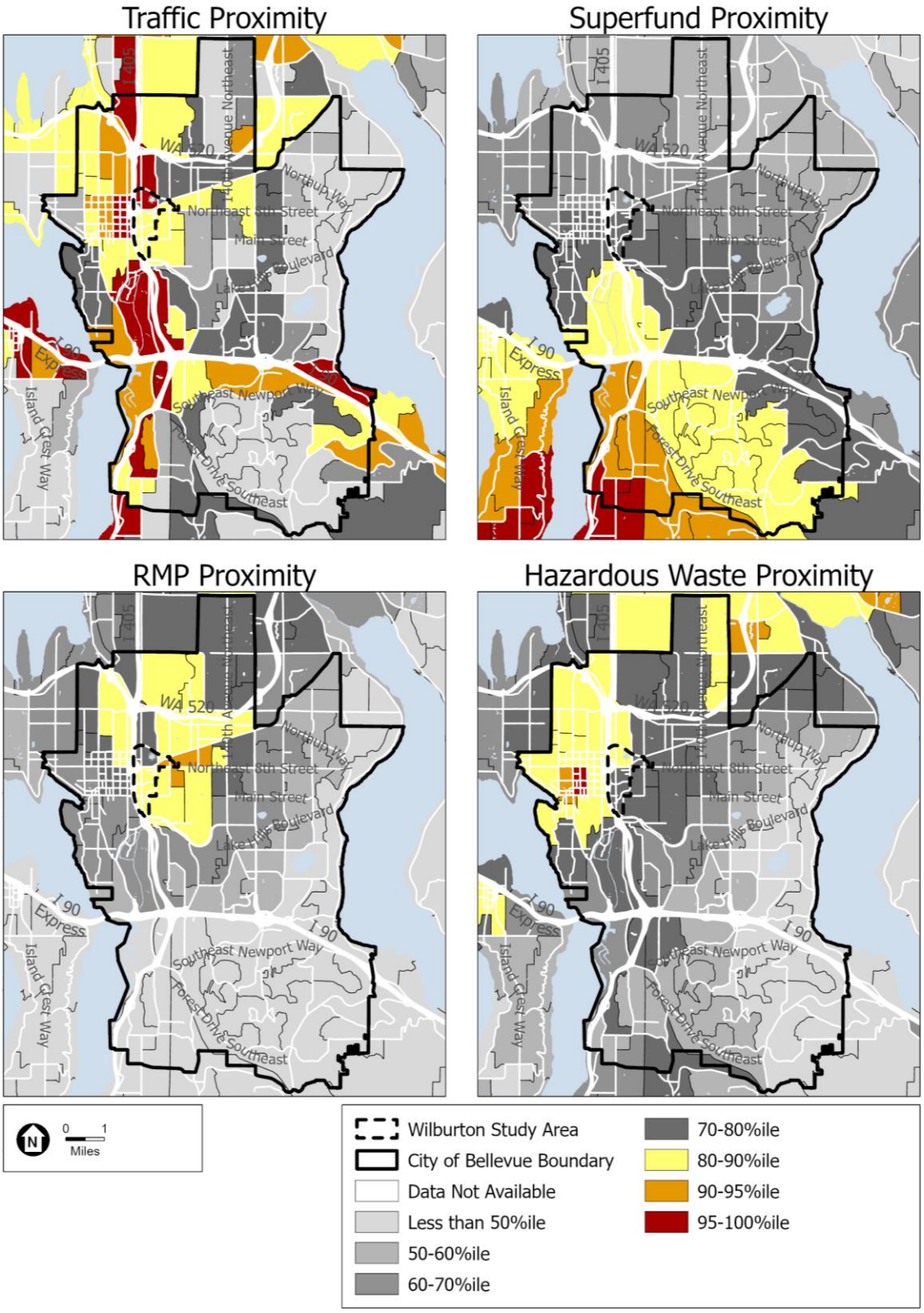
Alternatives would therefore have the greatest impacts of traffic proximity on new residents. See **Figure 5-5** and **Table 5-5**. Further discussion on air quality can be found in Chapter 8, *Air Quality and Greenhouse Gas Emissions*, and EIS Appendix G, *Climate Vulnerability Index.*

Most of the city is also below the 80th percentile for proximity to Superfund sites, although the southwest portion of the city ranges from the 80th–100th percentile. An existing area of housing unit density is present in the Factoria neighborhood, which is in an area in the 80th–95th percentile for proximity to these sites. All the alternatives include housing unit capacity in the Factoria area and a portion of the Newport neighborhood that is in the 90th–95th percentile. Alternative 3 would add the most unit capacity to these areas over the 80th percentile.

Most of Bellevue is below the 80th percentile for proximity to Risk Management Plan sites, although the northern portion of the city in the Wilburton study area and areas centering around Bel-Red Road range between the 80th and 95th percentile. This area already has substantial housing density, and all the alternatives, including the No Action, would add more unit capacity to this part of the city.

Per EJScreen's 2021 data, most of Bellevue is below the 80th percentile nationwide for proximity to hazardous waste facilities, with the exceptions of the northwestern portion of the city, which is in the 80–100th percentile and an area of the Bridle Trails neighborhood, which is in the 80th–90th percentile. The area with the highest percentile is Downtown. There is already an existing area of housing density concentrated Downtown, which has the closest proximity to hazardous waste facilities. All of the alternatives, including the No Action Alternative, place more capacity for housing units in the Downtown area. Alternatives 1, 2, and 3 would have comparable numbers of housing unit capacity Downtown (31,000–31,400), all higher than the No Action Alternative (28,700). Overall, Alternative 3 adds the most unit capacity in proximity to hazardous waste facilities.

All the Action Alternatives add capacity in areas of proximity to contamination and traffic, with Alternative 3 having the greatest impact. Section 5.4, *Avoidance, Minimization, and Mitigation Measures*, describes possible mitigation measures to address these impacts.



SOURCE: EPA EJScreen (2021)

FIGURE 5-5 **Exposure to Contaminated Sites and Traffic**

TABLE 5-5 **Traffic and Contamination Proximity and Total Housing Unit Capacity**

	Alt 0	Alt 1	Alt 2	Alt 3
Unit capacity in areas over 80th percentile for proximity to Superfund sites	17,968	19,264	21,349	24,336
Unit capacity in areas over 80th percentile areas for proximity to RMPs	20,460	33,449	39,652	47,785
Unit capacity in areas over 80th percentile areas for proximity to hazardous waste	42,417	45,531	49,163	53,262
Unit capacity in areas over 80th percentile areas for proximity to traffic	51,098	63,715	72,706	79,008
Unit capacity within 500 feet of highways	3,874	5,418	6,430	7,855

SOURCE: EPA EJScreen; City of Bellevue 2023; BERK 2023

5.3.3 Impacts of Alternative 0 (No Action)

The No Action Alternative assumes that growth would occur within current capacity. This includes capacity for 41,000 housing units (above the target of 35,000), or approximately 94,500 new residents. Most of this capacity is focused in the Downtown, BelRed, and East Main Mixed Use Centers in apartment buildings with studios and one-bedroom units. Population growth could impact Bellevue's overall demographics by moving to a smaller average household size and having fewer new units suitable for families and roommate living arrangements. The number of affordable housing units would likely grow under the No Action Alternative, leading to more options for residents with incomes below 80 percent AMI, although less so than under the Action Alternatives (see Chapter 7, *Housing*). The Wilburton study area could grow by up to 300 additional housing units (or 580 residents), which makes up less than 1 percent of the citywide housing capacity.

The No Action Alternative includes capacity for up to 124,000 new jobs. The capacity exceeds the growth target of 70,000 jobs. This includes capacity for up to 119,500 new jobs in Mixed Use Centers (96 percent of citywide capacity) and 2,900 new jobs in Neighborhood Centers. Capacity for 85,300 jobs is located within ¼ mile of the city's high frequency transit network (69 percent of new jobs). Office jobs make up the biggest share of job capacity (66 percent). Food sector jobs have an 8 percent share of job capacity, which is almost double the current number of food jobs. Medical (6 percent share) and Retail (11 percent share) have capacity

for job numbers to grow to some extent, while Government (1 percent share), Industrial (1 percent share), and Services (4 percent share) job numbers could decrease. Again, this job capacity is based on current capacity under the current Comprehensive Plan.

With a potential increase in the share of Office jobs citywide, which tend to have a higher average annual wage than other job types, average incomes could rise for those who work in Bellevue.

The Wilburton study area could grow within its current capacity for up to 3,900 jobs, or 3 percent of the overall job growth citywide. Currently, the Wilburton study area share of existing citywide jobs is 7 percent, and the share of job capacity is 5 percent. The area has capacity for growth in the number of Food, Medical, Office, and Retail jobs, while jobs in Education, Government, and Industrial sectors could decrease. The No Action Alternative may not see much change in the number of Services jobs, since the existing jobs number is nearing the capacity for such jobs. Again, with capacity for growth in Office and Medical jobs, average incomes of Bellevue workers could increase.

The No Action Alternative generally aligns with city's Economic Development Plan by emphasizing Office job capacity, which could support digital industries. Along with the other alternatives, the No Action Alternative includes capacity for more Retail jobs than currently exist, which could support a diverse retail mix and spaces for small businesses. However, the mix of job types could skew toward Office jobs, since 66 percent of capacity is for this job type, which may result in less job diversity overall. An emphasis on Office jobs could also have business displacement impacts on creative industries. The No Action Alternative also lacks new policies and strategies to encourage a wider variety of housing options, as the Action Alternatives do. Overall, the No Action Alternative does not conflict with the Economic Development Plan in ways that could not be mitigated.

The No Action Alternative includes housing capacity in areas close to traffic and possible contamination, as described in Table 5-5. However, this capacity is substantially lower than the housing unit capacity in these areas in the Action Alternatives. This is particularly true for areas proximate to RMPs and within 500 feet of highways: Alternative 3 has more than double the unit capacity than the No Action Alternative for these areas.

5.3.4 Impacts of Alternative 1

While the city's growth target is the same under all alternatives at 35,000 new housing units, Alternative 1 includes capacity for 59,000 new housing units citywide, which could house up to 136,000 new residents. Additional capacity above the growth target does not signify that the city will grow by that amount over the 20-year period, as growth is dependent on additional factors outside of capacity.

Capacity under Alternative 1 would primarily occur across the city's Mixed Use Centers (Downtown, BelRed, Wilburton-East Main, Crossroads, Factoria, and Eastgate). In Mixed Use Centers, incentives for larger units with two or more bedrooms could lead to more families and roommate households living in Bellevue and could impact the average household size. Like the other alternatives, affordable housing policies could lead to more affordable units, leading to more options for residents making less than 80 percent AMI. The city would also see capacity for gentle density increases in lower density residential neighborhoods, through the allowance of duplexes, triplexes, cottage housing, or other low-density housing types. This could attract larger households that cannot afford single-family houses in Bellevue.

The Wilburton study area includes capacity for an additional 9,200 housing units (or up to 17,700 residents) and would increase its share of citywide housing unit capacity from 0.7 to 8 percent. Growth in the Wilburton study area would be focused around the Wilburton Light Rail Station, Eastrail, and the Grand Connection.

Alternative 1 includes job capacity in Bellevue by up to 179,000 (to a total of 317,000 jobs). Capacity for 171,200 new jobs (96 percent of new citywide capacity) would be located in Mixed Use Centers, with added capacity for 2,800 jobs in Neighborhood Centers. Transit-proximate areas would include capacity for 123,100 jobs new (69 percent of the added job capacity).

The job mix under Alternative 1 includes a lower share of capacity for Retail jobs (9 percent) than the capacity under the No Action Alternative (11 percent), and a lower share of capacity for Services jobs (3 percent, compared to 4 percent in the No Action Alternative). Alternative 1 has higher shares of Office capacity (67 percent) and Medical capacity (9 percent) than under the No Action Alternative. Citywide, this mix of jobs would be likely to have a higher average wage than under the No Action Alternative, and slightly higher than under Alternatives 2 and 3.

In the Wilburton study area, capacity for 44,800 jobs would be added (25 percent of the new citywide job capacity). The Wilburton study area would then include capacity for 17 percent of the total jobs in Bellevue (up from 5 percent under the No Action Alternative). Compared to the No Action Alternative, Alternative 1 would have a lower share of capacity for Medical jobs (27 percent, compared to 43 percent) and a much higher share of capacity for Office jobs (62 percent, compared to 27 percent). Retail would also take a lower share of the job capacity (6 percent, compared to 17 percent under the No Action Alternative). An increase in the share of Office job capacity could increase the average wage of Wilburton study area jobs, higher than under the No Action Alternative.

Like the other alternatives, Alternative 1 aligns with the city's Economic Development Plan by adding job capacity overall, emphasizing Office job capacity, and adding capacity for more Retail jobs. Alternative 1 also encourages a wider variety of housing than the No Action Alternative. While an emphasis on Office jobs could result in some impacts on job diversity and spaces for creative industries, impacts are not expected to be unavoidable and significant.

Alternative 1 adds housing capacity above the No Action Alternative in areas close to traffic and possible contamination, as shown in Table 5-5. However, capacity under Alternatives 2 and 3 is higher for these areas.

5.3.5 Impacts of Alternative 2

Alternative 2 includes capacity for 77,000 new housing units citywide, which could house up to 177,600 residents. Like the other alternatives, this exceeds the target of 35,000 housing units. Additional capacity does not mean that the total number of possible units would be built in the 20-year period, since housing development depends on multiple factors.

Under this alternative, capacity is focused in Mixed Use Centers and areas with good access to transit and jobs. Apartments would mostly include studios and one-bedrooms, which could attract single-person and couple households to Bellevue. Opportunities for affordable units would also grow, leading to more housing options for households making less than 80 percent AMI. Duplexes and other low-density housing types would be allowed across the city. This alternative would also create more lot subdivision and ownership opportunities for these low-density housing types, which could provide options for first-time homebuyers, including young families, and for older adults to remain in place.

In the Wilburton study area, the alternative includes capacity for 14,200 housing units, or up to 27,300 new residents. The Wilburton study area share of the citywide housing capacity would be 15 percent, compared to less than 1 percent of the existing capacity.

Alternative 2 includes capacity for 177,000 new jobs (for a total of 315,000); 168,500 (or 95 percent) of this capacity for new jobs would be in Mixed Use Centers and 3,800 would be in Neighborhood Centers; 70 percent of the capacity for new jobs (124,000) would be located within ¼ mile of the high-frequency transit network. The job mix in this alternative would include a slightly lower share of capacity for Office jobs (64 percent) than under the No Action Alternative (66 percent). Medical jobs would take a larger share of the capacity (11 percent) than any of the other alternatives (5–9 percent). Retail job capacity would be the same share as under Alternative 1 (9 percent) and lower than the No Action Alternative (11 percent). This mix of jobs could result in a similar citywide average wage to Alternative 1, and higher wage than the No Action Alternative.

Under Alternative 2, the Wilburton study area would see capacity for 38,100 new jobs (22 percent of the city's new job capacity). The Wilburton study area's share of the total citywide job capacity would be 15 percent. Office jobs would take a much greater share (58 percent) of total Wilburton study area job capacity than the No Action Alternative (27 percent), but a lower share than under Alternative 1. Medical jobs would be a lower share of capacity (31 percent) than the No Action Alternative (43 percent), but slightly higher than Alternative 1 (27 percent). Services and Retail jobs share of capacity would be consistent with Alternative 1 (lower than the No Action Alternative). Average wages for jobs in the Wilburton study area could be higher than under the No Action Alternative and comparable to Alternative 1.

Similar to Alternatives 0, 1, and 3, Alternative 2 generally aligns with the city's Economic Development Plan. This alternative adds job capacity citywide, with an emphasis on Office job capacity. It also adds more capacity for Retail jobs. Alternative 2, like the other Action Alternatives, also provides policies that support a wider variety of housing options than the No Action Alternative. Similar impacts on job diversity and spaces for creative industries as the other alternatives would be expected, although these are unlikely to be unavoidable and significant.

Alternative 2 adds housing capacity above the No Action Alternative in areas close to traffic and possible contamination (see Table 5-5). It includes more housing capacity in these areas than the No Action

Alternative, but less capacity than Alternative 3. This is true for areas proximate to Superfund sites, RMPs, hazardous waste, and traffic, and for areas within 500 feet of highways.

5.3.6 Impacts of Alternative 3

Alternative 3 includes capacity for 95,000 new housing units citywide, which could house up to219,100 new residents. This exceeds the target for 35,000 new units. Capacity above the 35,000-unit target does not indicate that more units would be built, as housing development depends on a variety of factors in addition to capacity.

Alternative 3 would place much of this new housing capacity in Neighborhood and Mixed Use Centers, and areas close to transit. Similar to Alternative 2, apartments in Alternative 3 would mostly consist of studio and one-bedroom units, which best suit single-person and couple households. As under the other alternatives, more affordable units would result in more options for households making less than 80 percent AMI. Gentle density increases would also be allowed citywide. Like in Alternative 2, this alternative would create more lot subdivision and ownership opportunities for duplexes, triplexes, and cottage homes. This could influence the city's demographics by attracting first-time homebuyers and older adults.

In the Wilburton study area, capacity for 14,300 housing units could be added (100 more units than under Alternative 2), which could result in up to 27,500 new Wilburton study area residents. The Wilburton study area's share of citywide housing capacity would be 9 percent, compared to less than 1 percent of current capacity.

Alternative 3 would result in the greatest new job capacity of all the alternatives. Capacity for 200,000 more jobs would be added citywide, resulting in a total capacity of 338,000 jobs in Bellevue. Mixed Use Centers would account for 92 percent of this added job capacity (184,500 jobs) and Neighborhood Centers would take 2 percent (3,800 jobs). About 67 percent of new job capacity (133,000) would be located in transit-proximate areas. Similar to the other alternatives, the job mix would be predominantly capacity for Office jobs (66 percent) with a larger share of Medical job capacity (9 percent) than under the No Action Alternative (5 percent). Changes in the job mix in Alternative 3 could result in higher average wages than under the No Action Alternative, similarly to Alternatives 1 and 2.

The Wilburton study area would add capacity for 44,500 jobs under Alternative 3 (22 percent of new citywide job capacity). The Wilburton study area would also include 16 percent of the city's total job

capacity (up from 5 percent of current capacity). The job mix, like under Alternatives 1 and 2, would be mostly capacity for Office jobs (64 percent), much higher than under the No Action Alternative (27 percent). Medical job capacity would be a lower share (24 percent) than under the No Action Alternative (43 percent), Alternative 1 (27 percent), and Alternative 2 (31 percent). Like Alternatives 1 and 2, Retail would only be 6 percent of total job capacity (compared to 17 percent under the No Action Alternative). Similar to Alternatives 1 and 2, average wages could rise higher than under the No Action Alternative.

Like the other alternatives, Alternative 3 aligns with the city's Economic Development Plan. It adds the most job capacity of all the alternatives. Most of the job capacity share is in the Office sector, which could support digital industries. More capacity for Retail jobs is also included. Like the other Action Alternatives, Alternative 3 also supports a wider variety of housing options than the No Action Alternative. Some impacts on job diversity and spaces for creative industries could be expected due to the emphasis on Office jobs, although these are unlikely to be unavoidable and significant.

Alternative 3 adds the greatest housing capacity above the No Action Alternative in areas close to traffic and possible contamination, as described in Table 5-5. This applies to areas proximate to Superfund sites, RMPs, hazardous waste, and traffic, and for areas within 500 feet of highways. For some areas, such as those proximate to RMPs and within 500 feet of highways, the capacity under Alternative 3 is more than double the capacity under the No Action Alternative.

5.3.7 Summary of Impacts

Table 5-6 summarizes and compares impacts across the alternatives.

TABLE 5-6 **Population and Employment Impacts Summary**

	No Action Alternative	Alternative 1	Alternative 2	Alternative 3
CITYWIDE				
Housing Target	35,000 (same for all alternatives)			
Job Target	70,000 (same for all alternatives)			
New Housing Units Capacity	41,000 (Lowest)	59,000	77,000	95,000 (Highest)
Population Capacity	94,500 (Lowest)	136,000	177,600	219,100 (Highest)
Job Capacity	124,000 (Lowest)	179,000	177,000	200,000 (Highest)
Job Sector Mix	Mostly Office (66%), Lower Share of Medical (5%), Highest Share of Retail (11%)	Mostly Office (67%), Higher Share of Medical (9%), Lower Share of Retail (9%)	Mostly Office (64%), Highest Share of Medical (11%), Lower Share of Retail (9%)	Mostly Office (66%), Higher Share of Medical (9%), Lower Share of Retail (9%)
Population Capacity Near Contaminated Sites and Traffic	Lowest Impact	Higher Impact	Higher Impact	Highest Impact
Alignment with Economic Dev. Plan	Aligns (job capacity in Office and Retail)	Aligns (job capacity in Office and Retail, housing diversity)	Aligns (job capacity in Office and Retail, housing diversity)	Aligns. (job capacity in Office and Retail, housing diversity)
Average Wages	Higher than existing	Higher than Alt 0	Higher than Alt 0	Higher than Alt 0
WILBURTON STUDY AREA				
New Housing Units Capacity	300 (Lowest)	9,200	14,200	14,300 (Highest)
Population Capacity	580 (Lowest)	17,700	27,300	27.500 (Highest)
Job Capacity	3,900 (Lowest)	44,800 (Highest)	38,100	44,500
Job Sector Mix	Medical sector is largest (43%), Office 27%, Retail 17%	Office sector is largest (62%), Medical 27%, Retail 6%	Office sector is largest (58%), Medical 31%, Retail 6%	Office sector is largest (64%), Medical 24%, Retail 6%
Population Capacity Near Contaminated Sites and Traffic	Lowest Impact (least capacity)	Higher Impact	Higher Impact	Highest Impact (most capacity)
Alignment with Economic Dev. Plan	Least Aligned	Aligns (job capacity in Office and Retail, housing diversity)	Aligns (job capacity in Office and Retail, housing diversity)	Aligns (job capacity in Office and Retail, housing diversity)
Average Wages	Higher than existing	Higher than Alt 0	Higher than Alt 0	Higher than Alt 0

SOURCE: BERK 2023

NOTE: Population capacity is estimated based on the citywide occupancy rate (93 percent) and average household size (2.48 persons Citywide, 2.07 for the Wilburton study area). Housing capacity in the Wilburton study area is all multi-family units, so the average household size used for the Wilburton analysis is the average household size for multi-family units.

5.4 Avoidance, Minimization, and Mitigation Measures

5.4.1 Incorporated Plan Features

All the Action Alternatives increase capacity for jobs and support the strategies of the city's Economic Development Plan.

5.4.2 Regulations and Commitments

The Comprehensive Plan Economic Development Element and the city's Economic Development Plan include policies and strategies to build capacity, support entrepreneurs, expand the workforce, promote a diverse and healthy retail mix, and support a thriving creative and tourism economy.

Land Use Code (Title 20) establishes zoning and development regulations, which govern permitted uses and site planning.

5.4.3 Other Proposed Mitigation Measures

In addition to the measures addressed in Chapter 3, *Land Use Patterns and Urban Form*, and Chapter 8, *Air Quality and Greenhouse Gas Emissions*, the city could consider the following to address potential impacts on business displacement, implementation of the city's Economic Development Plan, and exposure to contaminated sites and traffic:

- **Mitigate displacement of existing small businesses.** In support of the Economic Development Plan's strategy to preserve spaces suitable for small businesses, the city could explore creating a program to ensure that affordable office and retail spaces are available. The programs could consider financial incentives (such as tax abatements similar to an office/retail equivalent of the Multi-family Tax Exemption [MFTE]), technical assistance and outreach, or the integration of office/retail affordability with livability initiatives.
- **Reduce Exposure to Contaminated Sites and Traffic.** All the alternatives add population capacity in areas with exposure to contaminated sites and traffic. The city's Air Quality and Land Use Planning 2023 report includes a range of mitigation strategies, including reducing vehicle miles traveled (VMT), retrofitting diesel vehicles, electrifying the city's fleet, transit-oriented development,

land use buffers, improved urban design, roadside barriers, decking or lids over highways, and building design strategies. Land use buffers could include designating areas near high-impact areas as industrial or other nonresidential zones, to ensure distance between these areas and residences. Bellevue could also limit residential uses within a certain distance of contaminated sites and freeways.

- **Wilburton Study Area: Zoning and Development Regulations.** The Action Alternatives would require changes in zoning and development regulations in the Wilburton study area. This would be an opportunity for Bellevue to specify allowed uses in the Wilburton study area to best align with the city's Economic Development Plan.

5.5 Significant Unavoidable Adverse Impacts

Under all alternatives, additional population and job growth would occur citywide and in the Wilburton study area. Effects on population growth from contaminated sites and traffic could be mitigated through the strategies in Section 5.4.3 above. All the alternatives align to some extent with the city's Economic Development Plan, and no unavoidable conflicts are expected. **Significant unavoidable adverse impacts on population and employment are not expected under any alternative.**

CHAPTER 6 Aesthetics

6.1 Introduction

The aesthetics analysis reviews possible impacts on the physical character of Bellevue, including citywide changes and an in-depth look at the Wilburton study area. This chapter includes a range of topics, such as urban form; viewsheds; and shadows, light, and glare.

Other chapters examine related thresholds, such as Chapter 3, *Land Use Patterns and Urban Form*, regarding compatibility and access to community assets.

6.2 Methods

Analysis of aesthetic impacts is subjective and can vary based on individual preferences. The No Action Alternative is provided as a basis for the analysis, which includes existing conditions and development that could occur under current regulations.

Analysis of urban form in this chapter is primarily based on the amount of potential population, employment, and commercial square footage growth in various geographic areas within the alternatives. Each alternative, as described in Chapter 2, *Alternatives*, also includes some policy assumptions that could impact aesthetics, such as height limits and housing types.

Viewshed analysis at the city level is also based on the assumption that higher densities in some areas will lead to larger and taller buildings, which could obstruct views of certain landmarks. In the

Wilburton study area specifically, a 3D model of the potential building envelopes is used to examine view impacts at eye level.

Shadow, light, and glare analysis citywide is also based on growth assumptions, as more density typically leads to larger buildings that cast shadows and contribute to light and glare. Higher densities may also contribute to more vehicle traffic, which is also associated with light impacts. Several specific public spaces are analyzed for possible shadow impacts based on where growth is added under each alternative. For the Wilburton study area, the 3D model is used to review shadow impacts at key locations.

Key terms in this chapter include:

- **Aesthetics**: The visual characteristics of a place.
- **Bulk:** The physical size of buildings, including height, width, and depth.
- **Scale:** How buildings or other features relate to one another, and how large they feel to pedestrians within a space.

6.3 Affected Environment

This section describes current policies and built environment conditions for urban form in Bellevue. See Chapter 3, *Land Use Patterns and Urban Form*, for a description of the overall land use and built environment context in Bellevue.

6.3.1 Aesthetics-Related Policies, Design Guidelines, and other Considerations

The Bellevue Comprehensive Plan includes an Urban Design and the Arts Element, with 85 policies in total. Several policies are especially relevant to this chapter's analysis of citywide aesthetics:

- **UD-6.** Encourage the green and wooded character of existing neighborhoods. [under Residential Neighborhoods]
- **UD-7.** Support neighborhood efforts to maintain and enhance their character and appearance. [under Residential Neighborhoods]
- **UD-11.** Develop Downtown and other mixed use areas to be functional, attractive, and harmonious with adjacent neighborhoods by considering through-traffic, view, building scale, and land use impacts.

- **UD-43.** Permit high-intensity development subject to design criteria that assures a livable urban environment. [under Design Quality – Downtown, Commercial, and Mixed Use Developments]
- **UD-48.** Link increased intensity of development with increased pedestrian amenities, pedestrian-oriented building design, through-block connections, public spaces, activities, openness, sunlight, and view preservation.
- **UD-59.** Ensure public places give access to sunlight, a sense of security, seating, landscaping, accessibility, and connections to surrounding uses and activities.
- **UD-62.** Identify and preserve views of water, mountains, skylines, or other unique landmarks from public places as valuable civic assets.

The Wilburton/NE 8th Street Subarea Plan also includes a policy related to retaining and enhancing views of Downtown, significant panoramas, and natural features (S-WI-40). The Wilburton study area is a subsection of the Wilburton/NE 8th Street Subarea.

Bellevue has also established design guidelines within the Land Use Code (Title 20) for some special and overlay districts:

- Downtown Design Guidelines (LUC 20.25A.140).
- Pedestrian Corridor and Major Public Open Space Design Guidelines (LUC 20.25). The Pedestrian Corridor extends from the Bellevue Square regional shopping center to 110th Avenue NE, along the alignment of NE 6th Street.
- Transition Area Design District (LUC 20.25B). This provides a buffer between residential uses in a residential land use district and a land use district that permits higher intensity development. This includes where multi-family development is planned adjacent to single-family residential, and where commercial development is planned adjacent to any residential uses.
- Office and Limited Business (OLB) 2 Design Guidelines (LUC 20.25C).
- BelRed Subarea Design Guidelines (LUC 20.25D.150).
- Factoria TownSquare Design Guidelines (LUC 20.25).
- Community Retail Design District Design Guidelines (LUC 20.25I). These guidelines apply to all properties within Community Business Districts, all Neighborhood Mixed Use Districts, and all properties within Neighborhood Business Districts.

- Medical Institution District Design Guidelines (LUC 20.25J).
- Light Rail Overlay District Design Guidelines (LUC 20.25M).
- Camp and Conference Center District Design Guidelines (LUC 20.25N).
- Eastgate Transit-Oriented Development Land Use District Design Guidelines (LUC 20.25P).
- East Main Transit-Oriented Development Land Use District Design Guidelines (LUC 20.25Q).

The Phase 1 Community Engagement report for the 2024 Comprehensive Plan Periodic Update revealed that community members continue to value aesthetics. In response to the "*What is something you love about Bellevue that you want future generations to enjoy?*" questionnaire question, 18 percent of questionnaire respondents mentioned "community and city character," and 65 percent of respondents mentioned "parks and green space."

6.3.2 Urban Form

The physical character of the city varies considerably, from low-density residential areas to mixed use neighborhoods, office parks, commercial centers, and high-rise Downtown towers. Known as a "City in a Park," Bellevue also has more than 2,700 acres of parks and open space and over 90 miles of multi-use trails. Street trees are present along many major roads throughout Bellevue, with a concentration of street trees in the Downtown area.

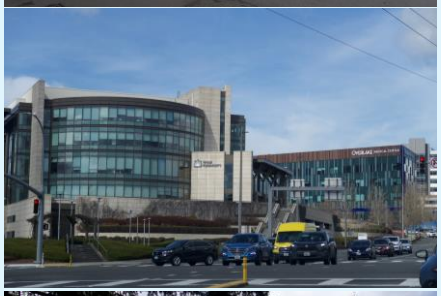
The Wilburton study area, located within the larger Wilburton/NE 8th Street and BelRed subareas, is located immediately east of I--405 and across from Downtown Bellevue. It includes a mix of retail and commercial uses, the Medical Institution District, and Auto Row along 116th Avenue NE. Overall, the Wilburton study area is characterized by low-density buildings in a pattern of auto-oriented development. Several small clusters of multi-family buildings are present: they are located along NE 8th Street (east and west of 124th Avenue NE), in the northwest corner of Lake Bellevue, and along 118th Avenue SE. Natural features in the Wilburton study area include Sturtevant Creek, which connects to Lake Bellevue and follows portions of Eastrail corridor and I-405, and a wetland west of 116th Avenue NE. Street trees are present throughout the study area, primarily on 116th Avenue NE, 120th Avenue NE, NE 12th Street, and NE 4th Street. In the future, the Wilburton study area will be a key destination for walking and biking along Eastrail and the Grand

SOURCE: City of Bellevue 2023 (upper left), Wikimedia Commons 2012 (lower left), ESA 2023

Bellevue's built form varies: The city includes areas of tall towers, mixed use areas, office parks, low-density residential, shopping centers, and multifamily housing, among other building types.

Connection. The future Wilburton Light Rail Station on NE 8th Street will also connect Wilburton to other parts of the city and region.

Other countywide Mixed Use Centers in Bellevue, including BelRed, Crossroads, Eastgate, Factoria, and Downtown, also have their own distinct character. BelRed is in the process of transitioning from a light industrial form to a transit-oriented mixed use neighborhood. Crossroads currently has a mix of large apartments, restaurants, and retail, including the large Crossroads Shopping Center. There is also a small pocket of two dozen single-family homes. Downtown has a mix of high-rise towers (between 45 and 60 stories), mid-rise buildings, and low-rise retail centers with large surface parking lots. Bellevue Downtown Park, Ashwood Park, and Meydenbauer Bay Park provide green space in this dense part of the city. Eastgate and Factoria have a mix of commercial office, retail, and multi-family housing.


SOURCE: Photos by ESA 2023
Wilburton currently includes a mix of uses and building types, including low-density commercial, medical institutions, and a small amount of multi-family housing.

6.3.3 Viewsheds

Bellevue has views of several regional landmarks, including Mount Rainier, the Cascade mountains, Lake Washington, and Lake Sammamish. Views of the Bellevue skyline are also present in some areas of the city.

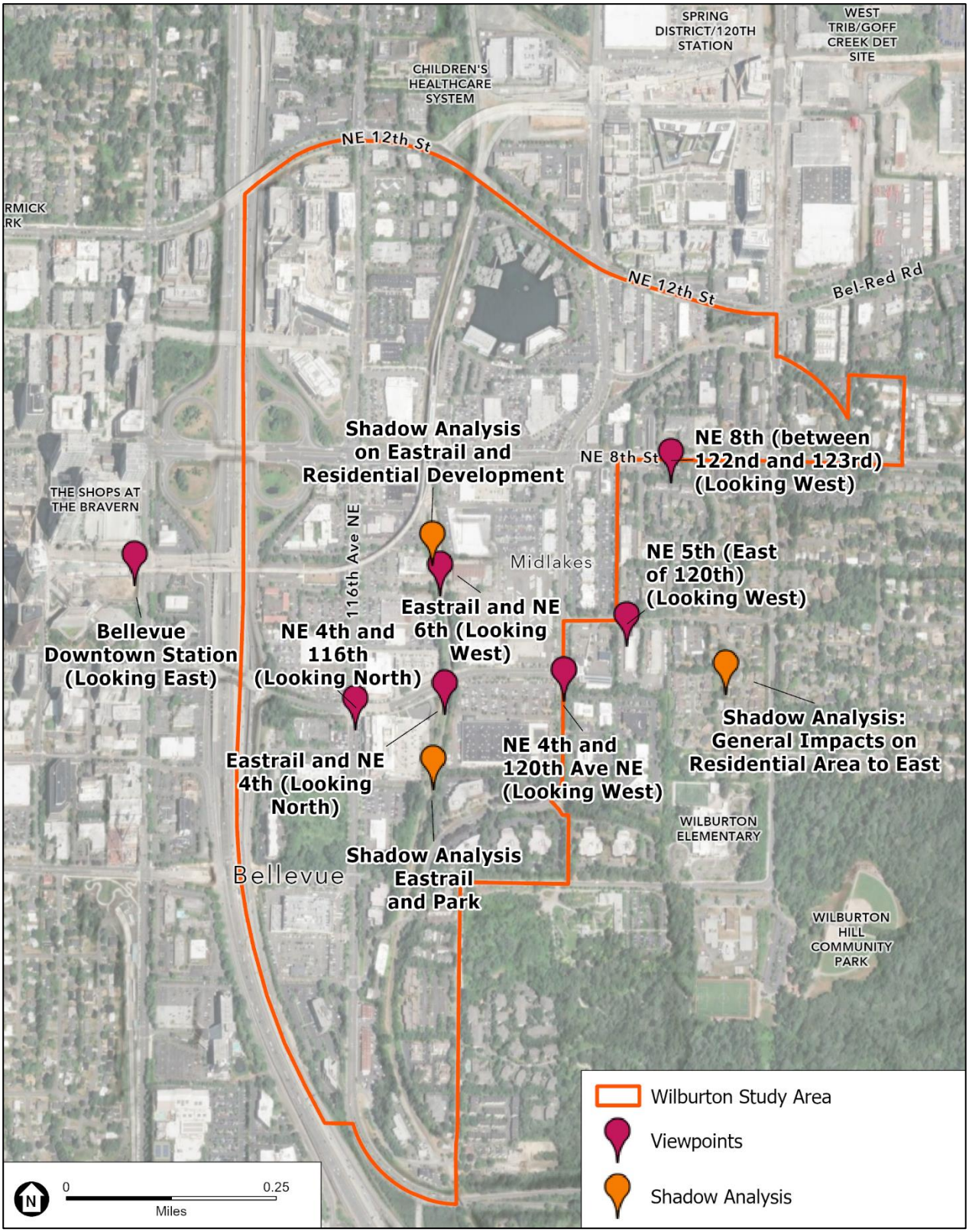
Comprehensive Plan Policy UD-62 suggests broadly that the city identify and preserve views of water, mountains, skylines, or other unique landmarks from public places as valuable civic assets. Citywide, potential impacts on views of these landmarks are considered in this chapter. Seven specific locations in the Wilburton study area are examined for view impacts in-depth using a digital 3D model (**Figure 6-1**).

6.3.4 Shadows

Areas of the city with higher densities, taller buildings, and smaller setbacks cast more shadows into the pedestrian realm and public spaces than low-density neighborhoods. As the predominant form of the Wilburton study area is low- and mid-rise buildings, with large areas of surface parking, prominent shaded areas are not numerous. The light rail bridge through the Wilburton study area, the Wilburton Trestle, and the bridge over NE 8th Street do currently cast shadows to the streets below. Three Wilburton study area locations are considered for shadow impacts in this chapter, with a focus on Eastrail and residential areas to the east (Figure 6-1).

6.3.5 Light and Glare

Light and glare impacts tend to be concentrated near high-traffic roadways, such as freeways and arterials, in commercial centers, and in higher density neighborhoods. Sources of light typical of urban areas includes streetlights, building lights, vehicle headlights, signage, and security lighting. Low-density residential areas typically have fewer light and glare impacts, due to the less-intense development pattern and, typically, higher concentration of trees and other vegetation. In the Wilburton study area, the primary sources of light and glare are vehicles, streetlights, interior building lighting, and parking lot lighting.



SOURCE: City of Bellevue 2023

FIGURE 6-1 **Wilburton Study Area Viewshed and Shadow Analysis Locations**

6.4 Potential Impacts

This section reviews potential aesthetic impacts for each alternative. **Table 6-2** in Section 6.4.7, *Summary of Impacts*, provides a high-level summary of the findings.

The potential impacts identified for the No Action Alternative and Action Alternatives include analysis of the "build-out" housing unit capacity and job capacity associated with each alternative. For the No Action Alternative and the Action Alternatives, these capacities for growth are higher than overall citywide growth targets of 35,000 new housing units and 70,000 new jobs by 2044. It is not expected that the "build-out" housing and job capacities would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with the alternatives.

Under the No Action Alternative, citywide capacity is 41,000 new housing units and 124,000 new jobs (including capacity for 300 housing units and 3,900 jobs in the Wilburton study area).

Alternative 1 includes citywide capacity for 59,000 new housing units and 179,000 new jobs (including capacity for 9,200 housing units and 44,800 jobs in the Wilburton study area).

Alternative 2 includes citywide capacity for 77,000 new housing units and 177,000 new jobs (including capacity for 14,200 housing units and 38,100 jobs in the Wilburton study area).

Alternative 3 includes citywide capacity for 95,000 housing units and 200,000 jobs (including capacity for14,300 housing units and 44,500 jobs in the Wilburton study area).

The alternatives are described in detail in Chapter 2, *Alternatives*.

6.4.1 Thresholds of Significance

Thresholds of significance for the aesthetics analysis include:

- **Urban form:** The action would result in impacts that conflict with the desired form.
- **Viewsheds:** The action would result in impacts on important public views citywide and from specific locations in the Wilburton study area.
- **Shadows:** The action would result in shadow impacts on public open space and specific locations for the Wilburton study area.
- **Light and glare:** The action would result in increases to light and glare that could hinder public use and enjoyment of public spaces.

6.4.2 Impacts Common to All Alternatives

URBAN FORM

Figure 6-1 and **Figure 6-2** summarize how different geographies citywide would be impacted in terms of urban form under the four alternatives.

Citywide

All alternatives, including the No Action Alternative, would see increases in the number of jobs and housing units citywide, which would impact the city's form, although each alternative distributes these increases in different areas. All alternatives would also see vacant and redevelopable land develop to various extents. All the Action Alternatives would permit a greater variety of housing types than is currently present or allowed, by allowing duplexes, cottage housing, or other low-density typologies across the city. In addition, the Action Alternatives would allow for higher Floor Area Ratios (FAR) in low-density mixed use and multi-family properties, resulting in an increased number of stories and lot coverage.

Mixed Use Centers would see a substantial amount of housing, job, and commercial square footage growth in all alternatives, including the No Action Alternative, which would be reflected in new development. Transit-proximate areas would also see more intense development, particularly under the Action Alternatives. Neighborhood Centers would experience impacts on urban form, especially under Alternatives 2 and 3, with large increases in the number of housing units, and increases in jobs and commercial square footage.

The Comprehensive Plan includes several policies relating to desired scale and form:

- **UD-6.** Encourage the green and wooded character of existing neighborhoods. [under Residential Neighborhoods]
- **UD-7.** Support neighborhood efforts to maintain and enhance their character and appearance. [under Residential Neighborhoods]
- **UD-11.** Develop Downtown and other mixed use areas to be functional, attractive and harmonious with adjacent neighborhoods by considering through-traffic, view, building scale, and land use impacts.
- **UD-48.** Link increased intensity of development with increased pedestrian amenities, pedestrian-oriented building design, through-block connections, public spaces, activities, openness, sunlight, and view preservation.

With respect to Policies UD-6 and UD-7, while the current form of residential neighborhoods would not change beyond what is allowed under current code in the No Action Alternative, all the Action Alternatives would result in gentle increases in density allowances throughout the city. This could be in the form of duplexes, cottage housing, or other low-density types. Design guidelines and development regulations could influence these housing types to appear similar to single-family housing and have minimal impacts on the visual characteristics of existing low-density neighborhoods. Gentle density increases could also result in fewer trees, depending on tree regulations.

Concerning Policy UD-11, all the alternatives would increase development in Downtown and in other Mixed Use Centers, resulting in impacts on building scales and views. Alternative 3 would likely have the greatest impact.

To address Policy UD-48, Alternative 1 would add modest expansions to multimodal transportation to accommodate new growth, while Alternatives 2 and 3 would have more-substantial investments accompanying high-density development. The No Action Alternative would not include multimodal investments beyond what is already planned.

Wilburton Study Area

For the Wilburton study area, all the alternatives add housing capacity, which means a greater opportunity to live and work in the same area and reduce vehicular travel. This is reflected in the types of new structures, as housing and mixed use buildings are added. The Action Alternatives would see the most dramatic change as capacity for more residential and mixed use buildings is added. Commercial space would also increase substantially in the Wilburton study area under the Action Alternatives, with capacity for more than nine times the commercial square footage as today.

Building heights in the Wilburton study area would also increase across the Action Alternatives, including areas with buildings up to approximately 45 stories tall, with lower building heights on the edges (ranging by alternative between 10 and 25 stories). Building heights would not change under the No Action Alternative.

The Wilburton/NE 8th Street Subarea Plan includes several relevant policies.[1] However, the scope of the current Wilburton Vision Implementation effort includes amending a number of policies that

[1] The Wilburton study area is a subsection of the Wilburton/NE 8th Street Subarea.

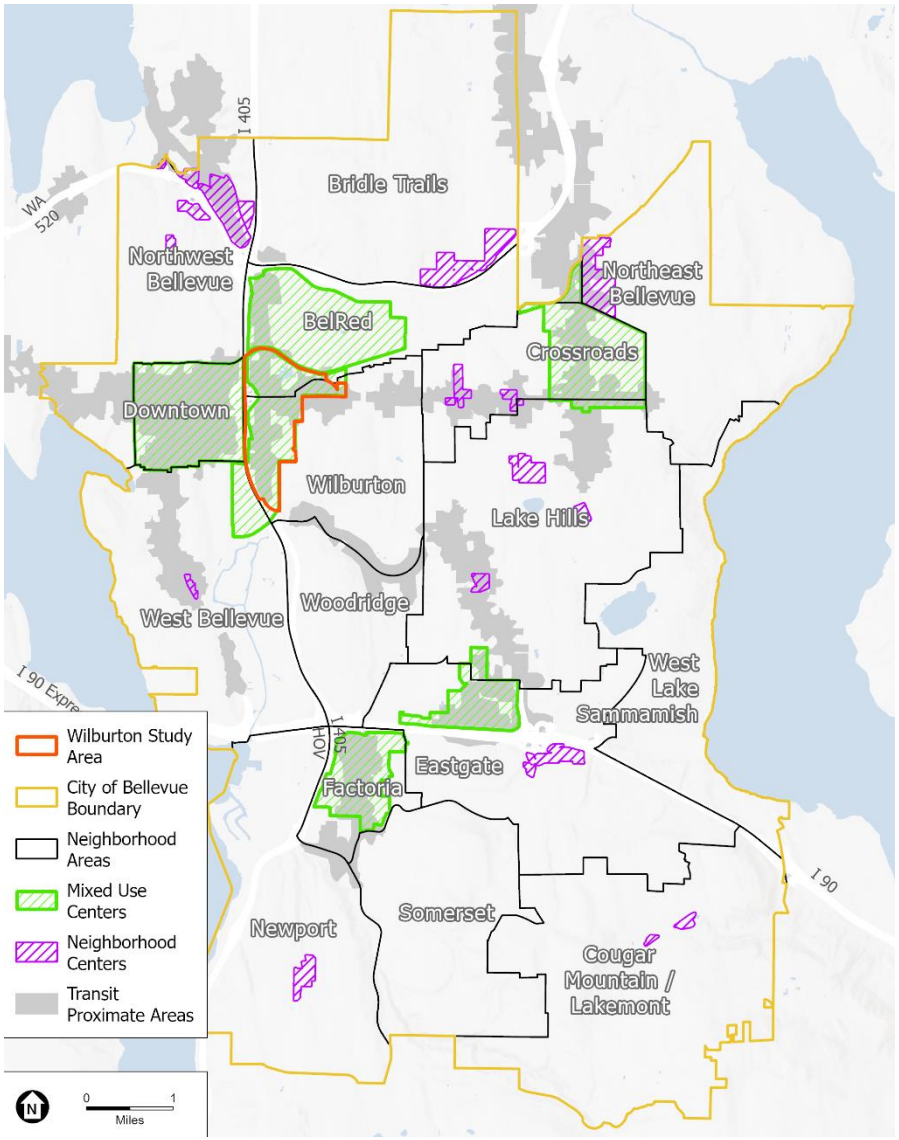
do not reflect the future vision for the area, including Policies S-WI-2, S-WI-3, and S-WI-4:

- **Policy S-WI-2.** Support the provision of commercial services in Wilburton that complement Downtown such as large retail and auto sales; mixed use opportunities; and services that provide convenient shopping for the adjacent neighborhoods. Implement this through zoning and development regulations.
- **Policy S-WI-3.** Support the long-term development of a "retail village" in the commercial area on the west side of 120th Avenue to provide a transition from more-intense commercial areas to the west and the residential area to the east.
- **Policy S-WI-4.** Recognize the area between I-405 and the BNSF corridor, and between NE 8th Street and SE 1st Street, as appropriate for a 75-foot height limit. Increased heights limits for the portion of this area east of 116th Avenue should be limited to those areas rezoned for more intense uses consistent with Policy S-WI-3 or future subarea plan amendments.

In the Wilburton study area, the No Action Alternative would remain the most similar to current conditions in terms of land uses. All the Action Alternatives introduce new mixed use areas throughout the study area, with Alternative 3 including the greatest opportunity for mixed use and, therefore, commercial services, as is supported by Policy S-WI-2.

Alternatives 1 and 3 would create a transition from lower- to higher-intensity mixed uses in the retail area west of 120th Avenue NE, as is desired under Policy S-WI-3. Alternative 2 would transition from lower- to higher-intensity residential development east of Eastrail and to high-intensity mixed uses between Eastrail and 116th Avenue NE. Land use under the No Action Alternative would not change from current conditions. Alternatives 1 and 3 best meet the conditions described in Policy S-WI-3. However, Policy S-WI-3 will likely be amended in the future to be consistent with the 2018 Citizen Advisory Committee vision.

Finally, the 75-foot height limit described in Policy S-WI-4 would not be impacted by the No Action Alternative, in which heights remain the same. Alternatives 1, 2, and 3, however, substantially exceed this height, which would mean an amendment to the policy language to be consistent.



SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 6-2 **City of Bellevue Geographies**

TABLE 6-1 **Impacts on Citywide Urban Form**

Geography	Alternative 0 (No Action)	Alternative 1	Alternative 2	Alternative 3
Mixed Use Centers	Development within current regulations.	Apartment buildings with larger and two-bedroom units.	Apartment buildings with studios and one-bedroom units.	Larger apartment buildings with studios and one-bedroom units.
Neighborhood Centers	Development within current regulations.	Development within current regulations.	Increased FAR allows larger building and greater density. Apartment buildings with studios and one-bedrooms.	Increased FAR allows larger buildings and greater density. Townhomes, small apartment buildings, or similar allowed.
Transit-Proximate Areas	Development within current regulations.	Development within current regulations.	Townhomes, small apartment buildings, or similar allowed.	Townhomes, small apartment buildings, or similar allowed.
Low-Density Neighborhoods	Development within current regulations.	Triplexes, cottage housing or similar allowed.	Duplexes or similar allowed. Some multi-family allowed near transit.	Triplexes, cottage housing, or similar allowed. Some multi-family allowed near transit and employment centers.
Wilburton Study Area	Development within current regulations.	Buildings up to around 45 stories adjacent to I-405. Transition to around 10–25 stories in north, south, and east.	More buildings up to around 45 stories adjacent to I-405. Buildings in central node around 16–25 stories. Eastern edge around 10–16 stories.	More buildings up to around 45 stories on both sides of 116th Ave NE. More areas with buildings around 25 and 45 stories compared to other alternatives.

VIEWSHEDS

Citywide

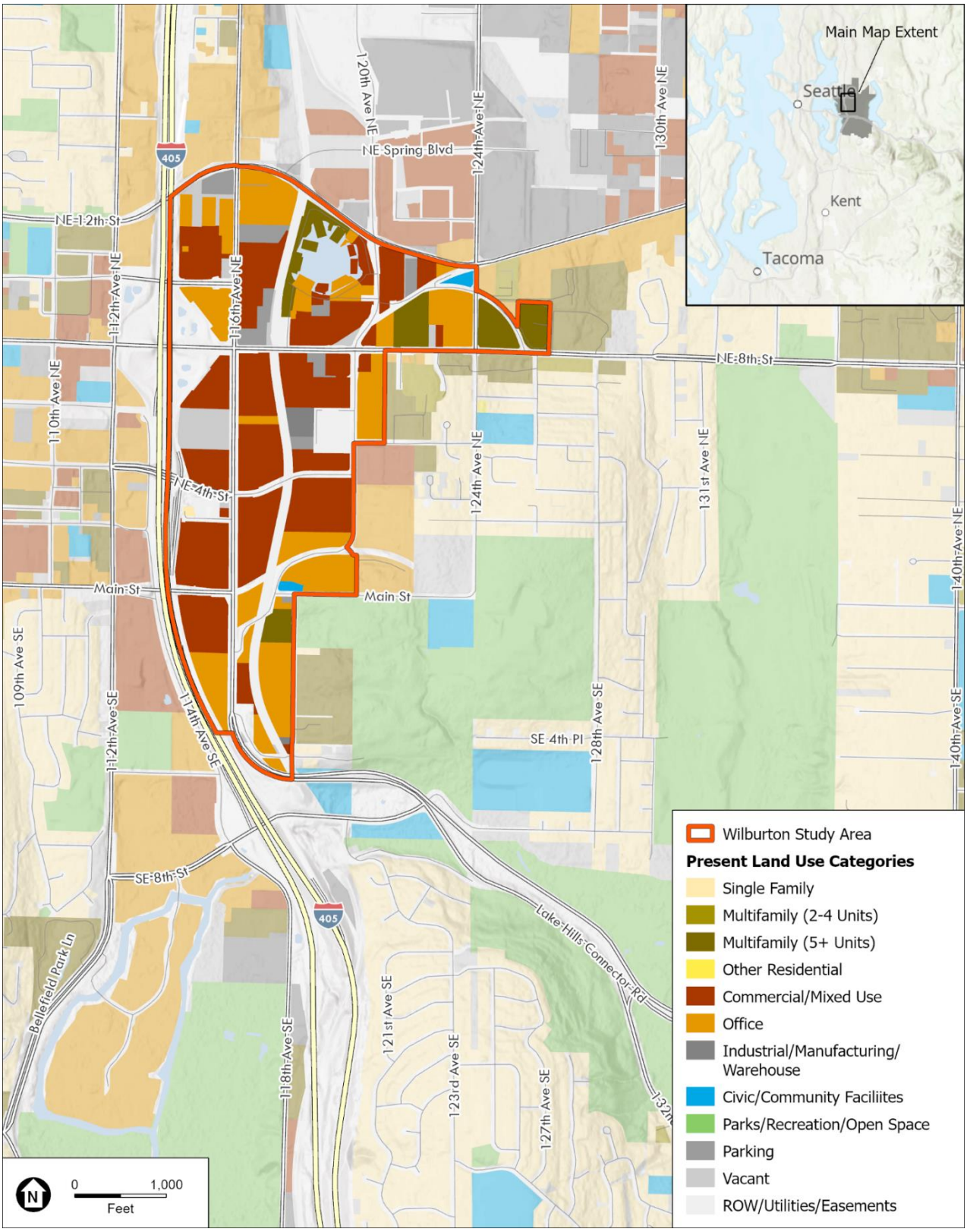
All the alternatives would have some impacts on viewsheds because all alternatives expect some level of housing, commercial square footage, and job growth; this growth would be reflected in more building massing than in current conditions. Although the No Action Alternative would not change city regulations or policies, it does anticipate that some parcels would redevelop to use the allowed building envelope more fully. The Action Alternatives would result in changes in regulations and policies, allowing more density citywide and taller buildings in some areas. These changes may result in some existing viewsheds being obstructed.

Generally, the No Action Alternative would have the least impacts and Alternative 3 would have the greatest potential for impacts, since it has the most capacity for development. All alternatives would see new growth in the Downtown and BelRed areas, which could impact public views from surrounding areas to local landmarks, such as Mount Rainier, Lake Washington, Lake Sammamish, the Cascade Mountains, and the Bellevue skyline.

Wilburton Study Area

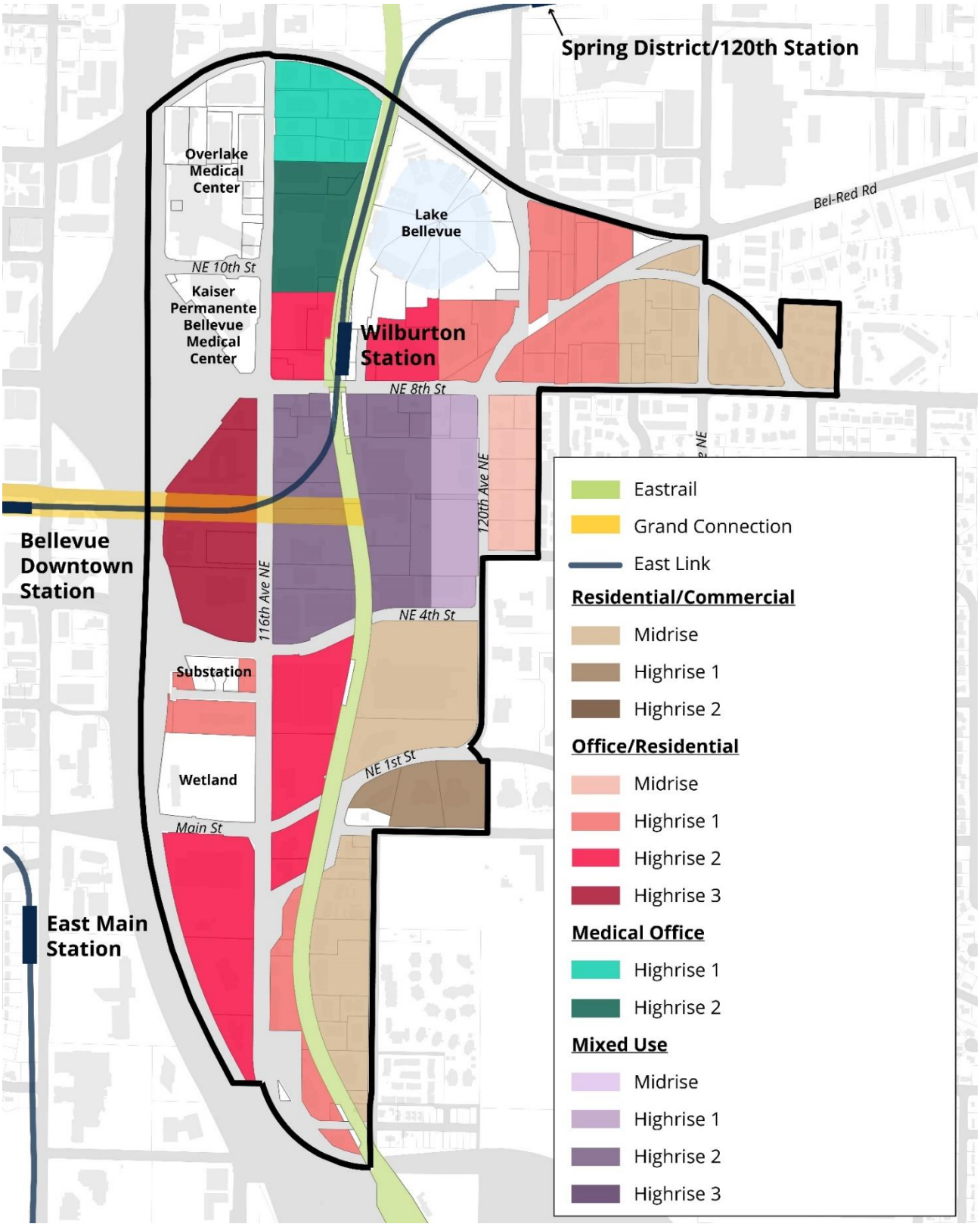
The Wilburton study area, in particular, would see much higher building heights in the Action Alternatives, which is expected to have impacts on views. At the specific viewpoint locations identified in Figure 6-1, all the Action Alternatives would impact existing views of Downtown.

Seven locations are analyzed for view impacts in the Wilburton study area using ArcGIS Urban modeling. The colored 3D models represent a theoretical buildable envelope for each alternative, based on heights and job and housing densities. The models do not reflect any specific building design or site-level development project proposal. The colors represent applicable land uses, as shown in **Figure 6-3**, **Figure 6-4**, **Figure 6-5**, and **Figure 6-6**. The grey buildings represent existing buildings, based on open source building footprint and height data published by ESRI and OpenStreetMap. Modeling of the alternatives does not reflect potential future development outside of the Wilburton study area.



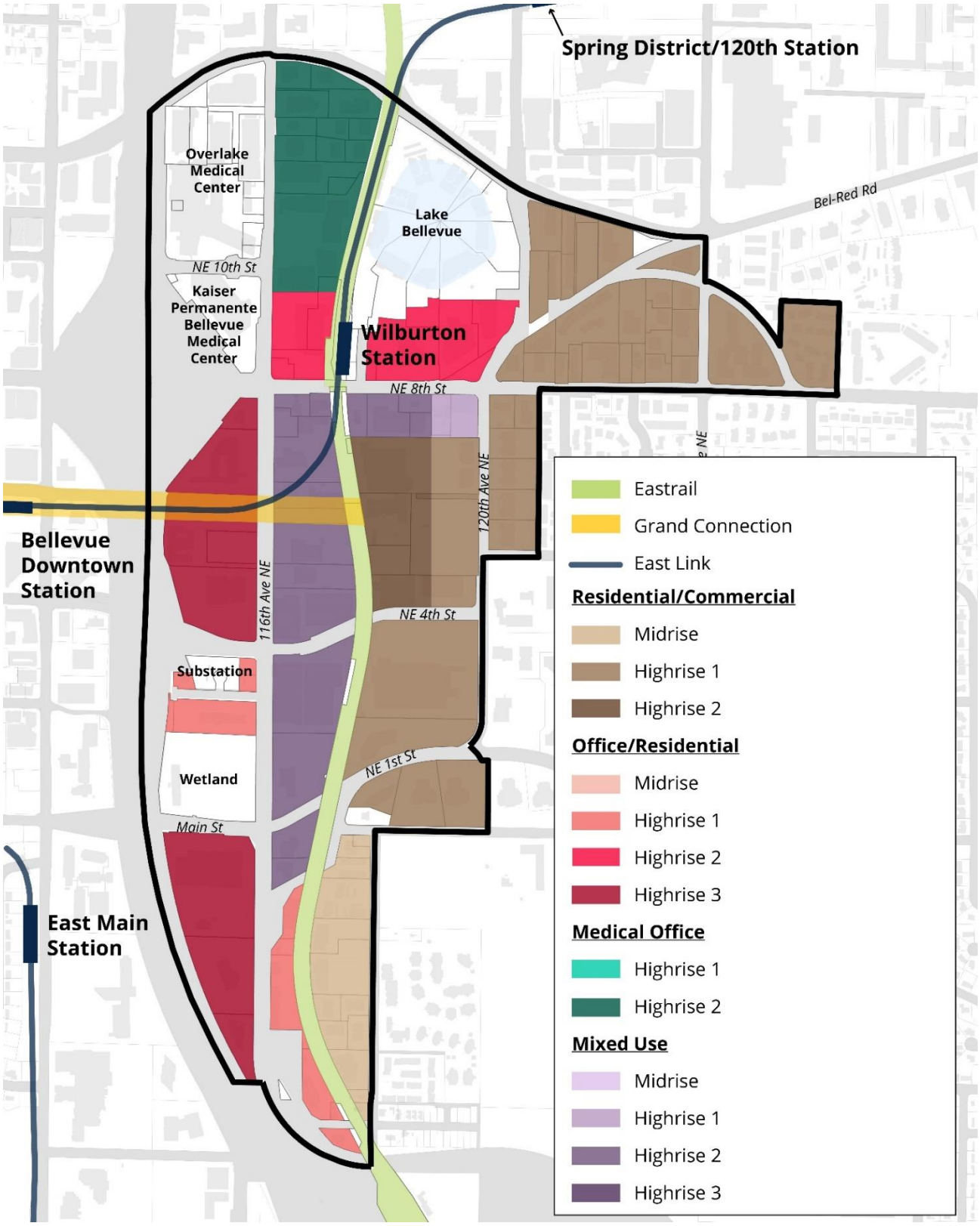
SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

FIGURE 6-3 **Alternative 0 (No Action) Wilburton Study Area**



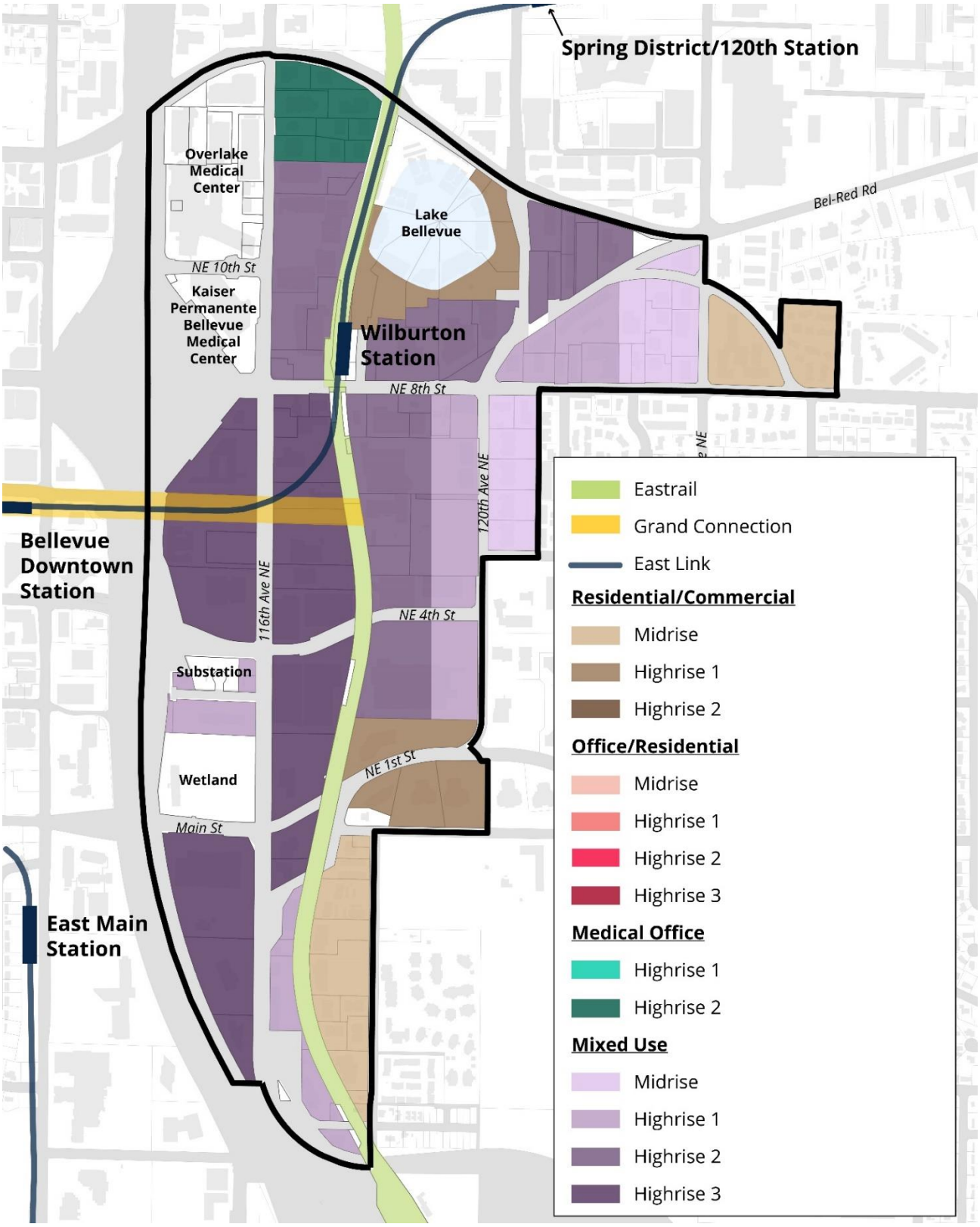
SOURCE: City of Bellevue 2023

FIGURE 6-4 **Alternative 1 Wilburton Study Area**



SOURCE City of Bellevue 2023

FIGURE 6-5 **Alternative 2 Wilburton Study Area**

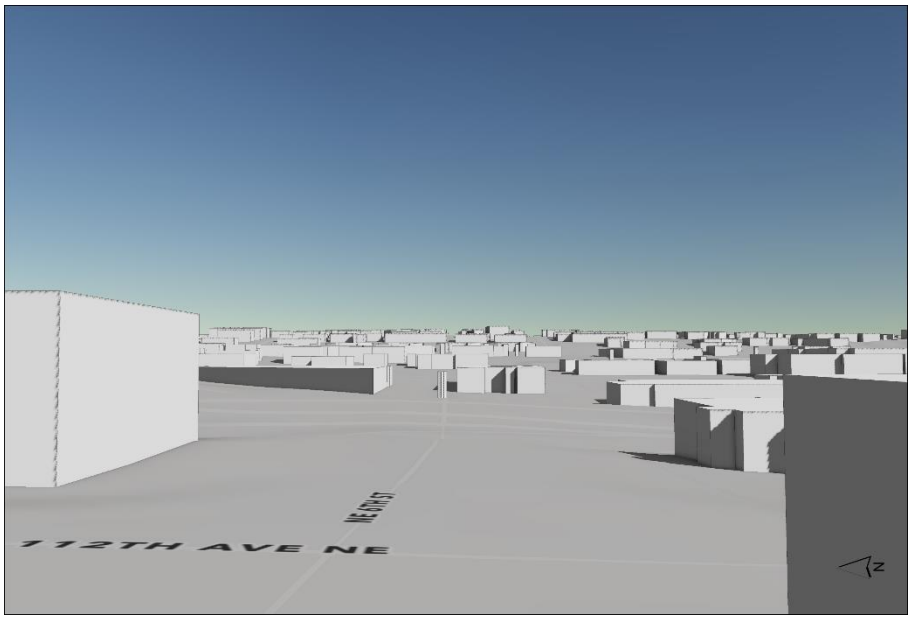


SOURCE: City of Bellevue 2023

FIGURE 6-6 **Alternative 3 Wilburton Study Area**

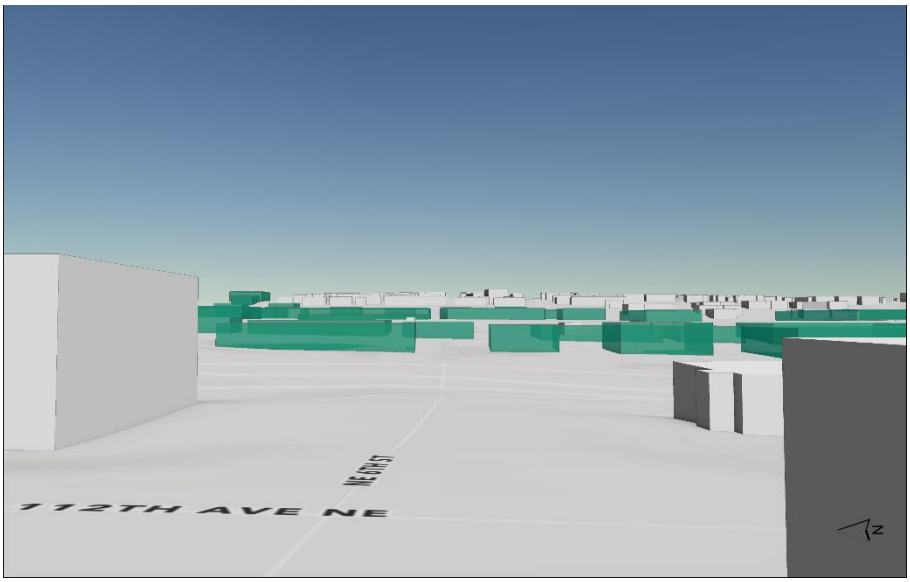
Bellevue Downtown Station (Looking East)

All three Action Alternatives would dramatically change views from the Bellevue Downtown Station location, while the views under the No Action Alternative would not be impacted. Existing buildings seen from this location are low-rise, while the Action Alternatives would all allow new towers in the area. The light rail bridge is already present and does obstruct some views from street level. Views are similar across the three Action Alternatives and would mostly prevent pedestrians from seeing trees and hilly topography in the distance.



SOURCE: City of Bellevue 2023; BERK 2023

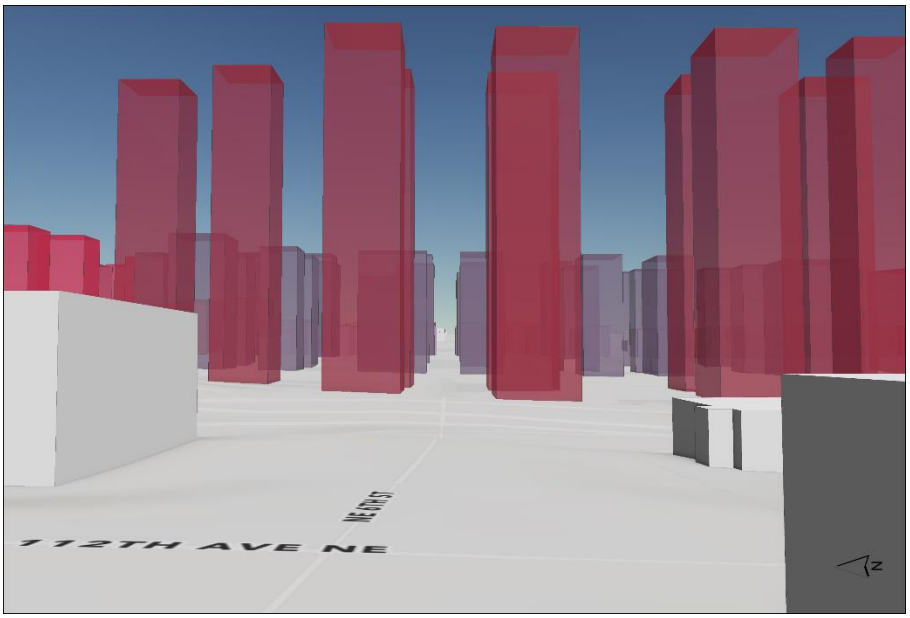
FIGURE 6-7 **Existing: Bellevue Downtown Station (Looking East)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-8 **Alternative 0 (No Action): Bellevue Downtown Station (Looking East)**



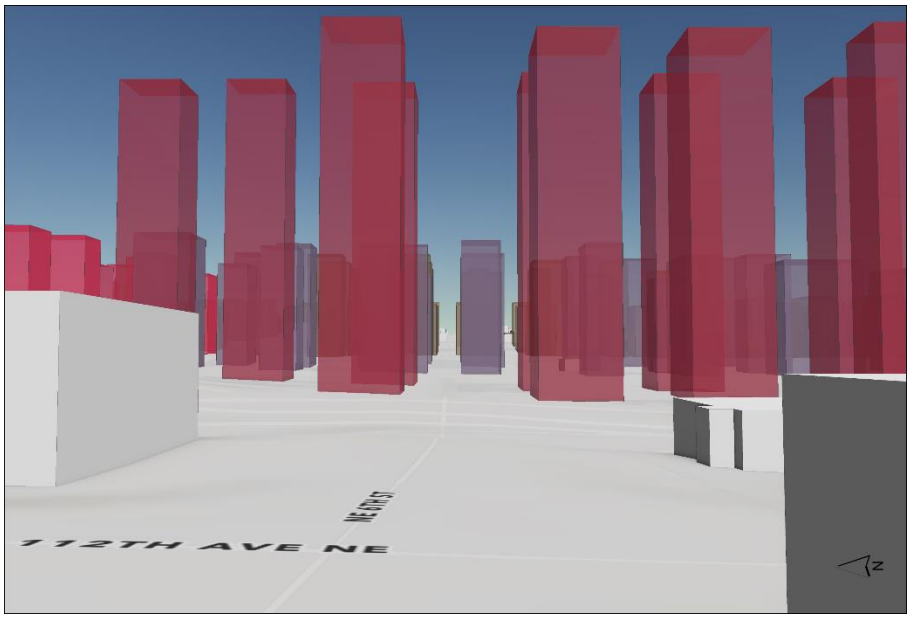
SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-9 **Alternative 1: Bellevue Downtown Station (Looking East)**

SOURCE: City of Bellevue 2023

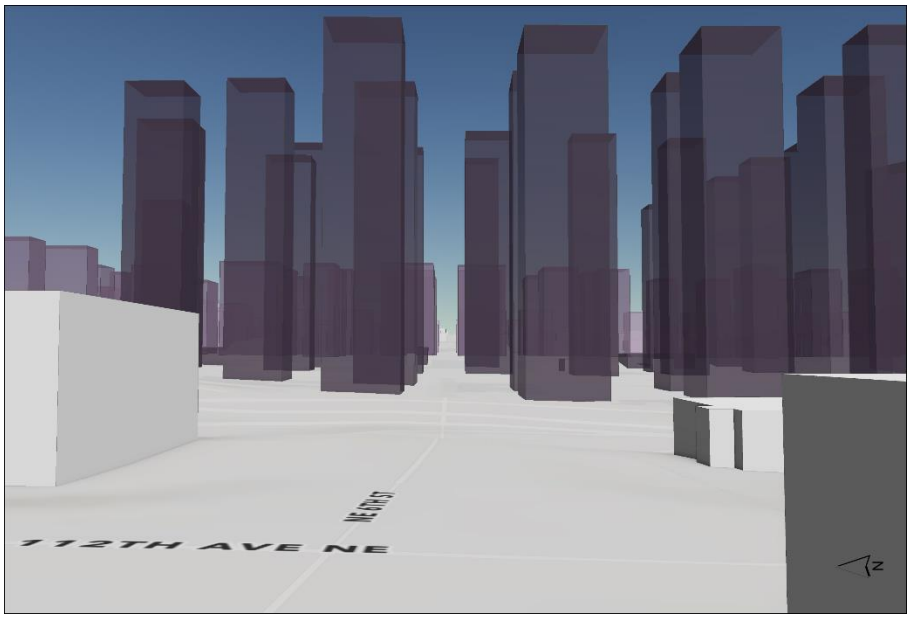
Where the alternatives models show capacity for towers, future building design could have visual characteristics similar to the examples above. This could include façade modulation, street trees, variation in textures, plazas, weather protection, transparency, upper level step backs, and other features that enhance the pedestrian experience and reduce the bulk of buildings.



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-10 **Alternative 2: Bellevue Downtown Station (Looking East)**



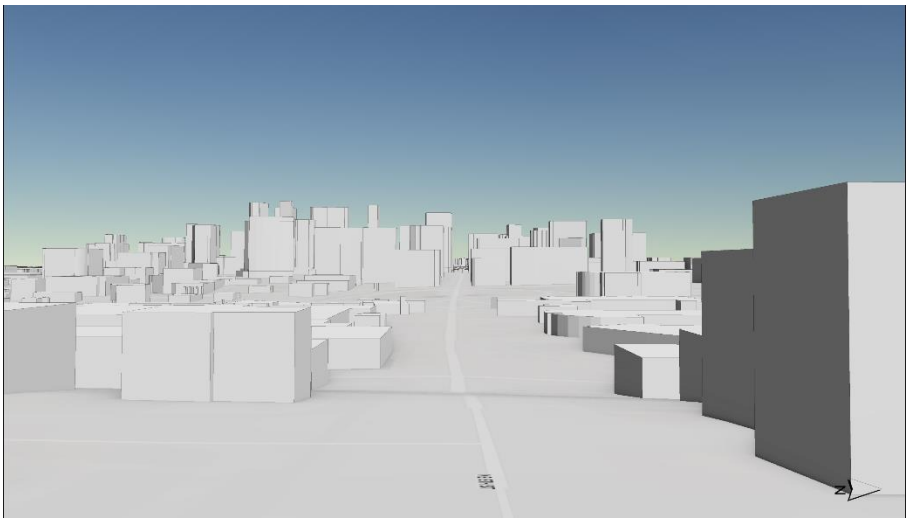
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-11 **Alternative 3: Bellevue Downtown Station (Looking East)**

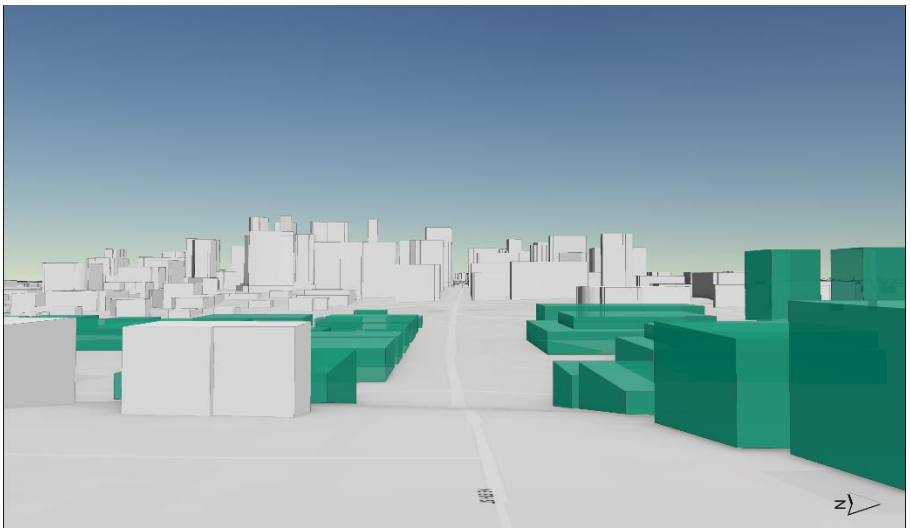
NE 8th Street (Looking West)

Currently, this location has views of Bellevue's Downtown skyline. All three Action Alternatives would mostly obstruct this view from street level. The No Action Alternative would have minimal view impacts from this location.



SOURCE: City of Bellevue 2023; BERK 2023

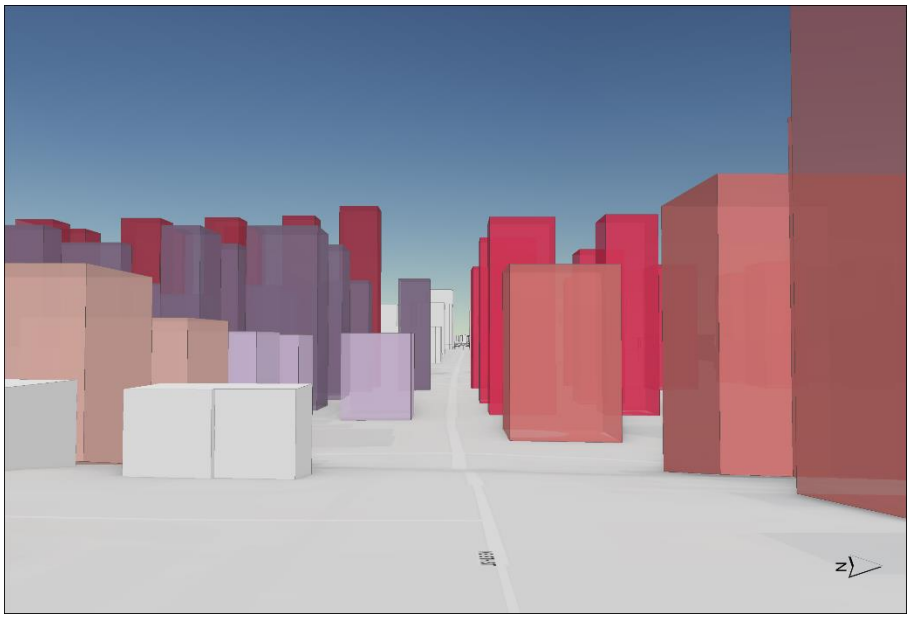
FIGURE 6-12 **Existing: NE 8th Street between 122nd and 123rd Avenues NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

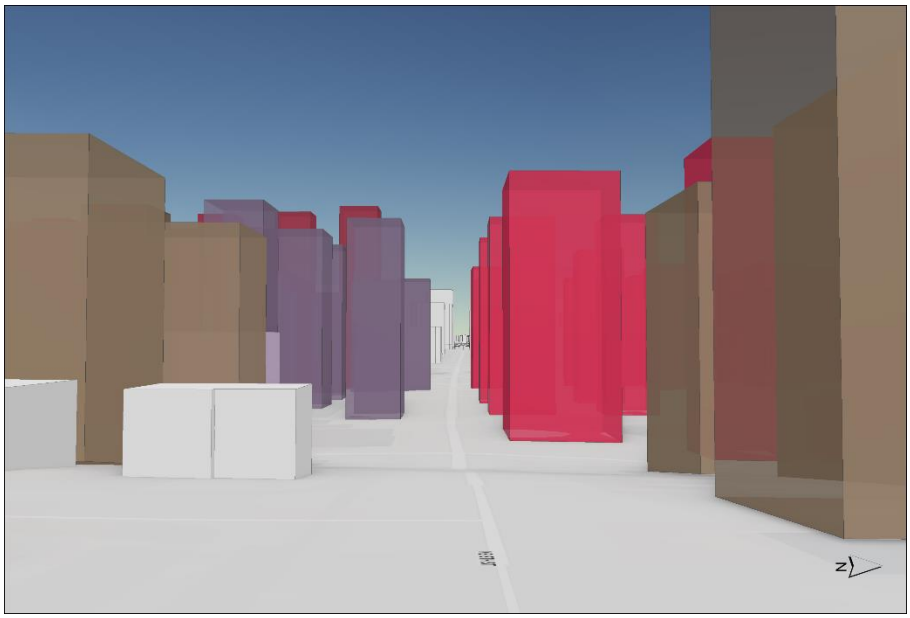
FIGURE 6-13 **Alternative 0 (No Action): NE 8th Street between 122nd and 123rd Avenues NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

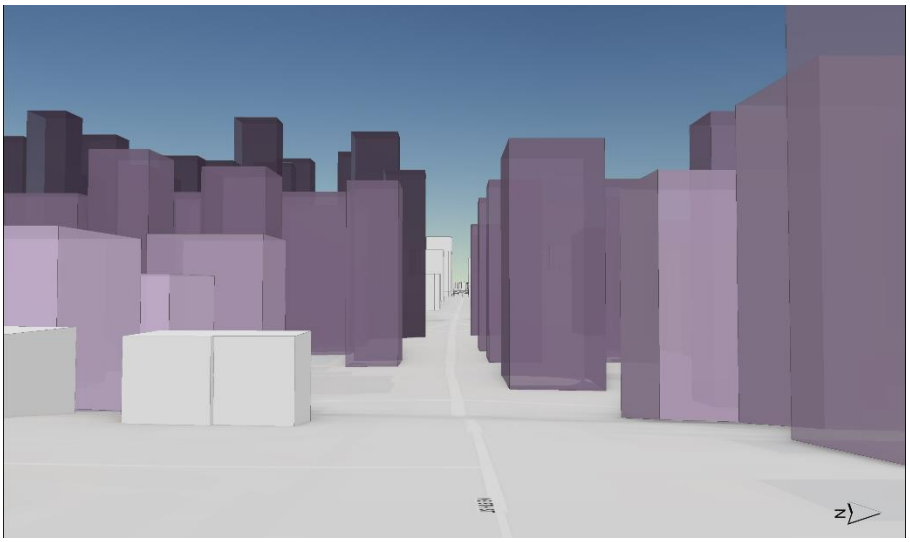
FIGURE 6-14 **Alternative 1: NE 8th Street between 122nd and 123rd Avenues NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-15 **Alternative 2: NE 8th Street between 122nd and 123rd Avenues NE (Looking West)**



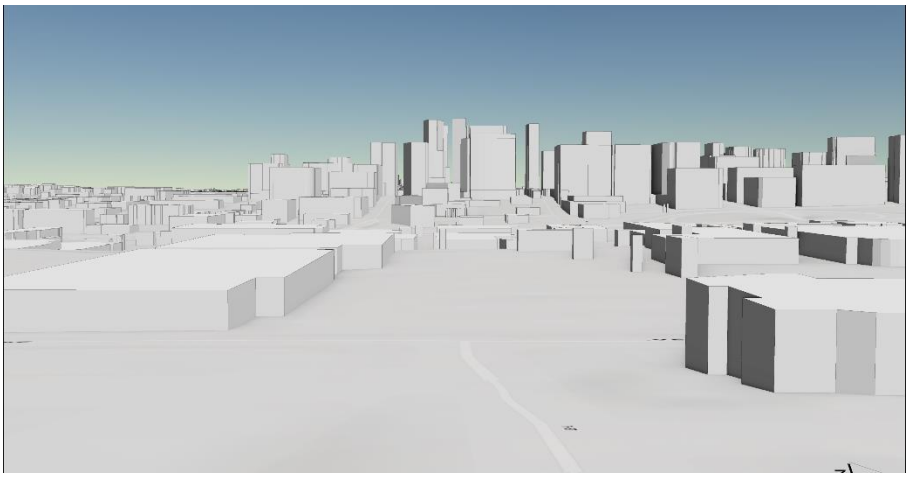
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-16 **Alternative 3: NE 8th Street between 122nd and 123rd Avenues NE (Looking West)**

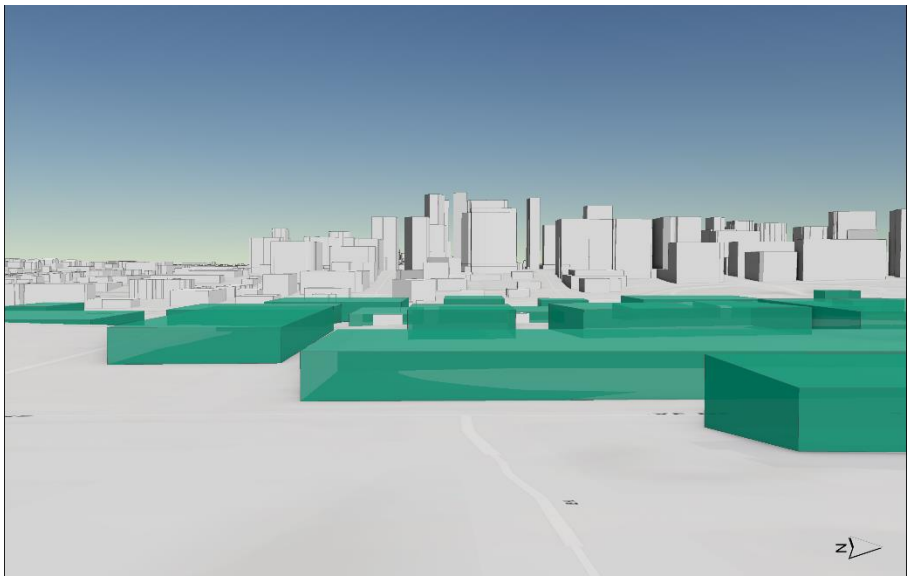
NE 5th Street (Looking West)

Under current conditions, this location has a view of the Downtown skyline that is partially obstructed by mature trees. All three Action Alternatives could completely obstruct this view with new buildings. The No Action Alternative would have minimal view impacts under full build-out.



SOURCE: City of Bellevue 2023; BERK 2023

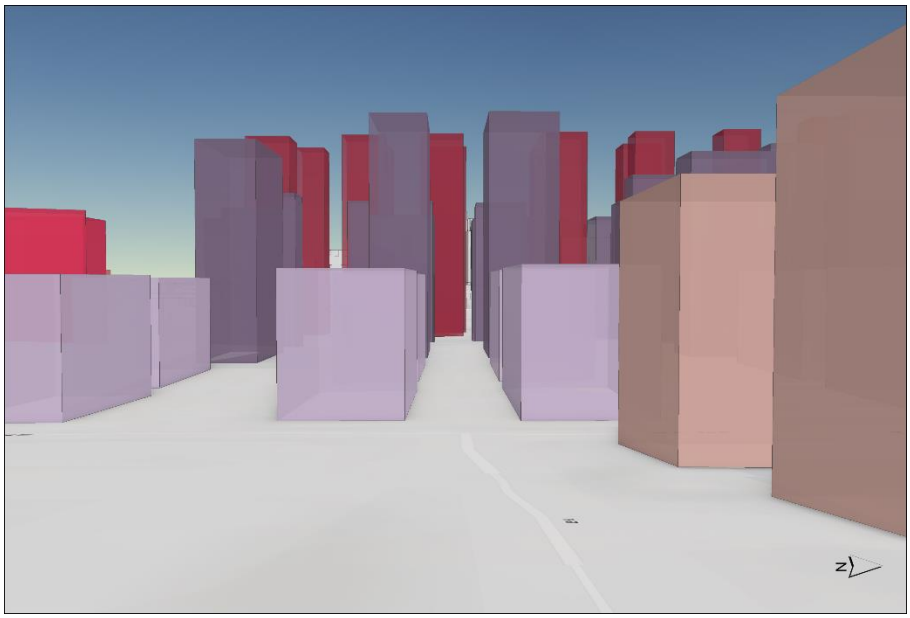
FIGURE 6-17 **Existing: NE 5th Street East of 120th Avenue NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

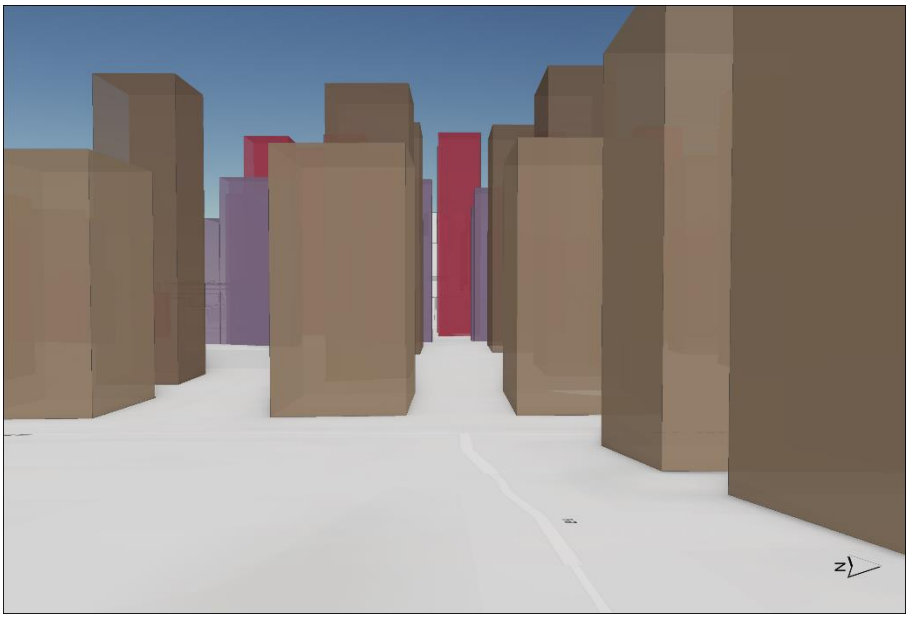
FIGURE 6-18 **Alternative 0 (No Action): NE 5th Street East of 120th Avenue NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

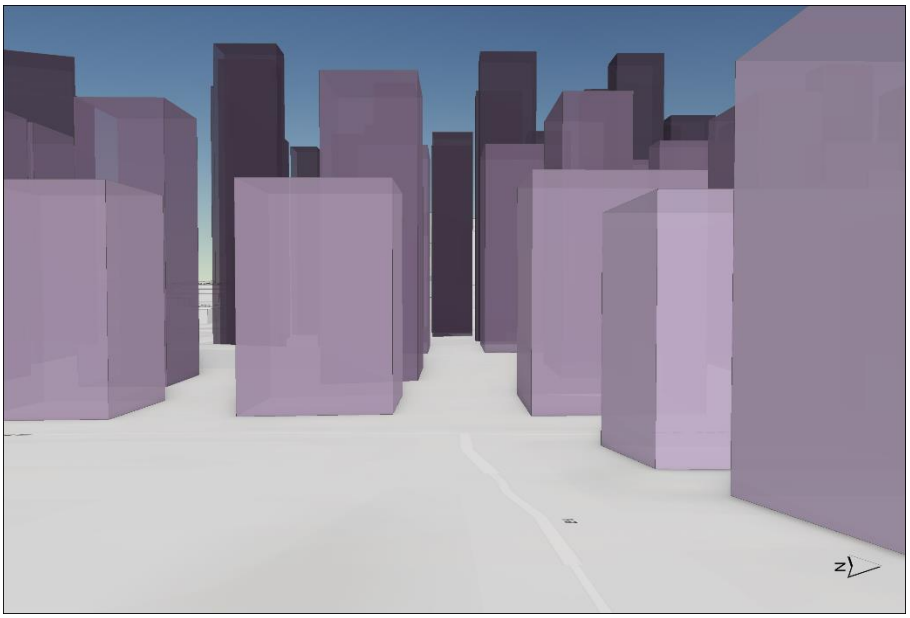
FIGURE 6-19 **Alternative 1: NE 5th Street East of 120th Avenue NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-20 **Alternative 2: NE 5th Street East of 120th Avenue NE (Looking West)**



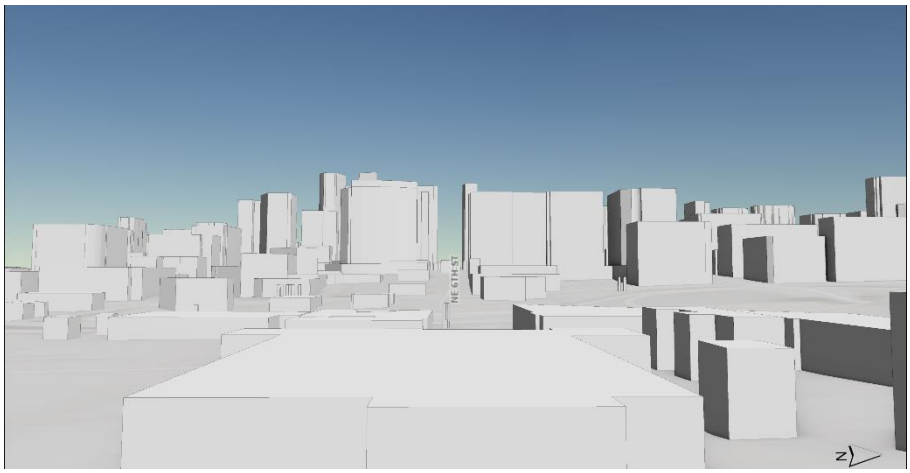
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-21 **Alternative 3: NE 5th Street East of 120th Avenue NE (Looking West)**

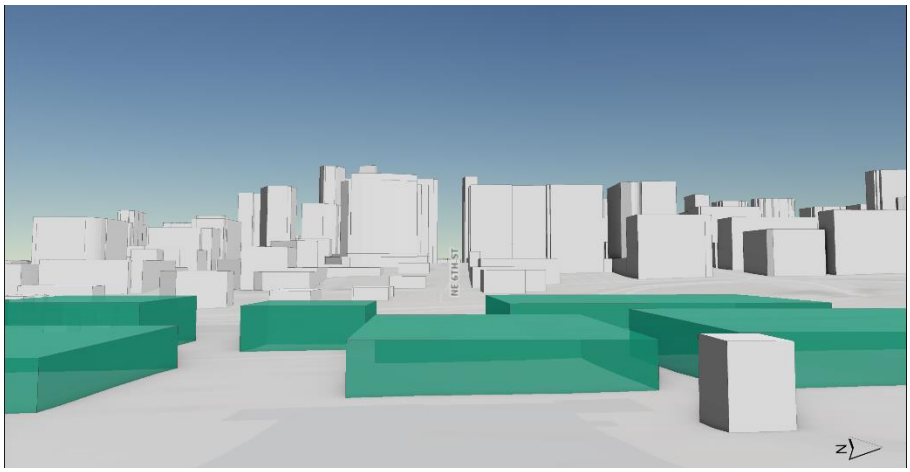
Eastrail and NE 6th Street (Looking West)

Under current conditions, this location has views of Downtown Bellevue. Conditions under all three Action Alternatives could obstruct most of this view, with some opportunities to see parts of Downtown between new Wilburton study area buildings. The No Action Alternative would have minimal impacts on views from this location.



SOURCE: City of Bellevue 2023; BERK 2023

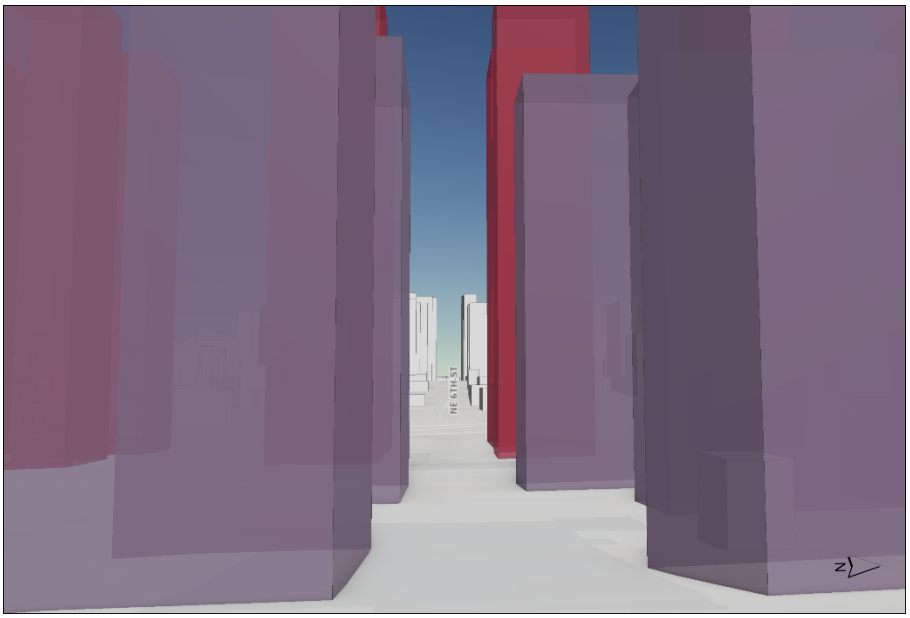
FIGURE 6-22 **Existing: Eastrail and NE 6th Street (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

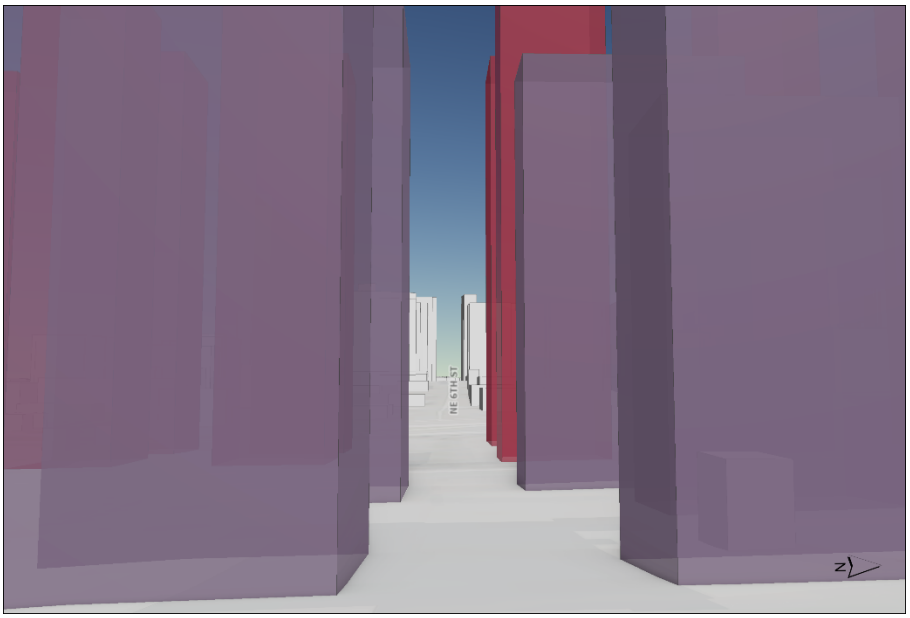
FIGURE 6-23 **Alternative 0 (No Action): Eastrail and NE 6th Street (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

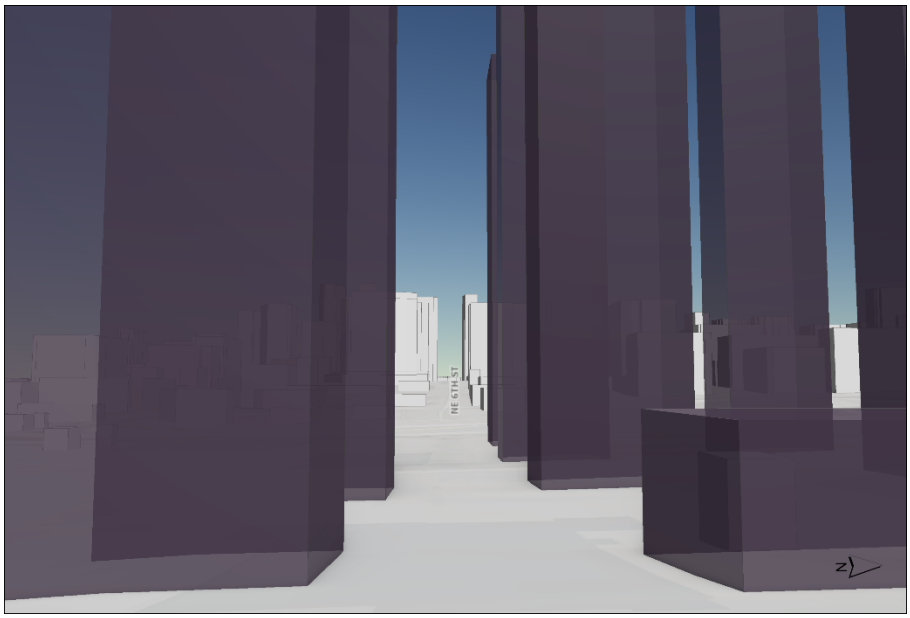
FIGURE 6-24 **Alternative 1: Eastrail and NE 6th Street (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-25 **Alternative 2: Eastrail and NE 6th Street (Looking West)**



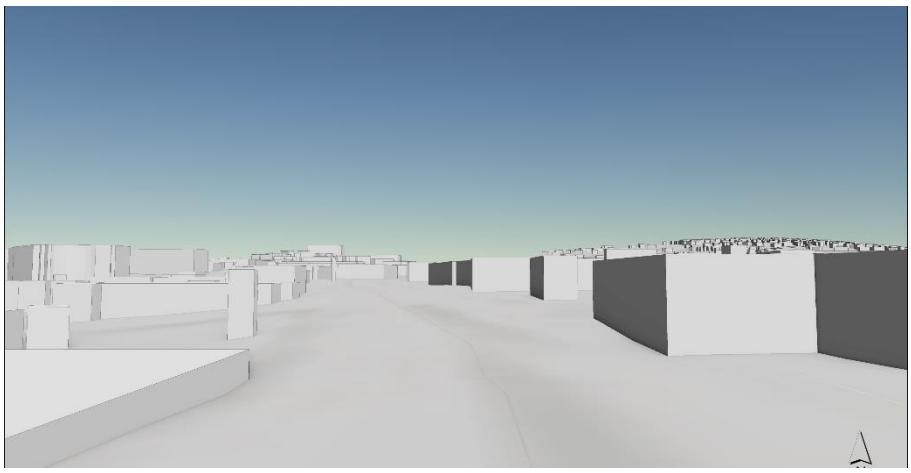
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-26 **Alternative 3: Eastrail and NE 6th Street (Looking West)**

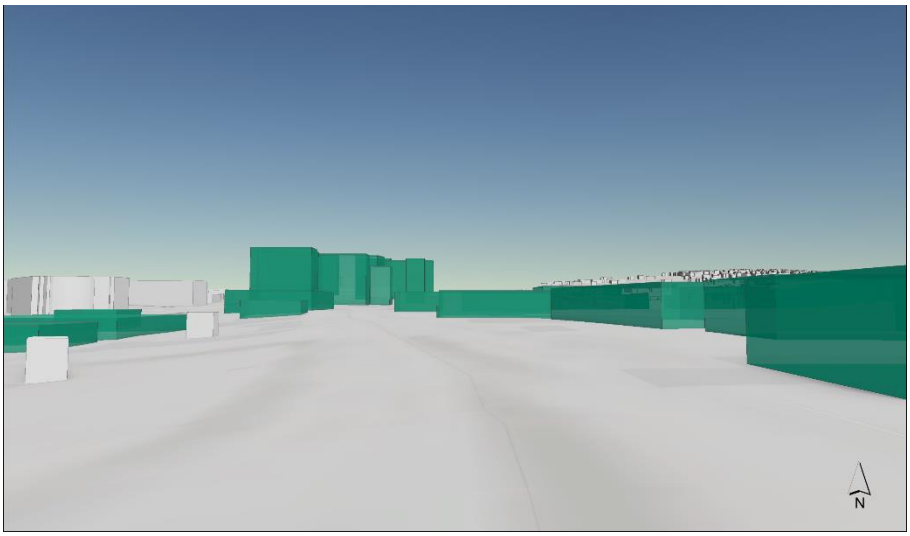
Eastrail and NE 4th Street (Looking North)

Currently, a pedestrian or cyclist in this location can see Downtown Bellevue to the left. Under the No Action Alternative and all the Action Alternatives, this view could be obstructed by new buildings.



SOURCE: City of Bellevue 2023; BERK 2023

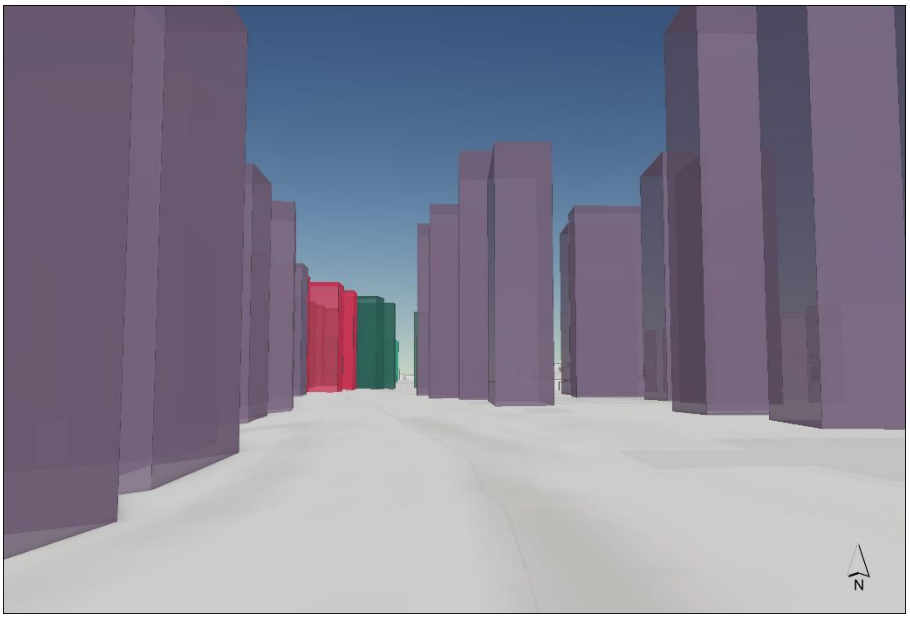
FIGURE 6-27 **Existing: Eastrail and NE 4th Street (Looking North)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

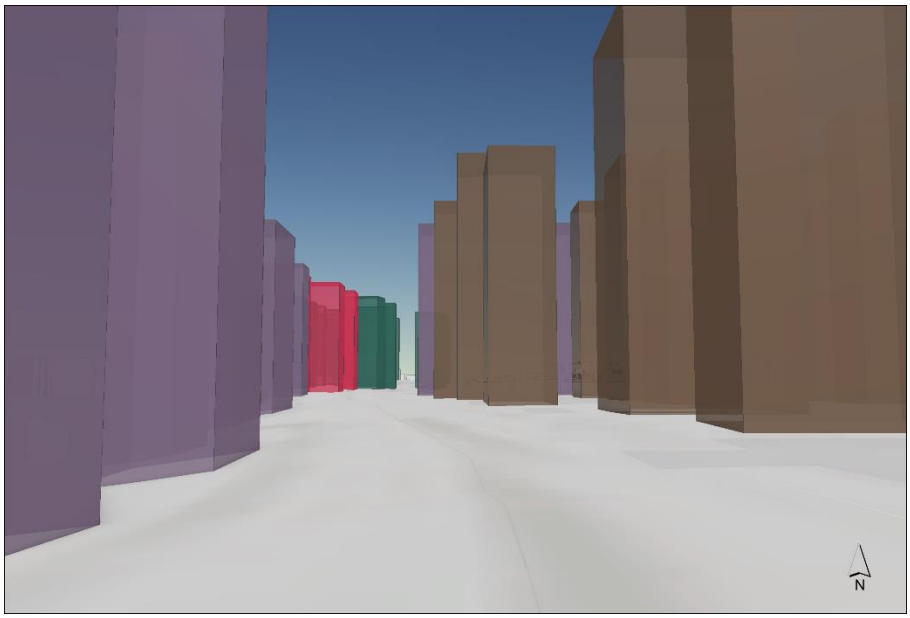
FIGURE 6-28 **Alternative 0 (No Action): Eastrail and NE 4th Street (Looking North)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

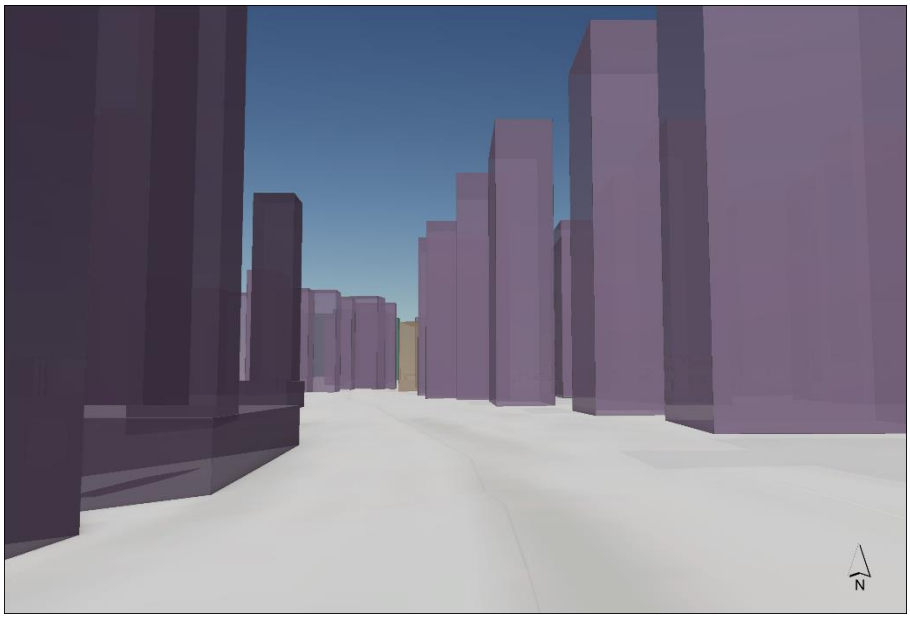
FIGURE 6-29 **Alternative 1: Eastrail and NE 4th Street (Looking North)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-30 **Alternative 2: Eastrail and NE 4th Street (Looking North)**



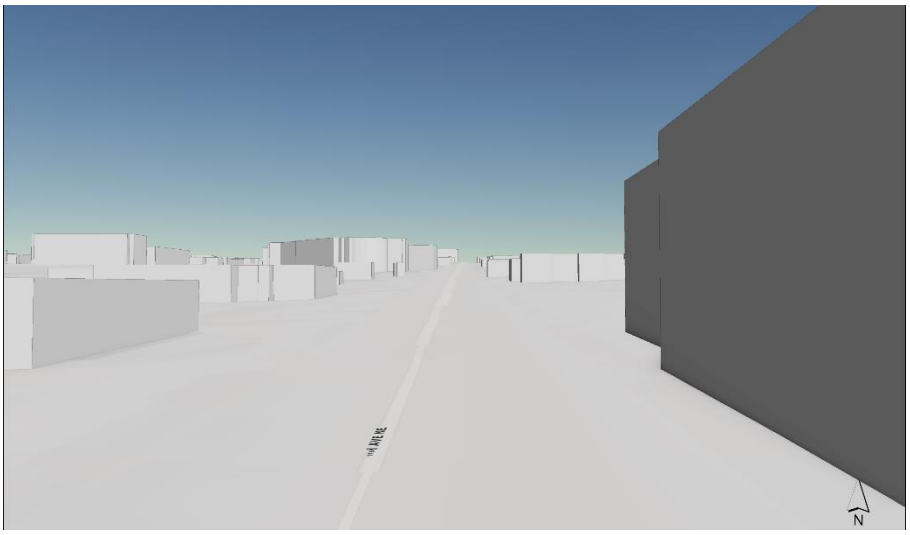
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-31 **Alternative 3: Eastrail and NE 4th Street (Looking North)**

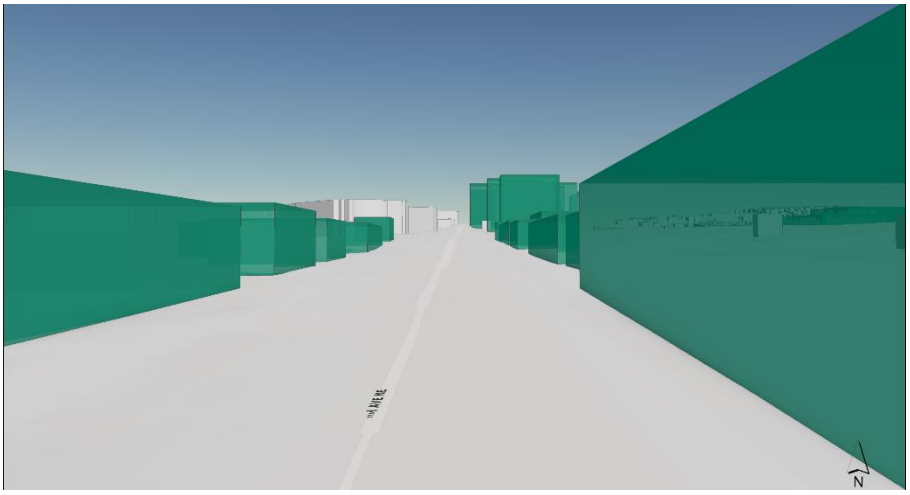
NE 4th Street and 116th Avenue NE (Looking North)

In this location, pedestrians can currently see Downtown Bellevue to the left. This view would be obstructed under all the Action Alternatives. The No Action Alternative could have impacts on this view as well. Alternative 1 would feel less enclosed than Alternatives 2 and 3, with more views of the sky.



SOURCE: City of Bellevue 2023; BERK 2023

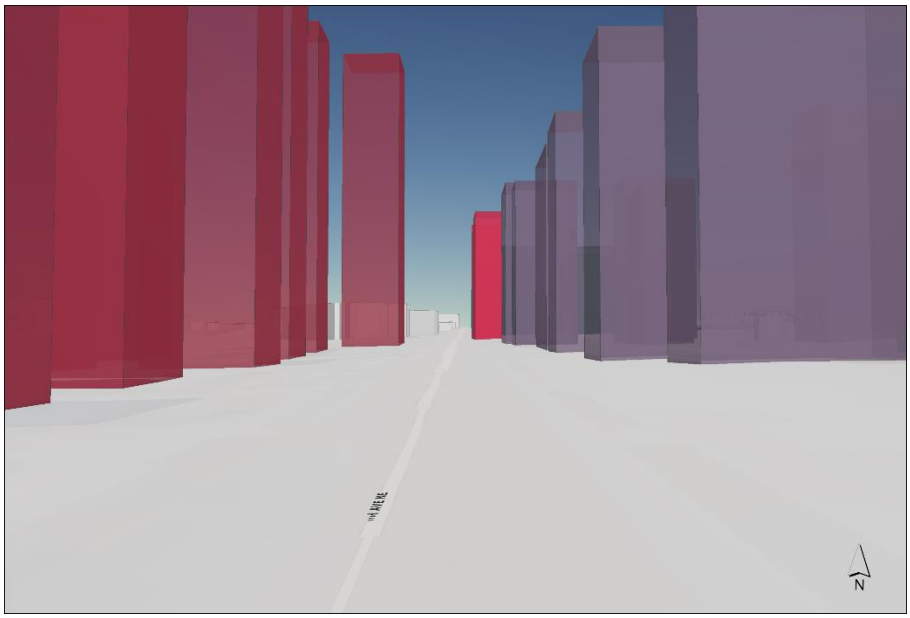
FIGURE 6-32 **Existing: NE 4th Street and 116th Avenue NE (Looking North)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-33 **Alternative 0 (No Action): NE 4th Street and 116th Avenue NE (Looking North)**



SOURCE: City of Bellevue 2023; BERK 2023

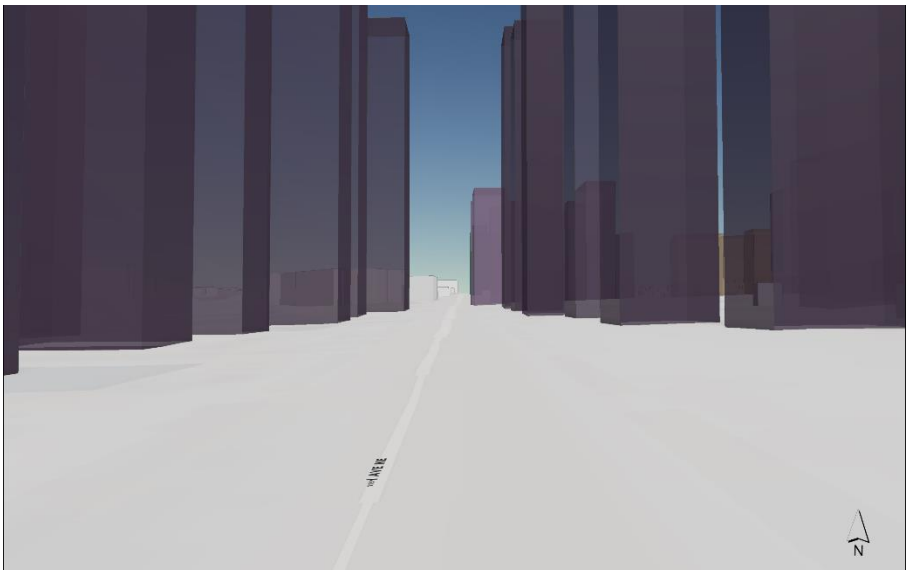
NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-34 **Alternative 1: NE 4th Street and 116th Avenue NE (Looking North)**

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-35 **Alternative 2: NE 4th Street and 116th Avenue NE (Looking North)**



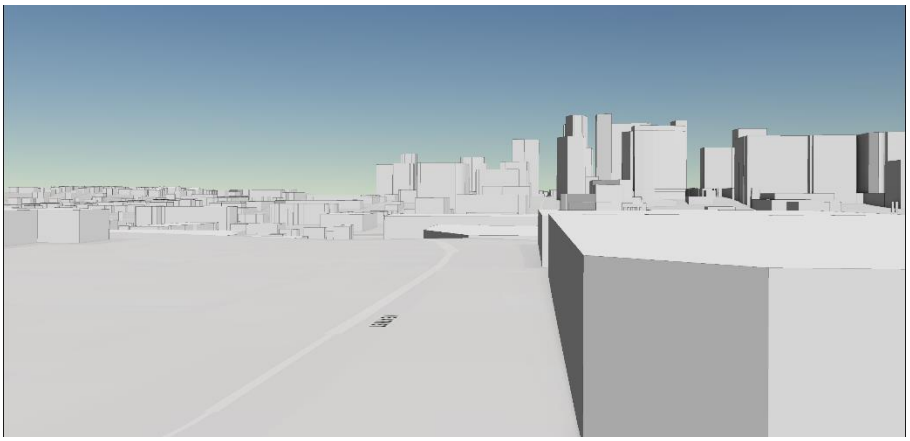
SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-36 **Alternative 3: NE 4th Street and 116th Avenue NE (Looking North)**

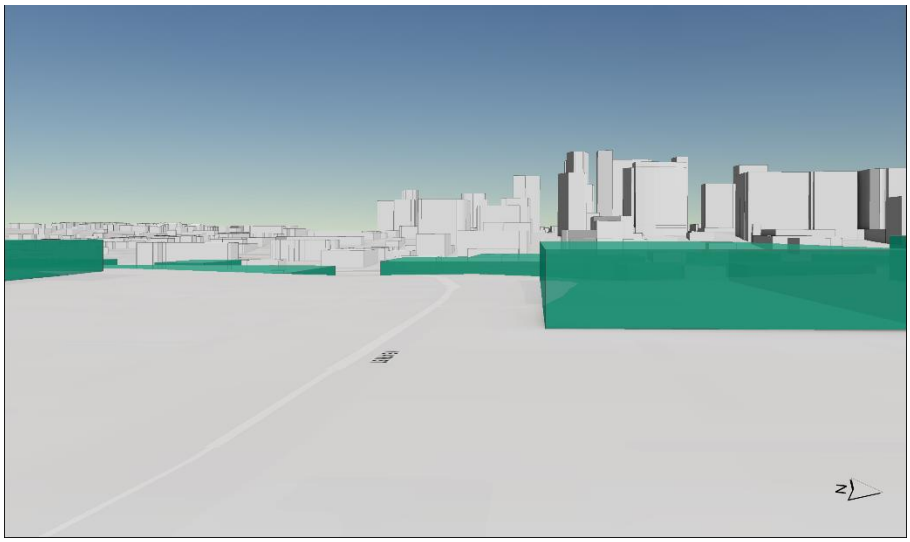
NE 4th Street and 120th Avenue NE (Looking West)

Currently, some views of the Downtown skyline are visible from street level. All three Action Alternatives could mostly obstruct these views, with only a small portion of Downtown still visible between buildings. The No Action Alternative would have minimal view impacts at this location.



SOURCE: City of Bellevue 2023; BERK 2023

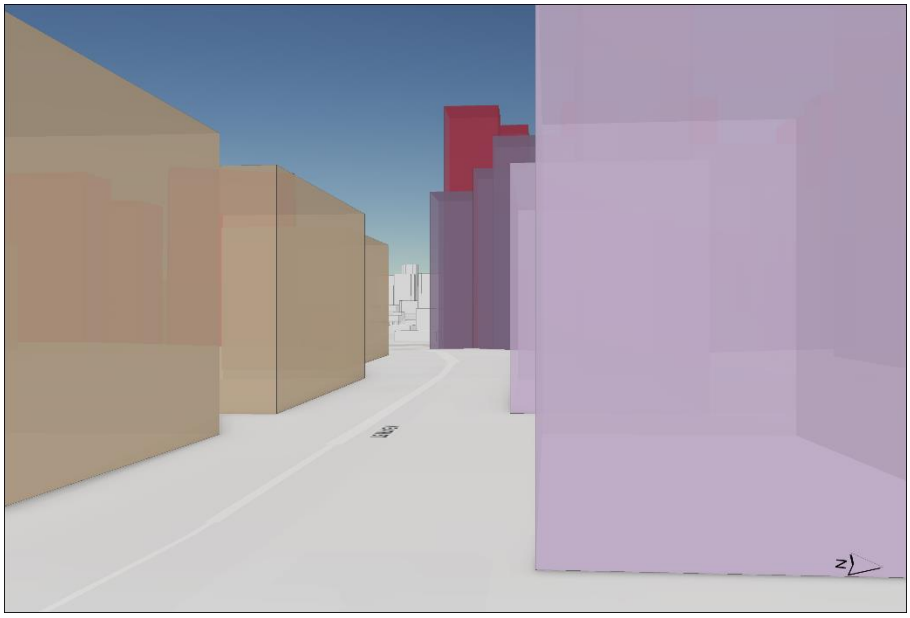
FIGURE 6-37 **Existing: NE 4th Street and 120th Avenue NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-38 **No Action Alternative: NE 4th Street and 120th Avenue NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

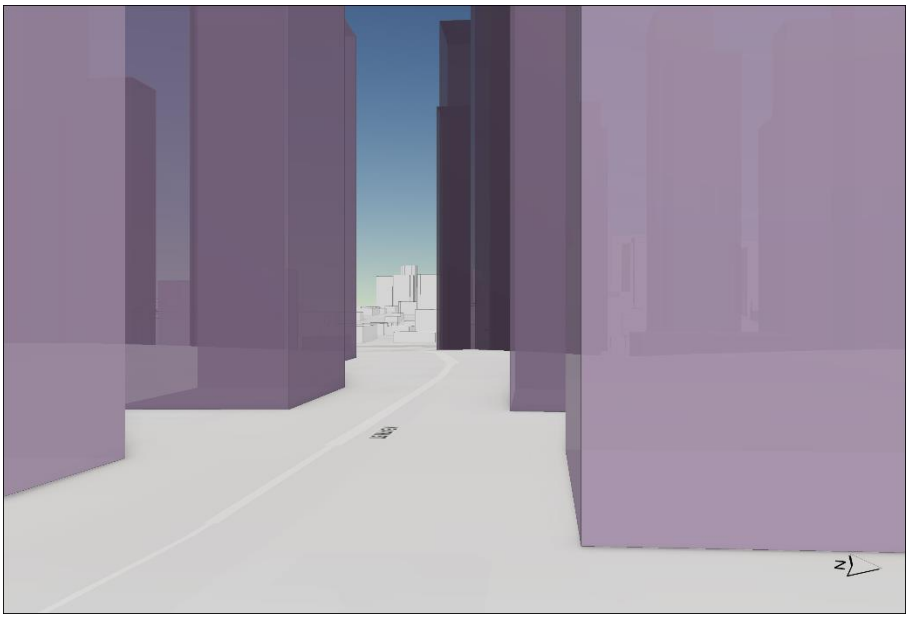
NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-39 **Alternative 1: NE 4th Street and 120th Avenue NE (Looking West)**

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-40 **Alternative 2: NE 4th Street and 120th Avenue NE (Looking West)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-41 **Alternative 3: NE 4th Street and 120th Avenue (Looking West)**

SHADOWS

Similarly to viewsheds, all the alternatives are expected to have shadow impacts greater than current conditions due to growth. This is particularly true for the Action Alternatives. Shadow impacts across the alternatives are expected to be more intense in Downtown and BelRed.

In the Action Alternatives, significantly higher building heights in the Wilburton study area would result in more shadows. At the specific analysis locations defined in Figure 6-1, all the Action Alternatives will have shadow impacts on the Eastrail corridor and multi-family residences to the east.

Shadow impacts are analyzed for several key public spaces citywide, and for several specific locations in the Wilburton study area.

Citywide

Regarding shadow effects, city policies reference light access in public spaces, and thus this analysis focuses on parks where greater intensity is planned. Citywide public spaces for shadow discussion include:

- Bellevue Downtown Park
- Meydenbauer Bay Park
- Surrey Downs Park
- Wilburton Hill Park

Under all alternatives, some shadow impacts on Bellevue Downtown Park would be expected, since all alternatives add housing, jobs, and commercial capacity to the Downtown area, likely resulting in more and larger buildings. Existing buildings immediately south of the park are approximately 100 feet in height, while buildings to the west, north, and east are generally under 50 feet tall. The Action Alternatives add the most capacity to Downtown (for jobs, housing units, and commercial space) so would be the most likely to result in shadow impacts. New, taller buildings to the south and west of the park would have the greatest impact. However, the park's edges are already shaded by trees, and most of the park is bordered by roads. The large open area in the center is unlikely to be dramatically impacted by shadows under any alternative. If it were to occur, some amount of additional shading could be of benefit for park visitors in the summer months.

Meydenbauer Bay Park is unlikely to see major shadow impacts under any alternative, as minimal growth is directed to the area, and, due to the lake there is no potential for new buildings to the southwest.

Surrey Downs Park, similarly, would be unlikely to be significantly impacted by more shadows under any alternative since the immediate area is not a focus for growth. It is currently bordered by 112th Avenue SE and railroad tracks to the east, and low-density residential on all other sides. The edges abutting residences also have mature trees taller than the structures, which cast shadows already.

Wilburton Hill Park would see more capacity for density to the northwest. However, due to the topography decrease from east to west and the existing dense tree canopy, shadows are unlikely to feel more intense than current conditions by park visitors.

Wilburton Study Area

In the Wilburton study area, areas of focus include two points on the Eastrail and general shadow impacts on residential areas to the east of the study area. Note that the colored 3D models represent a theoretical buildable envelope for each alternative, based on proposed heights and job and housing densities, not a specific building design or development proposal. The colors represent applicable land use types, as shown in Figure 6-3, Figure 6-4, Figure 6-5, and Figure 6-6. Grey buildings in the 3D model represent existing buildings; modeling of the alternatives does not reflect potential future development outside of the Wilburton study area.

Eastrail – Near Wilburton Hill Park

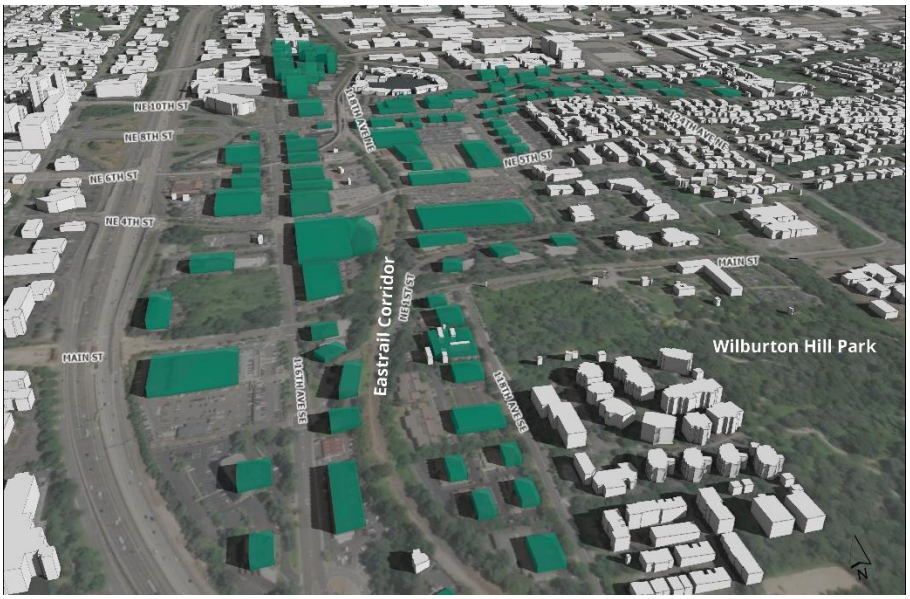
Part of the Eastrail passes near Wilburton Hill Park. In this segment, as shown in the figures below, the trail would be impacted by building shadows in the morning and afternoon under all the Action Alternatives. Alternatives 2 and 3 would have the greatest shadow impacts on this area. The No Action Alternative has minimal shadow impacts at this location.

SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 6-42 **Existing: Eastrail Near Wilburton Hill Park (10 a.m., September 21)**

SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 6-43 **Existing: Eastrail Near Wilburton Hill Park (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

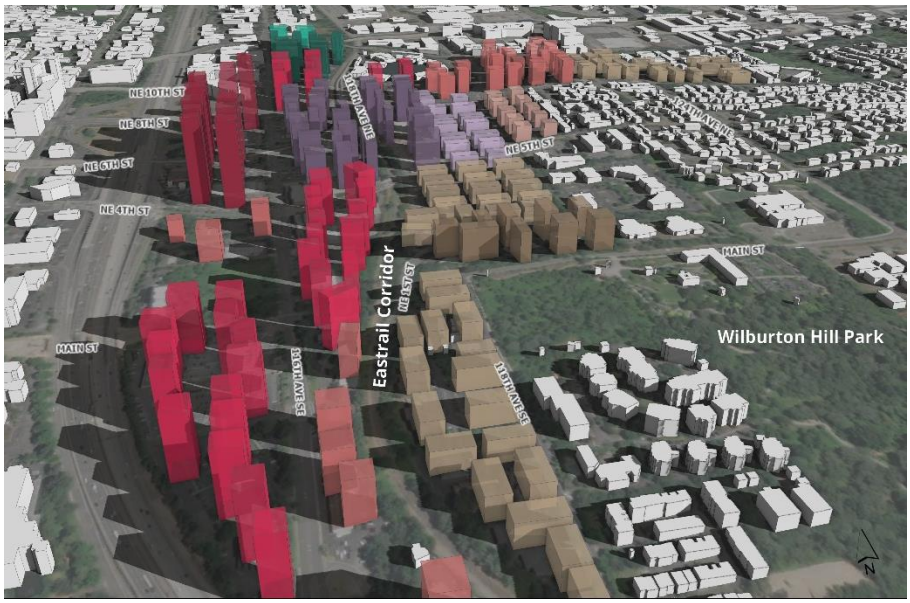
NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-44 **Alternative 0 (No Action): Eastrail Near Wilburton Hill Park (10 a.m., September 21)**

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

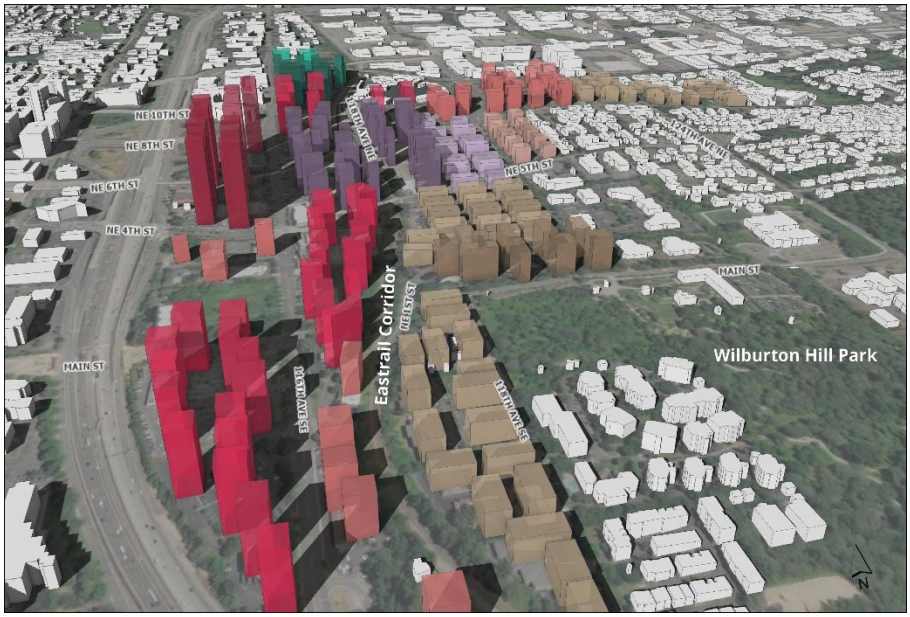
FIGURE 6-45 **Alternative 0 (No Action): Eastrail Near Wilburton Hill Park (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

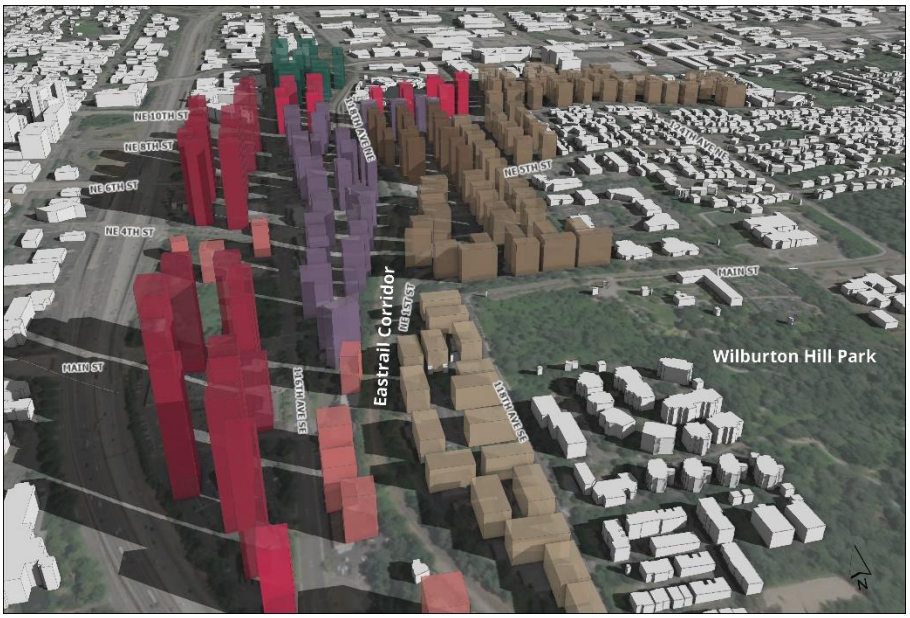
FIGURE 6-46 **Alternative 1: Eastrail Near Wilburton Hill Park (10 a.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

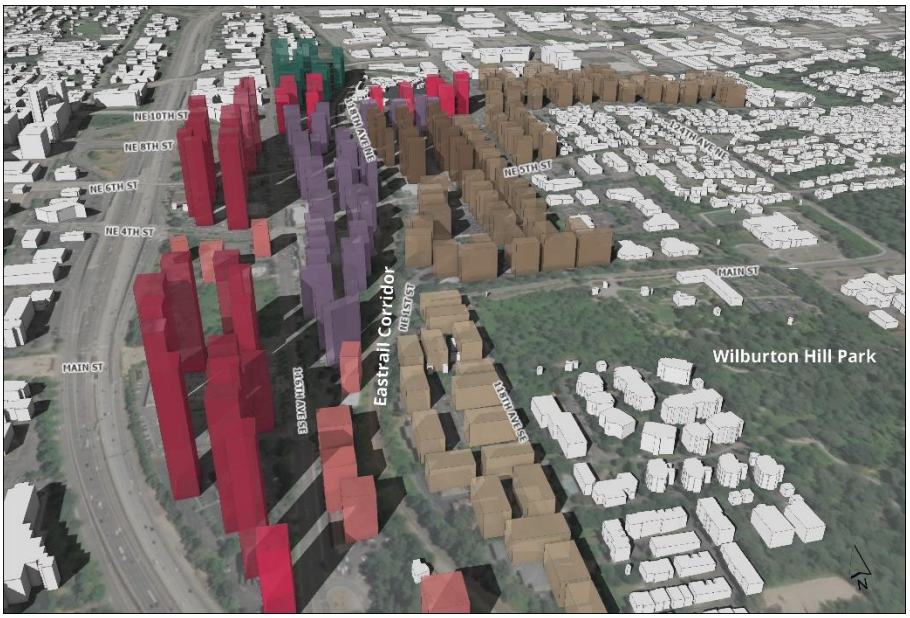
FIGURE 6-47 **Alternative 1: Eastrail Near Wilburton Hill Park (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

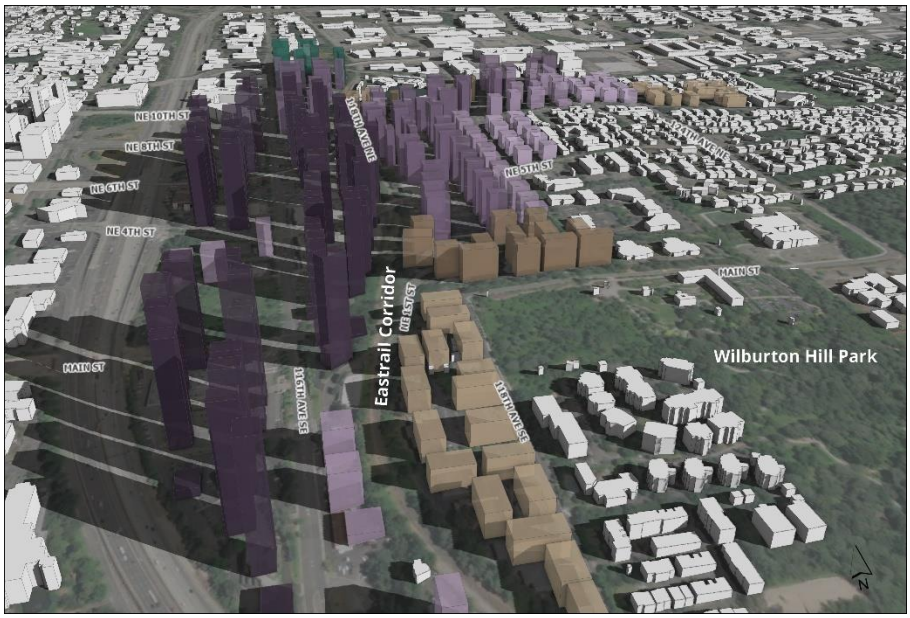
FIGURE 6-48 **Alternative 2: Eastrail Near Wilburton Hill Park (10 a.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

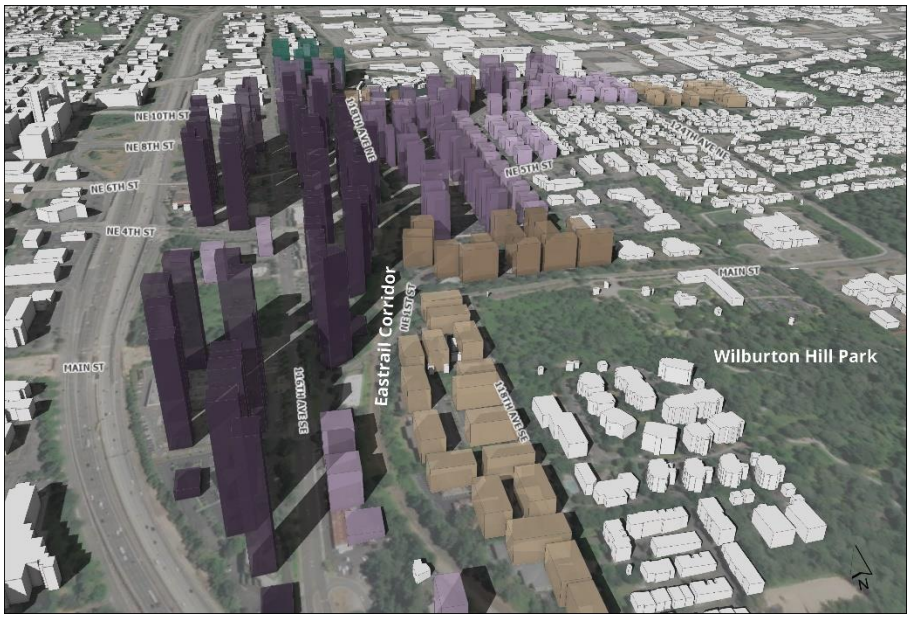
FIGURE 6-49 **Alternative 2: Eastrail Near Wilburton Hill Park (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-50 **Alternative 3: Eastrail Near Wilburton Hill Park (10 a.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-51 **Alternative 3: Eastrail Near Wilburton Hill Park (3 p.m., September 21)**

Eastrail – Near Residential Development

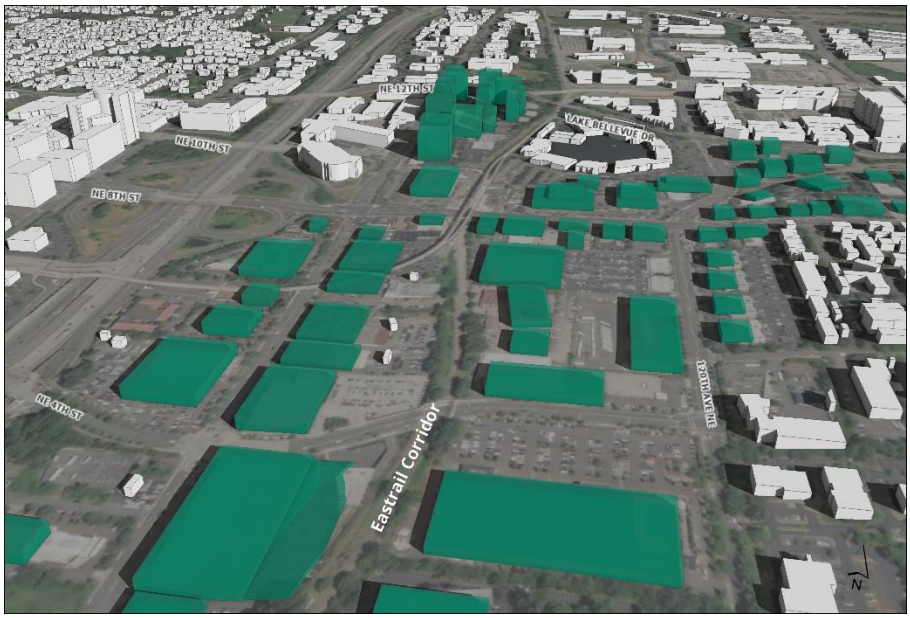
The portion of Eastrail near NE 4th Street would also see shadow impacts across all the Action Alternatives. Alternative 1 would preserve some light areas in the morning hours around NE 4th Street, while Alternatives 2 and 3 would mostly shade this area. In the afternoon, all the Action Alternatives would mostly shade this portion of the trail, although Alternative 1 would see more areas where sunlight passes through. The No Action Alternative has minimal shadow impacts on the Eastrail at this location.

SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 6-52 **Existing: Eastrail Near Residential Development (10 a.m., September 21)**

SOURCE: City of Bellevue 2023; BERK 2023

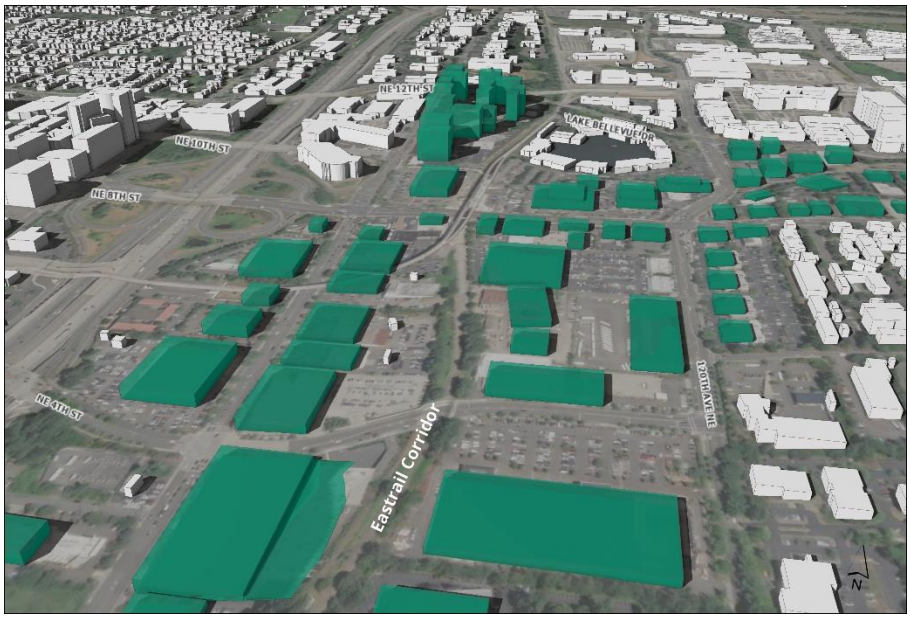
FIGURE 6-53 **Existing: Eastrail Near Residential Development (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

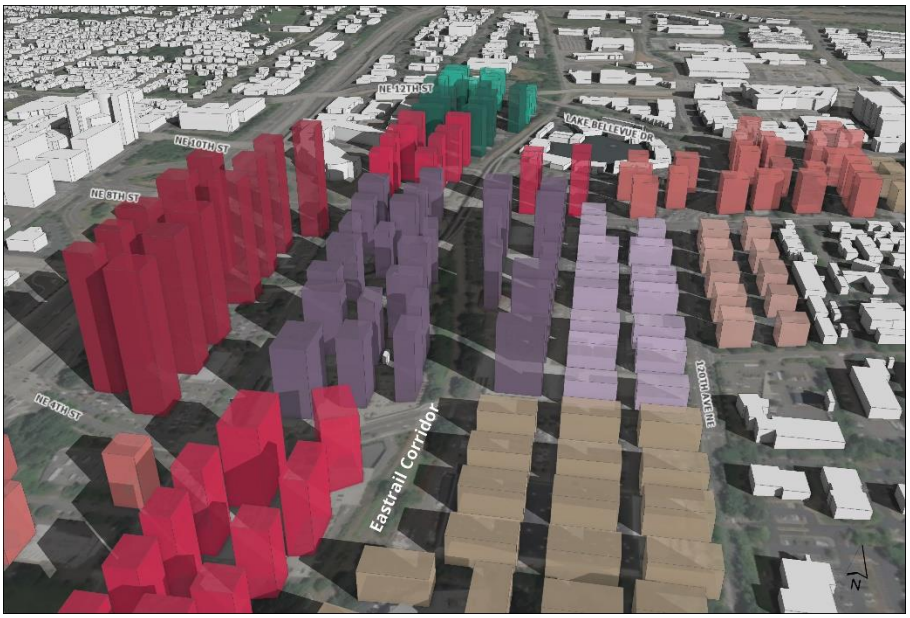
FIGURE 6-54 **Alternative 0 (No Action): Eastrail Near Residential Development (10 a.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

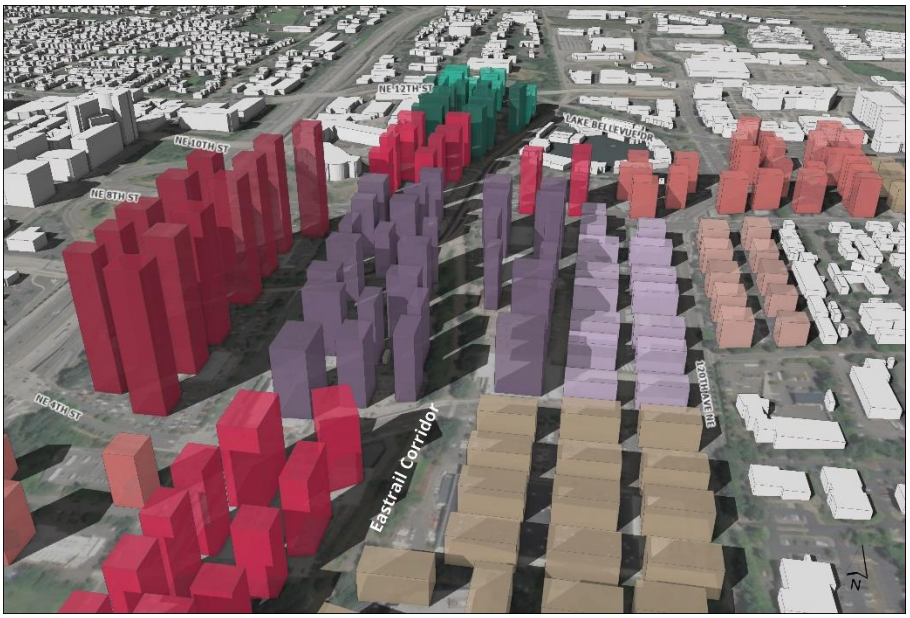
FIGURE 6-55 **Alternative 0 (No Action): Eastrail Near Residential Development (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

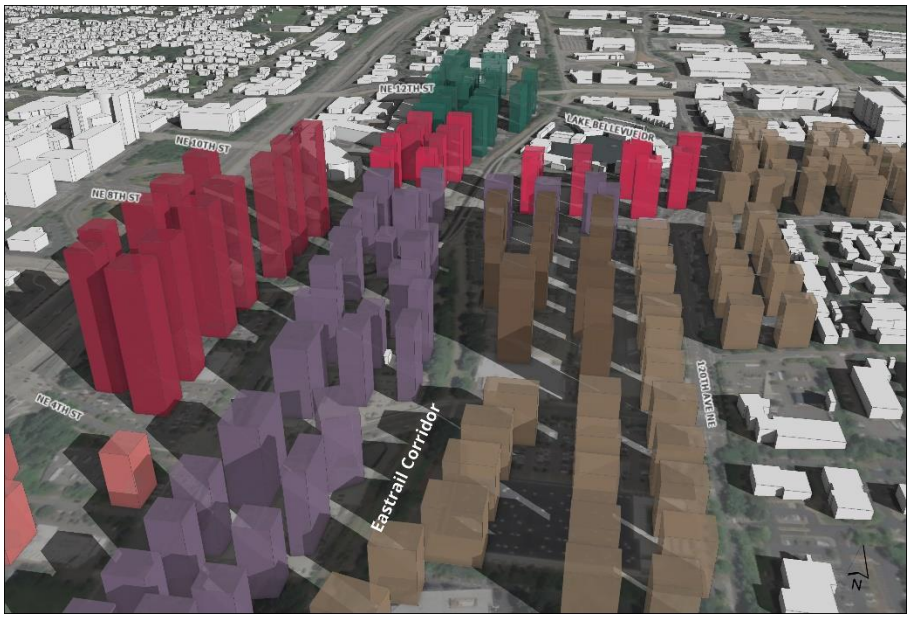
FIGURE 6-56 **Alternative 1: Eastrail Near Residential Development (10 a.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

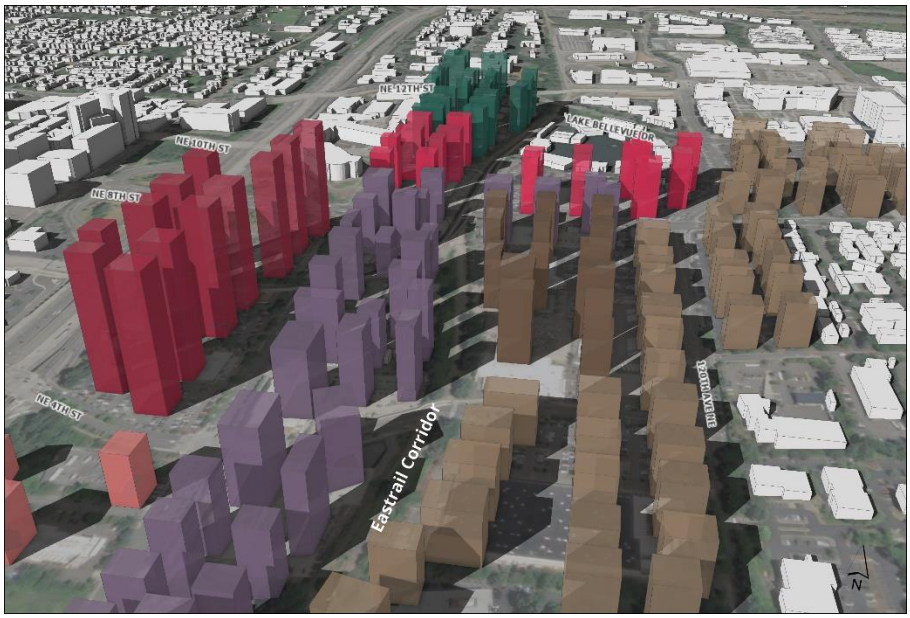
FIGURE 6-57 **Alternative 1: Eastrail Near Residential Development (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

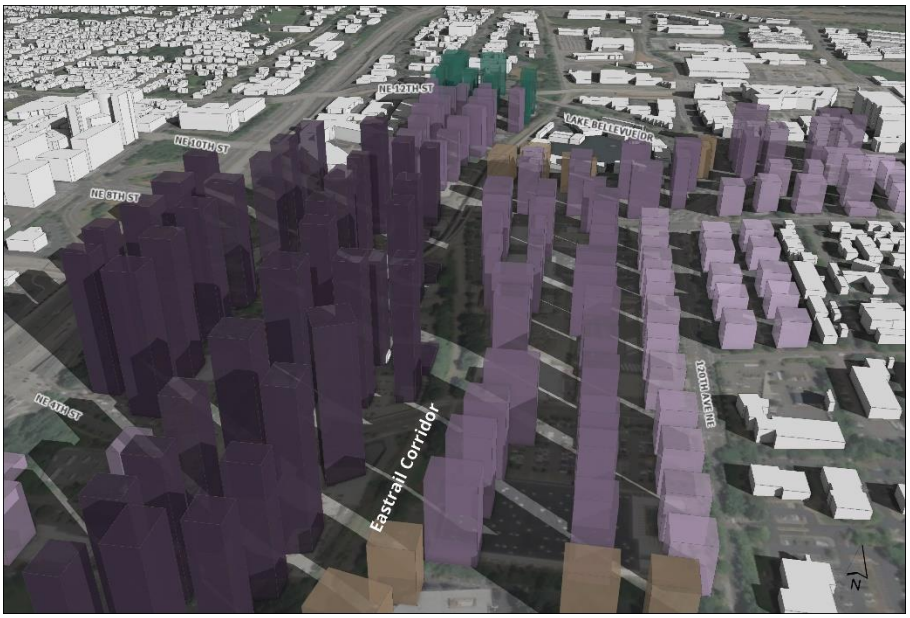
FIGURE 6-58 **Alternative 2: Eastrail Near Residential Development (10 a.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

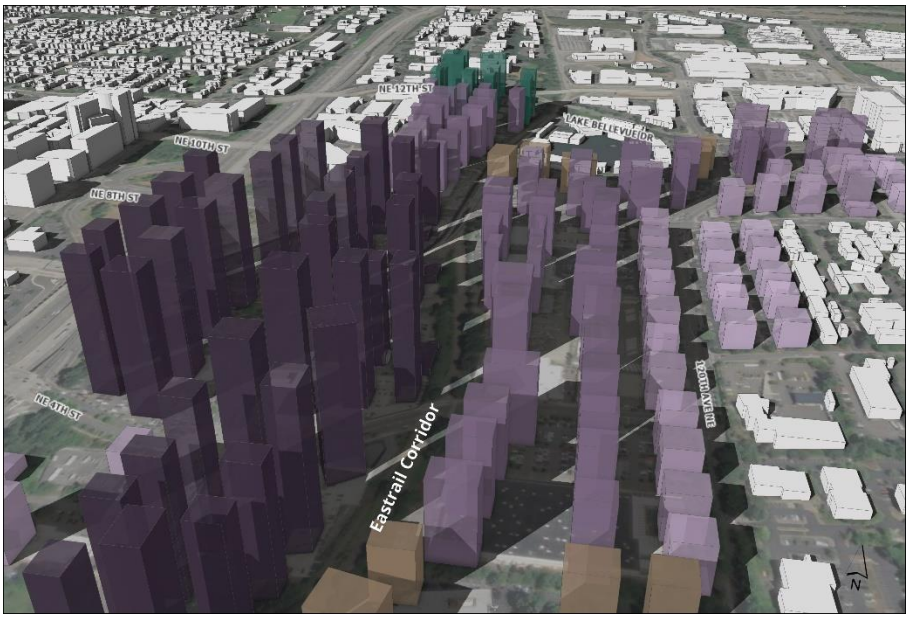
FIGURE 6-59 **Alternative 2: Eastrail and Residential Development (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-60 **Alternative 3: Eastrail and Residential Development (10 a.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

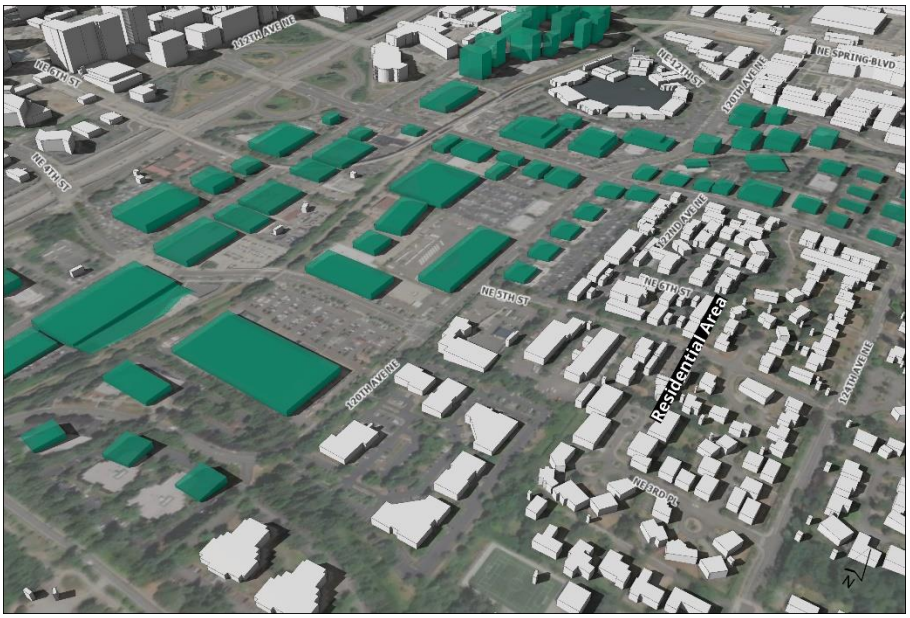
FIGURE 6-61 **Alternative 3: Eastrail and Residential Development (3 p.m., September 21)**

Residential Area to the East

The Action Alternatives all have some afternoon shadow impacts on existing multi-family residential buildings between 120th Avenue NE and 122nd Avenue NE. Alternative 2 would have the largest impact, covering much of these buildings in shadows. Alternatives 1 and 3 would have similar impacts, casting shadows immediately to the west of the buildings. If additional housing were added adjacent to the study area, particularly in the area closer to Main Street, shadows from new buildings in the Wilburton study area could impact these, too. The No Action Alternative has minimal shadow impacts on residential areas to the east of the study area.

SOURCE: City of Bellevue 2023; BERK 2023

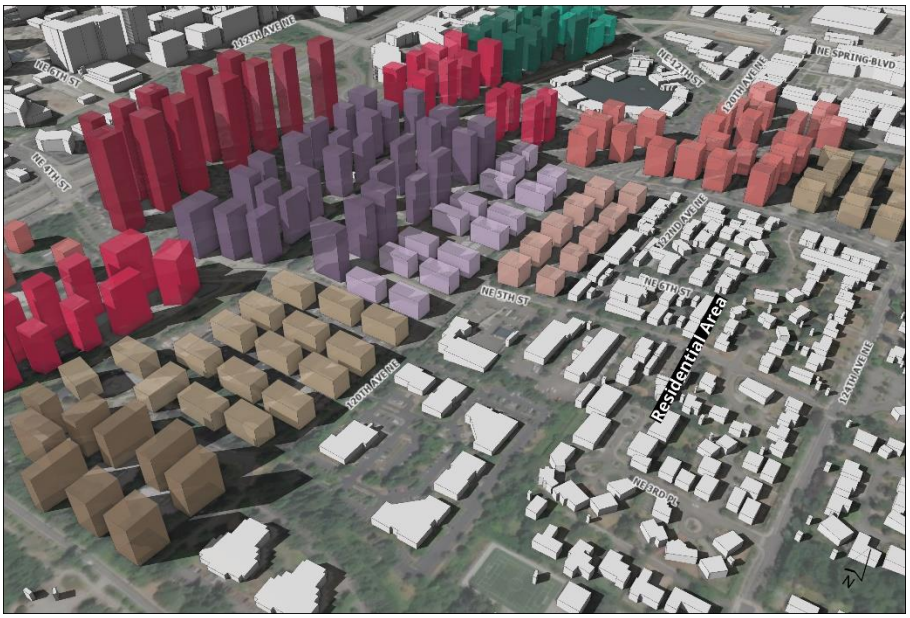
FIGURE 6-62 **Existing: Residential Development to the East (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Buildings in green represent additional capacity for Alternative 0 (No Action). Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

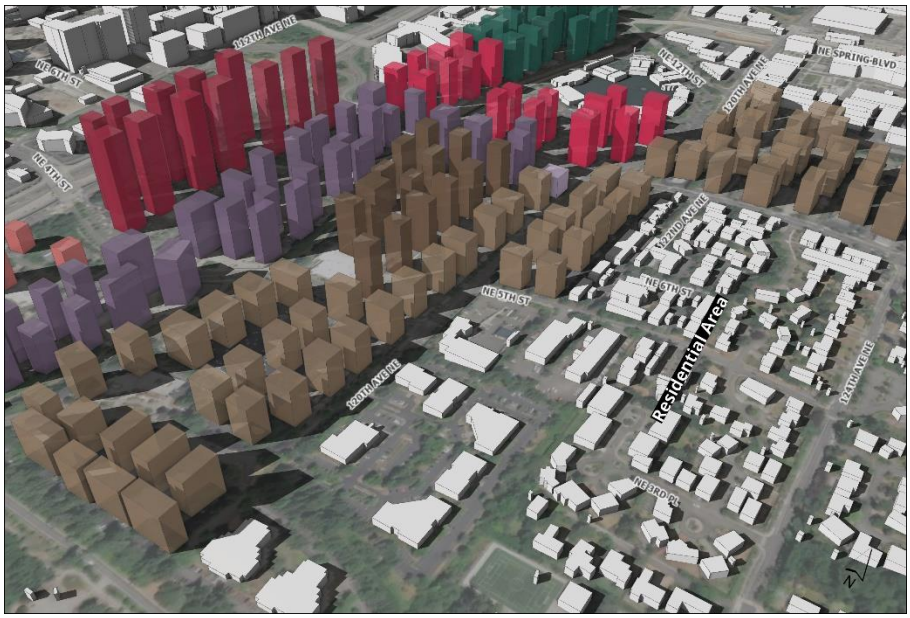
FIGURE 6-63 **Alternative 0 (No Action): Residential Development to the East (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTES: Action Alternatives' building colors are based on land uses in Figure 6-4 to Figure 6-6. Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

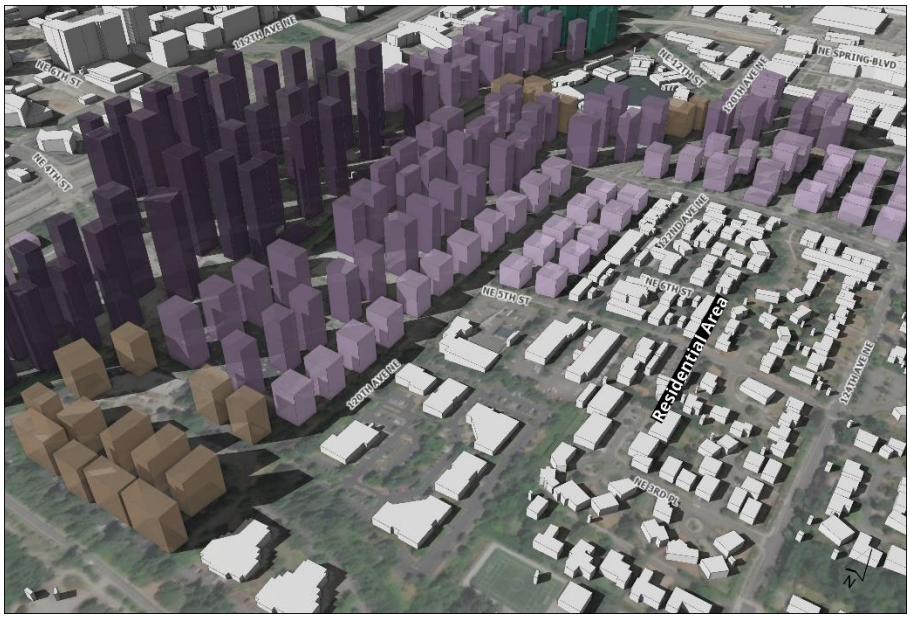
FIGURE 6-64 **Alternative 1: Residential Development to the East (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-65 **Alternative 2: Residential Development to the East (3 p.m., September 21)**



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Models represent a theoretical buildable envelope based on proposed heights and job and housing densities, not a specific building design or proposal.

FIGURE 6-66 **Alternative 3: Residential Development to the East (3 p.m., September 21)**

LIGHT AND GLARE

Citywide

All the alternatives are expected to increase light and glare as development is added and more building lighting and vehicle lights are present. This is particularly true for the Action Alternatives, which add the most capacity for growth. Light and glare impacts across the alternatives are expected to be more intense in Downtown and BelRed. Because Bellevue development patterns are already urban, existing sources of light and glare are present. While all alternatives would increase light and glare, it is unlikely that these increases would impact the public's ability to use and enjoy public spaces.

Wilburton Study Area

In the Wilburton study area, the Action Alternatives are expected to have the greatest impacts on light and glare, as these add substantially more capacity than the No Action Alternative. However, the No Action Alternative does include some amount of development, which would correspond with some light and glare increases.

6.4.3 Alternative 0 (No Action)

URBAN FORM

Citywide

In the No Action Alternative, most growth is focused in the Downtown, BelRed, and East Main Mixed Use Centers. This would increase development in these areas, within the current development regulations for density, height, bulk, and scale. New housing units would primarily be in larger apartment buildings.

Wilburton Study Area

Under the No Action Alternative, the Wilburton study area would see no change in allowed uses or scales; however, an increased number of housing units and jobs would result in some increased density within the current regulations.

VIEWSHEDS

Citywide

Additional growth in Downtown and BelRed could result in impacts on public views of Mount Rainier from areas to the north of these neighborhoods, views of Lake Washington and the Olympic Mountains from the east, and views of Lake Sammamish and the Cascades from the west. Some impacts on views of the Bellevue skyline could be expected north and east of BelRed.

Wilburton Study Area

The Wilburton study area could accommodate some growth under the No Action Alternative, but maximum building heights would remain the same. The only specific Wilburton viewpoint with the No Action Alternative view impacts is at Eastrail and NE 4th Street, where views of Downtown could be obstructed. Other views of Downtown and surrounding areas are unlikely to see major impacts.

SHADOWS

Citywide

The No Action Alternative would see fewer impacts from shadows than the Action Alternatives. With growth focused in Downtown, BelRed, and East Main, these areas would have a greater density of buildings and, therefore, more shadows than under current conditions.

Wilburton Study Area

In the Wilburton study area, while some development would occur, the maximum building heights would remain the same, so significant shadow impacts are not expected.

LIGHT AND GLARE

Citywide

The No Action Alternative would see fewer impacts from light and glare than the Action Alternatives. However, with capacity for more intense development than current conditions, more light impacts would likely occur from buildings and vehicles.

Wilburton Study Area

The Wilburton study area would experience some growth within the limits of current regulations and would, therefore, be likely to see some light and glare impacts throughout.

6.4.4 Alternative 1

URBAN FORM

Citywide

Alternative 1 would include more capacity for housing units and jobs than the No Action Alternative, and focus growth across Mixed Use Centers, with gentle density increases across the city. Lower density areas would see more duplexes, triplexes, cottage housing, or other low-density types. Larger apartment units would be allowed in Mixed Use Centers, which would impact the height, bulk, and scale in these locations.

Wilburton Study Area

The Wilburton study area would also see increases in jobs and housing, which in turn would impact the form. Most growth would focus on a core around the Wilburton Light Rail Station, Eastrail, and the Grand Connection. This would include residential, office, and other commercial uses within a mixed use node within the core, primarily office uses around the mixed use node and 116th Avenue NE, and primarily residential uses toward the east edges of the study area. Heights in the Wilburton study area under Alternative 1 could be up to around 45 stories between I-405, NE 8th Street, NE 4th Street, and 116th Avenue NE, and between 16–25 stories in the core, transitioning to lower heights on the edges (between 10–25 stories).

VIEWSHEDS

Citywide

With more density and jobs being focused across Mixed Use Centers and in areas with good access to transit and jobs, some impacts on public views would be expected.

Areas with good access to transit stations could see view impacts where a public view currently exists, as small apartments are added.

Mixed Use and Neighborhood Centers would also see an increase in density, which could also result in view obstructions.

Concentrations of density Downtown, BelRed, and East Main, along with height increases in the Wilburton study area, would impact public views of Mount Rainier from the north, of Lake Washington and the Olympic Mountains from the east, and of Lake Sammamish and the Cascades from the west. Views of the Bellevue skyline from publicly accessible locations in neighborhoods to the north and east could also be impacted.

Wilburton Study Area

In the Wilburton study area, some views of Downtown and hilly, vegetated, topography at specific locations (Figure 6-1) could be obstructed by new buildings in Alternative 1. However, impacts under Alternative 1 are similar or slightly less intense than under Alternatives 2 and 3.

SHADOWS

Citywide

Alternative 1 would likely result in some shadow impacts, due to more intense growth in Mixed Use Centers than under the No Action Alternative, and gentle density increases citywide. Mixed Use Centers would likely see the greatest impacts due to greater density of buildings.

Wilburton Study Area

The Wilburton study area would see much more growth than in the No Action Alternative, with expanded capacity for housing, jobs, and commercial development. Taller buildings would be allowed and would cast shadows. For specific shadow analysis locations, Alternative 1 has a lower impact on Eastrail and homes to the east than the other Action Alternatives, but a larger impact than the No Action Alternative.

LIGHT AND GLARE

Citywide

Alternative 1 would see some impacts from light and glare. Mixed Use Centers would see the greatest light and glare impacts as more building square footage is added. More vehicles would also likely be

present, with more people living and working in these areas, and would contribute some light impacts.

Wilburton Study Area

More density in the Wilburton study would result in more light impacts overall, although some surface parking lot lighting could be reduced if these areas are redeveloped. Impacts on specific locations on the Eastrail and on residential development to the east would be less intense under Alternative 1 than under Alternatives 2 and 3.

6.4.5 Alternative 2

URBAN FORM

Citywide

Alternative 2 would include a greater number of housing unit capacity and a similar number of job capacity to Alternative 1. Alternative 2 would place capacity in many of the same areas as Alternative 1, as well as increase growth in areas with good access to transit and jobs. Apartment buildings would be allowed in Mixed Use Centers, townhouses and small apartments would be allowed in Neighborhood Centers and transit corridors, and duplex and other lower density housing types would be allowed across the city. In the BelRed area, density around the Spring District/120th and 130th Avenue NE Light Rail Stations would increase, with medium density south of Bel-Red Road within walking distance of the transit stations. Existing multi-family areas would allow a wider range of housing typologies at higher densities.

Wilburton Study Area

In the Wilburton study area, growth with Alternative 2 would be focused in the mixed use core, similar to Alternative 1, and along the edges of the study area. Alternative 2 has less emphasis on office uses and more emphasis on residential uses. This alternative also has more housing capacity in areas east of Eastrail compared to Alternative 1, and a greater number of mid-rise and high-rise residential buildings. Building heights could increase modestly along the east edge of the study area (up to around 16 stories) and building heights could increase significantly along I-405 across East Main (up to around 45 stories).

VIEWSHEDS

Citywide

Alternative 2's impacts on citywide viewsheds would be comparable to those in Alternative 1, though the increase in housing units could result in slightly greater impacts.

Density and jobs would similarly be focused in Mixed Use Centers and areas with good access to transit and jobs. Small apartments could be added in areas with good transit access, and larger apartments could be added in mixed use and Neighborhood Centers: this could result in some immediate views from publicly accessible locations in and around these areas being impacted.

Added density Downtown and in BelRed and height increases in the Wilburton study area could impact public views of Mount Rainier from the north, of Lake Washington and the Olympics from the east, and of Lake Sammamish and the Cascades from the west. Views of the Bellevue skyline from publicly accessible locations in neighborhoods to the north and east could also be impacted.

Wilburton Study Area

Building heights in the east edge of the Wilburton study area would be higher than in Alternative 1, which may result to greater impacts on public views out of and through this area. Several specific Wilburton locations (Figure 6-1) would see impacts on views of Downtown and distant hills. Generally, view impacts under Alternative 2 are similar to the other Action Alternatives.

SHADOWS

Citywide

Alternative 2 would have similar shadow impacts as Alternative 1. Growth is most intense in Mixed Use Centers and gentle density is added across the city. Alternative 2 also places growth in areas with good access to transit and jobs and in Neighborhood Centers. Transit-proximate areas would see more development and, therefore, more shadows.

Wilburton Study Area

Growth in the Wilburton study area would be more spread out than under Alternative 1 and would have the highest heights along the

eastern edges. For specific locations on the Eastrail and residences to the east (Figure 6-1), Alternative 2 has the greatest shadow impacts on the multi-family buildings to the east, and slightly lesser shadow impacts on the Eastrail than Alternative 3.

LIGHT AND GLARE

Citywide

Light and glare impacts under Alternative 2 would be similar to Alternative 1, with most-intense impacts in Mixed Use Centers and lesser impacts in low-density neighborhoods from gentle density increases. Transit-proximate areas would see some impacts from added development. While more vehicles would also likely be present in areas of higher density, placing growth near transit could mitigate this by reducing residents' car dependency and, therefore, reduce amount of vehicle light.

Wilburton Study Area

Alternative 2 would likely result in light and glare impacts greater than under the No Action Alternative, but lesser than Alternative 1.

6.4.6 Alternative 3

URBAN FORM

Citywide

Alternative 3 would have the greatest capacity for new housing units and jobs. Similar to Alternative 2, a broader range of housing types would be allowed in existing multi-family areas, and additional density would be allowed in the lowest density areas. Housing typologies would include townhomes or small apartment buildings in areas with good transit access and around Neighborhood Centers, and duplexes, triplexes, cottage housing, or other low-density types allowed citywide. Alternative 3 emphasizes middle-scale housing in areas of high opportunity across the city. Larger apartment buildings would be found in Mixed Use Centers. This alternative would also encourage the creation of new Neighborhood Centers, creating better access to essential services within a short distance. Unlike the other alternatives, Alternative 3 would have increased flexibility in height and building typologies for large lots that consolidate development to retain natural areas and open space.

Wilburton Study Area

For the Wilburton study area, Alternative 3 would focus growth in the core of the study area, similar to Alternative 1, and several new mixed use nodes. A mix of office and retail uses would be integrated with residential uses in mixed use nodes. Medical uses would occupy a smaller area than in Alternatives 1 and 2. Building heights could increase significantly around the Grand Connection east of 116th Avenue NE and across East Main (up to around 45 stories). Building heights would be increased along both sides of 120th Avenue NE north of NE 8th Street, including around Lake Bellevue. There would also be more buildings between 25 and 45 stories in the study area, with taller high-rise towers around the Grand Connection east of 116th Avenue NE than in Alternatives 1 or 2. These additional areas for development would provide a similar amount of housing capacity in the Wilburton study area as Alternative 2.

VIEWSHEDS

Citywide

Impacts from Alternative 3 on citywide viewsheds would likely be greater than the impacts under Alternatives 1 and 2, due to a greater number of housing units, jobs, and commercial square feet. Alternative 3, in addition to adding growth in Mixed Use Centers and areas with good access to transit or jobs, would expand housing capacity in and near Neighborhood Centers and would create new Neighborhood Centers.

Small apartments could be added in areas with good transit access and around Neighborhood Centers, and larger apartments could be added in mixed use; this could impact some immediate views from publicly accessible locations in and around these areas. Compared with Alternatives 1 and 2, apartments would be smaller in and around Neighborhood Centers, but more numerous. View impacts, therefore, might be more intense from within Neighborhood Centers, but could be less impactful on surrounding areas.

Downtown and BelRed would see more development, and the Wilburton study area would have higher building heights (similar to Alternative 1) and a greater number of high-rise residential buildings (compared to Alternatives 1 and 2), which could impact public views of Mount Rainier from the north, of Lake Washington and the Olympic Mountains from the east, and of Lake Sammamish and the Cascades from the west. Views of the Bellevue skyline from publicly

accessible locations in neighborhoods to the north and east could also be impacted.

Wilburton Study Area

In the selected viewpoints for the Wilburton study area (Figure 6-1), Alternative 3 would obstruct multiple views of the Downtown skyline and of vegetated hills in the distance. All three alternatives have similar impacts, although Alternative 3 tends to have slightly more-intense impacts than the other two alternatives.

SHADOWS

Citywide

Similar to the other alternatives, Alternative 3 has much of its growth in Mixed Use Centers. Gentle density would also be allowed throughout the city. Like Alternative 2, growth would be placed in areas with good transit access; Alternative 3 adds additional capacity in areas in and around Neighborhood Centers. Alternative 3 also creates new Neighborhood Centers in areas that lack access to essential services. Due to these changes, Mixed Use Centers, Neighborhood Centers, and transit-proximate areas would likely see more shadow impacts than under current conditions.

Wilburton Study Area

Growth in the Wilburton study area would be focused in the core of the study area, as in Alternative 1, along with several new mixed use nodes throughout. Alternative 3 has the greatest building heights, job growth, and commercial space capacity of the alternatives, and the same housing capacity as Alternative 2. Therefore, this alternative would have the greatest shadow impacts.

For specific shadow analysis locations (Figure 6-1), Alternative 3 has a slightly larger shadow impact on the Eastrail than Alternative 2, which covers much of the area in shadows. Alternative 3, similarly to Alternative 1, has less of an impact on residences to the east than Alternative 2.

LIGHT AND GLARE

Citywide

Similarly to shadow impacts in Alternative 3, Mixed Use Centers, Neighborhood Centers, and transit-proximate areas would see the

greatest light and glare impacts, in the form of building and traffic light, due to increases in development.

Wilburton Study Area

Alternative 3 would also have the greatest light and glare impacts in the Wilburton study area, due to the greatest amount of capacity.

6.4.7 Summary of Impacts

TABLE 6-2 **Aesthetic Impacts Summary**

Alternative	Alternative 0 (No Action)	Alternative 1	Alternative 2	Alternative 3
CITYWIDE				
Urban form	Lowest Impact	Higher Impact	Higher Impact	Highest Impact
Viewsheds	Lowest Impact	Higher Impact	Higher Impact	Highest Impact
Shadows	Lowest Impact	Higher Impact	Higher Impact	Highest Impact
Light and glare	Lowest Impact	Higher Impact	Higher Impact	Highest Impact
WILBURTON STUDY AREA				
Urban form	Lowest Impact	Higher Impact	Higher Impact	Highest Impact
Viewsheds	Lowest Impact	Higher Impact	Higher Impact	Highest Impact
Shadows	Lowest Impact	Lower Impact on Eastrail, Lower Impact on Homes to the East	Higher Impact on Eastrail, Highest Impact on Homes to the East	Highest Impact on Eastrail, Lower Impact on Homes to the East
Light and glare	Lowest Impact	Higher Impact	Higher Impact	Highest Impact

SOURCE: BERK 2023

NOTE: "Higher Impact" indicates that the alternative is likely to have greater impacts than the alternative with the lowest expected impact. For "urban form" higher impacts are expected where buildings may be taller or where more-intense development would potentially occur.

6.5 Avoidance, Minimization, and Mitigation Measures

6.5.1 Incorporated Plan Features

- Under the Action Alternatives, new low-density typologies are permitted across the city, as opposed to allowing higher density types citywide. This will minimize aesthetic impacts within low-density neighborhoods.
- In the Wilburton study area, the Action Alternatives generally transition in intensity, with lower intensities to the eastern edges, and higher intensities in the core, around Wilburton Station, and adjacent to I-405. This minimizes the visual impacts of the higher density buildings on the area.
- In the Wilburton study area, the Action Alternatives include new multimodal connections that create smaller, more walkable blocks and minimize the visual impacts of new buildings.

6.5.2 Regulations and Commitments

The Comprehensive Plan and Wilburton/NE 8th Street Subarea Plan have existing policies that mitigate impacts on urban form, views, shadows, light, and glare.

The Bellevue Land Use Code (Title 20) establishes zoning and development regulations that govern uses, building design, site planning, and land use compatibility. Commercial and mixed use zones include regulations for building form, such as height, bulk, density, scale, setbacks, screening, landscaping, and other design considerations. Design standards for several special and overlay districts also apply.

In the Wilburton study area, although there are no neighborhood design standards, other design standards in the code are applicable, including:

- Transition Area Design District (LUC 20.25B), which addresses height, setbacks, buffers, screening, and signage for commercial and office buildings that abut residential zones.
- Office Limited Business 2 (OLB2) zone (LUC 20.25C) sets minimum building and landscaping design standards for new buildings.
- Community Retail Design District Design Guidelines (LUC 20.25I) sets minimum standards for building design, site design, internal

walkways, and screening for retail districts outside of the Downtown area, which includes Community Business (CB), Neighborhood Business (NB), and Neighborhood Mixed Use (NMU) zones.

- Medical Institution District (LUC 20.25J) sets appropriate uses, dimensions, landscaping, streetscape design, site design, and building design for master planned development in the Medical Institution area.
- Light Rail Overlay District (LUC 20.25M) sets regulations for light rail facility development.

6.5.3 Other Proposed Mitigation Measures

Other mitigation measures not currently included in the alternatives could include the following:

- **Regulations around Public Spaces.** Bellevue could add requirements for shadow studies, height limits, maximum floorplate size, separation of high-rise building massing, floorplate reductions, and modification of high-rise tower location and orientation for development adjacent to some key parks and public spaces.
- **Ground-Level and Upper-Story Setbacks.** Bellevue could require all areas with higher heights to have ground-level or upper-story setbacks, which would preserve access to light, limit shading, and limit height and bulk.
- **Building Form Requirements.** Bellevue could add requirements for roof articulation, modulation of façades, layering of materials and massing, and tower separation.
- **Streetscape Vegetation.** The city could require vegetation on major streets to screen development and enhance the pedestrian experience.
- **Viewshed Regulations.** Bellevue could consider adding regulations to the development code to protect certain public views.
- **Transparent Façade Requirements.** In areas with bulk and scale concerns that do not have existing requirements for transparent façades, the city could add such requirements to enhance the pedestrian environment.

- **Low-Density Residential Development Regulations.** The Action Alternatives would allow gentle density increases across the city. As new residential uses are added to the zoning code, Bellevue would have an opportunity to regulate scale and form.
- **Wilburton Study Area: Zoning and Development Regulations.** The Action Alternatives in the Wilburton study area would require changes to the zoning and development regulations. These regulations would address permitted uses, dimensional requirements, a FAR amenity incentive system, conversion of non-conforming uses and properties, pedestrian comfort, parking and circulation, landscaping, and the development of streets and sidewalks.
- **Wilburton Study Area: Design Guidelines** The Action Alternatives would include design guidelines specific to the Wilburton study area. These would likely include standards related to building design, pedestrian experience and streetscapes, public spaces, and mixed use building features, in addition to other standards. These could include standards for towers, such as locating them farther from the street, making podiums shorter, or orienting towers to maximize solar access.

6.6 Significant Unavoidable Adverse Impacts

In all alternatives, additional growth would result in impacts on the built form citywide, particularly in Mixed Use Centers, and, under the Action Alternatives, in Neighborhood Centers and near transit. The urban form of the Wilburton study area, especially under the Action Alternatives, would change to a much denser area with much taller buildings. This growth will, in turn, have significant adverse impacts from shadows, views, and light and glare. These impacts are to be expected as Bellevue continues to grow, especially in the context of regional transit investments and development interest. **With the application of mitigation measures, no significant unavoidable adverse impacts on views or from shadows, light, and glare are expected.**

INTENTIONALLY BLANK

CHAPTER 7 Housing

7.1 Introduction

This chapter summarizes the affected environment—including the current housing policy framework and current housing stock conditions—and compares the impacts of the alternatives.

The analysis focuses on housing growth and implications under each alternative regarding supply, diversity and affordability, displacement risk, and access to transit. See Chapter 4, *Plans and Policies*, for an analysis of compatibility with land use plans and policies and Chapter 6, *Aesthetics*, for an analysis of neighborhood character, physical form (height, bulk, and scale), viewsheds, shadows, and light and glare.

7.2 Affected Environment

This section addresses existing housing in the City of Bellevue and provides a baseline for analyzing the impacts on housing of the four alternative growth scenarios. The review is conducted on a citywide scale and for several smaller geographies within the city—including Mixed Use Centers, Neighborhood Centers, transit-proximate areas, and the Wilburton study area.

The analysis relies on geospatial information provided by the City of Bellevue, such as assessor tax parcel information, U.S. Census Bureau data, Consolidated Housing Affordability Strategy (CHAS) data from the U.S. Department of Housing and Urban Development (HUD), and the Puget Sound Regional Council (PSRC) displacement risk analysis.

7.2.1 Current Policy and Regulatory Framework

Current policy and the regulatory framework regulating housing in the City of Bellevue flows from the State of Washington Growth Management Act (GMA), the PSRC's Multi-County Planning Policies (MPPs), King County's Countywide Panning Policies (CPPs), the city's current Comprehensive Plan, the Affordable Housing Strategy, and implementation actions including development standards in the Land Use Code (LUC). Several other regulatory measures affect housing development including localized overlay districts and community agreements.

This section describes policies specific to housing such the City of Bellevue's 2017 Affordable Housing Strategy, as well as the future land use and zoning framework relevant for housing and current housing conditions. State, regional, and local land use policies are reviewed and evaluated in Chapter 4, *Plans and Policies*.

KING COUNTY COUNTYWIDE PLANNING POLICIES

House Bill 1220

In 2021, the state legislature amended portions of the GMA (Engrossed Second Substitute House Bill, or House Bill [HB], 1220) that changed the minimum housing planning requirements for cities and counties subject to the Act. The requirements of HB 1220 have now been codified in the GMA. These new amendments mandate jurisdictions that plan under the GMA now must "*plan for and accommodate housing affordable to all economic segments of the population*." Previous language only required jurisdictions to "*encourage the availability of affordable housing to all economic segments of the population*."

To implement these changes, as required by the GMA, jurisdictions must conduct a suite of new analyses and show evidence of new accommodations in their comprehensive plans. According to bill analysis from the Municipal Research and Services Center of Washington, HB 1220 requires that jurisdictions take the following actions:

- Include a statement of goals, policies, objectives, and mandatory provisions for moderate density housing options (e.g., duplexes, triplexes, and townhomes) within urban growth areas (UGAs).

- Identify sufficient land capacity for housing, including housing for moderate-, low-, very low-, and extremely low-income households; emergency housing, emergency shelters, and permanent supportive housing; and, within UGAs, consideration of duplexes, triplexes, and townhomes.
- Make adequate provisions for existing and projected needs of all economic segments of the community, including:
  - Incorporating consideration for moderate-, low-, very low-, and extremely low-income households.
  - Documenting programs and actions needed to achieve housing availability.
  - Considering housing locations in relation to employment location.
  - Considering the role of accessory dwelling units in meeting housing needs.
- Identify local policies and regulations that result in racially disparate impacts, displacement, and exclusion in housing (e.g., disinvestment, zoning that may have a discriminatory effect, and infrastructure availability).
- Identify and implement policies and regulations to address and begin to undo racially disparate impacts, displacement, and exclusion in housing caused by prior and current local policies, plans, and actions.
- Identify areas at higher risk of displacement from market forces that occur with changes to development regulations and capital investments.
- Establish anti-displacement policies, with consideration given to strategies such as the preservation of historical and cultural communities, equitable development initiatives, inclusionary zoning, and tenant protections.

HB 1220 also instructs the Washington State Department of Commerce to provide an inventory and analysis of existing and projected housing needs that identify the number of housing units necessary to manage projected growth, including projections for units affordable to moderate- to extremely low-income households, emergency housing, emergency shelters, and permanent supportive housing.

Growth Management Planning Council

On June 23, 2021, the Growth Management Planning Council (GMPC) adopted recommended amendments to the King County CPPs, including amendments to align the CPP Housing Chapter with changes to the GMA, PSRC's VISION 2050, and the Regional Affordable Housing Task Force's Final Report and Recommendations, while centering equitable outcomes in the policy amendments. King County Countywide Planning Policies, in the Housing Chapter, support a range of affordable, accessible, and healthy housing choices for current and future residents. Further, they respond to the legacy of discriminatory housing and land use policies and practices (e.g., redlining, racially restrictive covenants, exclusionary zoning, etc.) that have led to significant racial and economic disparities in access to housing and neighborhoods of choice. These disparities affect equitable access to well-funded schools, healthy environments, open space, and employment. Policies in the Housing Chapter include:

H-1 All comprehensive plans in King County combine to address the countywide need for housing affordable to households with low-, very low-, and extremely low-incomes, including those with special needs, at a level that calibrates with the jurisdiction's identified affordability gap for those households and results in the combined comprehensive plans in King County meeting countywide need.

The countywide need for housing in 2044 by percentage of AMI is:

- 30 percent and below AMI (extremely low) 15 percent of total housing supply
- 31–50 percent of AMI (very low) 15 percent of total housing supply
- 51–80 percent of AMI (low) 19 percent of total housing supply

H-2 Prioritize the need for housing affordable to households at or below 30 percent AMI (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.

H-3 Update existing and projected countywide and jurisdictional housing needs using data and methodology provided by the Washington State Department of Commerce, in compliance with state law.

H-4 Conduct an inventory and analysis in each jurisdiction of existing and projected housing needs of all segments of the population and summarize the findings in the housing element.

H-5 Evaluate the effectiveness of existing housing policies and strategies to meet a significant share of countywide need. Identify gaps in existing partnerships, policies, and dedicated resources for meeting the countywide need and eliminating racial and other disparities in access to housing and neighborhoods of choice.

H-6 Document the local history of racially exclusive and discriminatory land use and housing practices, consistent with local and regional fair housing reports and other resources. Explain the extent to which that history is still reflected in current development patterns, housing conditions, tenure, and access to opportunity. Identify local policies and regulations that result in racially disparate impacts, displacement, and exclusion in housing, including zoning that may have a discriminatory effect, disinvestment, and infrastructure availability. Demonstrate how current strategies are addressing impacts of those racially exclusive and discriminatory policies and practices. The County will support jurisdictions in identifying and compiling resources to support this analysis.

H-7 Collaborate with diverse partners (e.g., employers, financial institutions, philanthropic, faith, and community-based organizations) on provision of resources (e.g., funding, surplus

property) and programs to meet countywide housing need.

H-8 Work cooperatively with the Puget Sound Regional Council, subregional collaborations and other entities that provide technical assistance to local jurisdictions to support the development, implementation, and monitoring of strategies that achieve the goals of this chapter.

H-9 Collaborate with populations most disproportionately impacted by housing cost burden in developing, implementing, and monitoring strategies that achieve the goals of this chapter. Prioritize the needs and solutions articulated by these disproportionately impacted populations.

H-10 Adopt intentional, targeted actions that repair harms to Black, Indigenous, and other People of Color households from past and current racially exclusive and discriminatory land use and housing practices (generally identified through Policy H-6). Promote equitable outcomes in partnership with communities most impacted.

H-11 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.

H-12 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.

H-13 Implement strategies to overcome cost barriers to housing affordability. Strategies to do this vary but can include updating development standards and regulations, shortening permit

timelines, implementing online permitting, optimizing residential densities, reducing parking requirements, and developing programs, policies partnerships, and incentives to decrease costs to build and preserve affordable housing.

H-14 Prioritize the use of local and regional resources (e.g., funding, surplus property) for income-restricted housing, particularly for extremely low-income households, populations with special needs, and others with disproportionately greater housing needs. Consider projects that promote access to opportunity, anti-displacement, and wealth building for Black, Indigenous, and People of Color communities to support implementation of policy H-10.

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.

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.

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.

H-18 Adopt inclusive planning tools and policies whose purpose is to increase the ability of all residents in jurisdictions throughout the county to live in the neighborhood of their choice, reduce disparities in access to opportunity areas, and meet the needs of the region's current and future residents by:

a) Providing access to affordable housing to rent and own throughout the jurisdiction, with a focus on areas of high opportunity;

b) Expanding capacity for moderate-density housing throughout the jurisdiction, especially in areas currently zoned for lower density single-family detached housing in the Urban Growth Area, and capacity for high-density housing, where appropriate, consistent with the Regional Growth Strategy;

c) Evaluating the feasibility of, and implementing, where appropriate, inclusionary and incentive zoning to provide affordable housing; and

d) Providing access to housing types that serve a range of household sizes, types, and incomes, including 2+ bedroom homes for families with children and/or adult roommates and accessory dwelling units, efficiency studios, and/or congregate residences for single adults.

H-19 Lower barriers to and promote access to affordable homeownership for extremely low-, very low-, and low-income, households. Emphasize:

a) Supporting long-term affordable homeownership opportunities for households at or below 80 percent AMI (which may require up-front initial public subsidy and policies that support diverse housing types); and

b) Remedying historical inequities in and expanding access to homeownership opportunities for Black, Indigenous and People of Color communities.

H-20 Adopt policies and strategies that promote equitable development and mitigate displacement risk, with consideration given to the preservation of historical and cultural communities as well as investments in low-, very low-, extremely low-, and moderate-income housing production and preservation; dedicated funds for land acquisition; manufactured housing community preservation, inclusionary zoning; community planning

requirements; tenant protections; public land disposition policies; and land that may be used for affordable housing. Mitigate displacement that may result from planning efforts, large-scale private investments, and market pressure. Implement anti-displacement measures prior to or concurrent with development capacity increases and public capital investments.

H-21 Implement, promote, and enforce fair housing policies and practices so that every person in the county has equitable access and opportunity to thrive in their communities of choice, regardless of their race, gender identity, sexual identity, ability, use of a service animal, age, immigration status, national origin, familial status, religion, source of income, military status, or membership in any other relevant category of protected people.

H-22 Adopt and implement policies that protect housing stability for renter households; expand protections and supports for low-income renters and renters with disabilities.

H-23 Adopt and implement programs and policies that ensure healthy and safe homes.

H-24 Plan for residential neighborhoods that protect and promote the health and well-being of residents by supporting equitable access to parks and open space, safe pedestrian and bicycle routes, clean air, soil and water, fresh and healthy foods, high-quality education from early learning through K–12, affordable and high-quality transit options and living wage jobs and by avoiding or mitigating exposure to environmental hazards and pollutants.

H-25 Monitor progress toward meeting countywide housing growth targets, countywide need, and eliminating disparities in access to housing and neighborhood choices. Where feasible, use existing regional and jurisdictional reports and monitoring tools and collaborate to reduce duplicative reporting.

AFFORDABLE HOUSING STRATEGY

The city adopted an Affordable Housing Strategy (AHS) in 2017 that includes five strategies and 21 actions to increase the availability and access to affordable housing over a 10-year period. The primary purpose of the AHS is to improve affordable housing opportunities throughout the city consistent with City Council priorities, Comprehensive Plan guidance, and Economic Development Plan strategies.

The AHS supports a healthy housing market in the city that:

- Provides affordability across a range of incomes mirroring Bellevue's population and workforce.
- Provides a variety of affordable housing choices that meet the needs of the community including:
  - Young people in college or just entering the job market.
  - First-time home buyers or new employees who are ready to purchase a home.
  - The city's aging population, especially those on fixed/limited income, who wish to remain in the community.
  - Families that want to keep their children in Bellevue schools.
- Preserves the integrity of single-family areas while considering, through the neighborhood planning process, housing that can accommodate a wider spectrum of needs, and foster ongoing investments by individual homeowners.

7.2.2 Current Conditions

This section summarizes information on current housing, affordability, housing type diversity, displacement risk, and access to transit, both citywide and by the following sub geographies: Mixed Use Centers, Neighborhood Centers, transit-proximate areas, and the Wilburton study area.

CITYWIDE

Current Housing Supply and Diversity

As of 2022, there were an estimated 65,891 housing units in Bellevue per the Washington State Office of Financial Management (OFM). This EIS uses data from 2019 as a base year, which matches the CPP

growth target base year; the city's records show about 64,372 units, rounded across the geographies in **Table 7-1**.

TABLE 7-1 **Current Housing Units by Location 2019**

Housing Units	Mixed Use Centers	Neighborhood Centers	Transit-Proximate Areas	Wilburton Study Area	Outside Centers/ Transit Corridors	Citywide
Existing	17,700	200	19,000	400	26,700	**64,000***

SOURCE: City of Bellevue 2023; Table prepared by BERK 2023

* Exact count in city database is 64,372.

Most of the housing is concentrated in Mixed Use Centers and transit-proximate areas. See Figure 7-9, below.

Housing units in Bellevue increased by 17,372 units from 2000 to 2022. Of those, 3,353 came from annexations of existing housing units, most of which occurred in 2002 and 2013. Half of the city's housing units are single-family homes, down from 59 percent in 2000. Between 2000 and 2020, Bellevue produced very few single-family residential units and more than 12,000 multi-family units. On average, after excluding annexations, Bellevue has produced 637 units per year between 2000 and 2022. Annexed housing units account for 84 percent of all new single-family houses added during this period.

As of 2020, an estimated 53 percent of households in Bellevue owned their home, while 47 percent rented their home. This represents a decline in the proportion of owner household units since 1990, when 58 percent of Bellevue households were homeowners and 42 percent were renters. The breakdown of households between renters and owners and by size has changed over the past couple of decades. Bellevue is gaining renter households at a much faster rate than owner households. Between 2000 and 2020, the city experienced a net gain of more than 5,600 small households (1 or 2 members), the overwhelming majority of which (5,500 households) were renter households.

The increase in renter households in Bellevue is closely related to the current rate of multi-family housing development in the city. The city has almost exclusively produced multi-family housing in the past two decades, and therefore, mostly rental housing. Between 2000 and 2020, Bellevue produced very few single-family residential units and more than 12,000 multi-family units. More than 80 percent of multi-family occupied housing units are renter-occupied, versus 19 percent of single-family occupied housing units.

Affordability

The term "affordable housing" refers to a household's ability to find housing within its financial means. The city further defines affordable housing as affordable to 80 percent Area median income (AMI) and below. AMI is the widespread metric used for assessing housing affordability and developed by HUD for determining eligibility for subsidized housing. HUD establishes extremely low-, very low-, low-, and median-income thresholds for households between one and eight people in size. The income levels produced by HUD are only available for certain metropolitan areas. The City of Bellevue falls within the Seattle-Bellevue HUD Metro Fair Market Rent (FMR) Area, which extends over King and Snohomish counties.

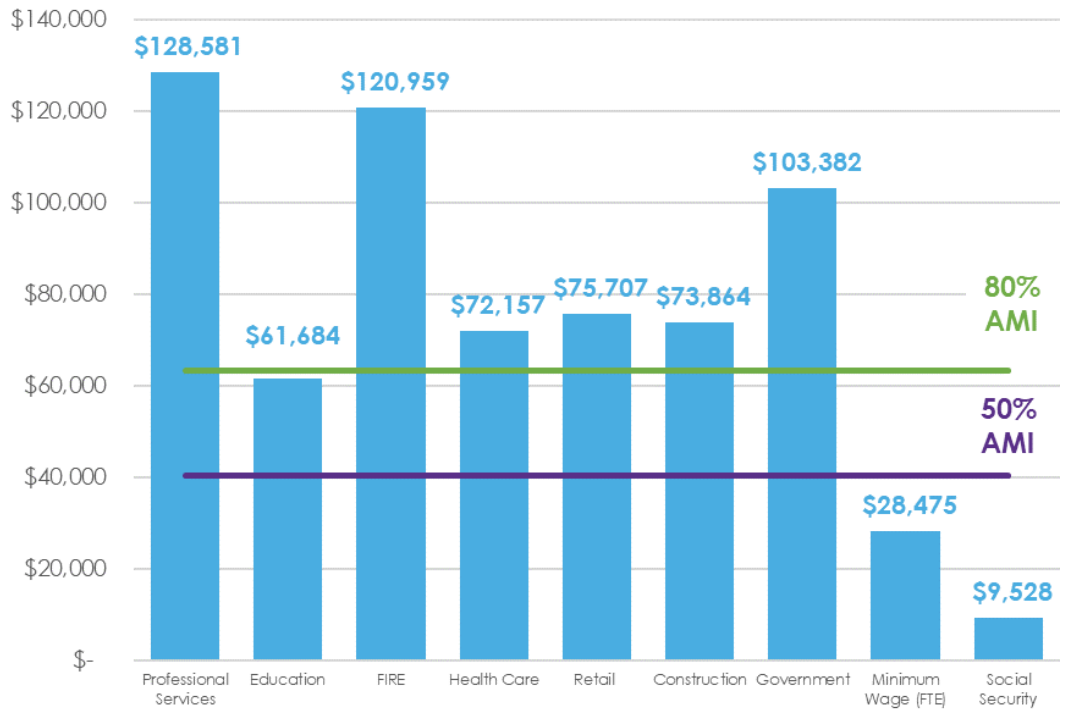
Figure 7-1 shows the median income of Bellevue's employed residents for select industries, as well as the income for individuals earning minimum wage or relying on Social Security in 2021. Households reliant on minimum wage or Social Security for income are likely to be very low-income households earning below the 50 percent AMI income limit for a 1-person household ($40,500). Several industries in which a large share of Bellevue residents work have a median wage above 80 percent AMI ($63,350). Professional services; finance, insurance, and real estate (FIRE); and government jobs are high earning. The other selected industries have a median income close to the 80 percent AMI level.

Home Values and Rental Housing

Reflecting regional trends, home values in Bellevue have steadily increased since 2000. Home prices in the region have increased significantly between 2000 and 2021, with a slump during the Great Recession. During this period, Bellevue has had higher home prices relative to King County. In 2022, the median sales price for homes in Bellevue was $1.5 million, an increase of more than 200 percent from 10 years earlier, when the median sales price was $491,600.

During this time, Bellevue's median home value grew at the highest compound annual growth rate (7.3 percent) while the county as a whole, and Seattle, grew at a slower rate, with a 6.2 percent and 6.1 percent annual growth rate, respectively.

Bellevue has a higher share of homeowners (53 percent) than Redmond (50 percent) and Seattle (45 percent) and a lower share of homeowners than Kirkland (62 percent) and King County as a whole (56 percent). The breakdown of households by tenure and size has changed over the past couple of decades. Between 2000 and 2020,



SOURCE: HUD 2021; US Census Bureau 1-year Estimates ACS 2021; Social Security Administration 2021; Washington State Department of Labor & Industries 2021; Community Attributes Inc. 2022

FIGURE 7-1 **Median Income by Industry for Employed Residents vs. HUD Income Limits (1-Person Household), Citywide, 2021**

Bellevue gained renter households at a much faster rate than owner households. Between 2000 and 2020, the city experienced a net gain of more than 5,600 small households (1 or 2 members), the overwhelming majority of which (5,500 households) were renter households.

The increase in renter households in Bellevue is closely related to the current rate of multi-family housing development in the city. The city has almost exclusively produced multi-family housing in the past two decades, and therefore, mostly rental housing. More than 80 percent of multi-family occupied housing units are renter-occupied, versus 19 percent of single-family occupied housing units. This reflects regional patterns where construction of multi-family units has risen substantially and now accounts for about two-thirds of all housing construction in the region.

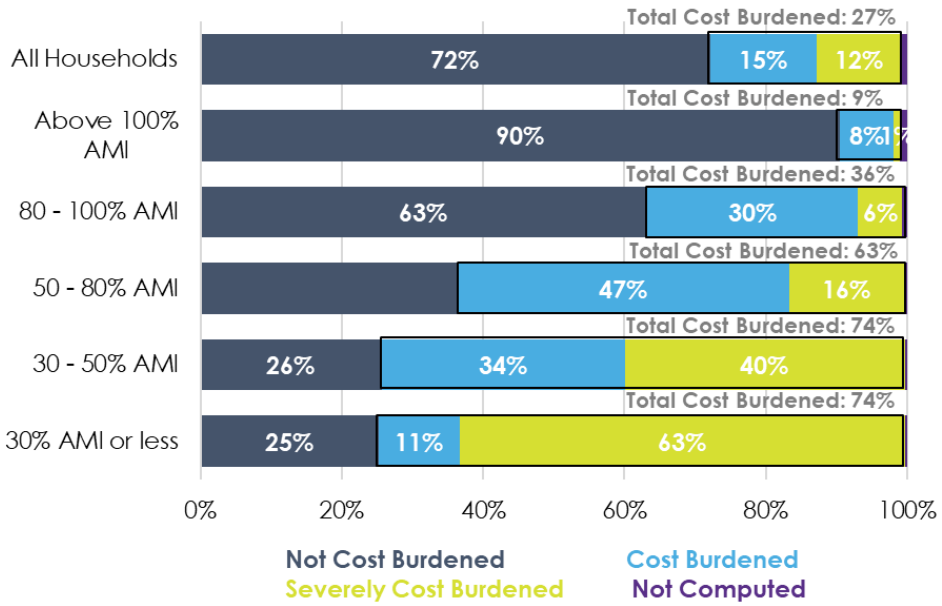
Rental costs have followed a similar pattern to the increase of home values. From 2010 to 2020, the median rent in Bellevue increased by more than 80 percent. Bellevue's median rent in 2020 is about $400 higher than King County as a whole.

Cost Burdened Households

The number of households that are "cost-burdened" (defined as spending too much of their income on housing) is an indicator of affordable housing needs. HUD defines a household as cost burdened if they pay between 30 percent and 50 percent of their gross household income for housing, and severely cost burdened if they pay more than 50 percent of their gross household income on housing.

Cost Burden by Income

Income level is a clear indicator of the likelihood that a household is cost burdened. Across Bellevue and all income levels, 27 percent of households are cost burdened (**Figure 7-2**). The least cost burdened income level is above 100 percent AMI, of whom only 9 percent are cost burdened. Across all other income groups, at least one-third of households are cost burdened, including moderate income groups of 50 to 80 percent and 80 to 100 percent AMI. Low- and very low-income households are equally cost burdened (both at 74 percent), but very low-income groups are more likely to be severely cost burdened. Nearly two-thirds of all very low-income households are severely cost burdened, compared to 40 percent of households earning 30 percent to 50 percent AMI.

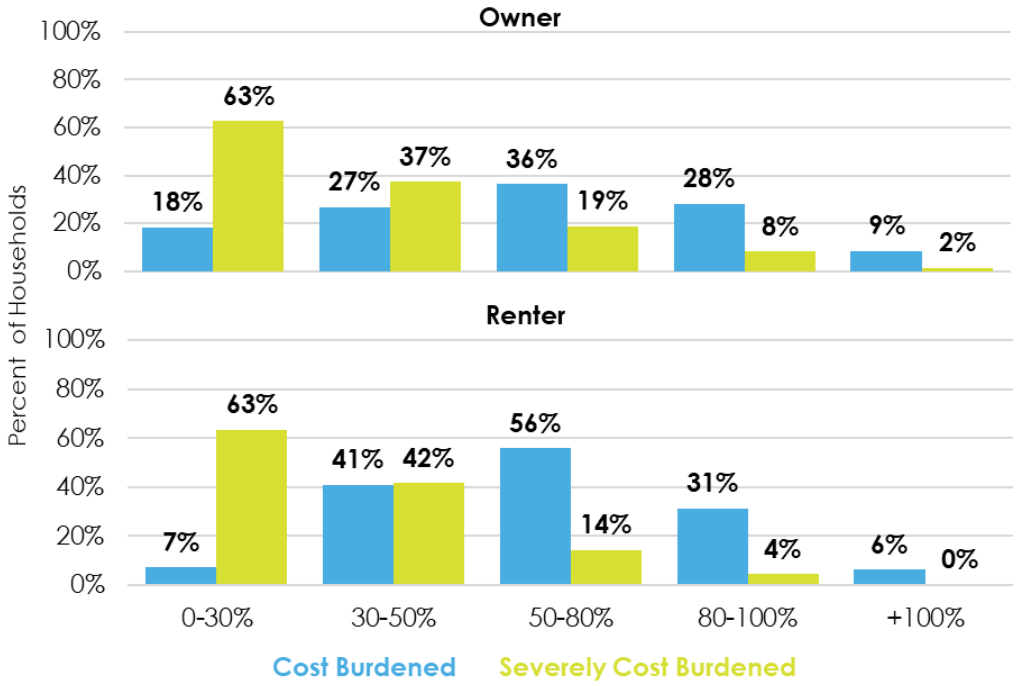


SOURCE: HUD CHAS 2022; Community Attributes Inc. 2022

FIGURE 7-2 **Cost Burden by Income Range, Percent of Households, Citywide, 2019**

Cost Burden by Tenure

In addition, whether a household rents (referred to as tenure) or owns can indicate the likelihood that a household is cost burdened, as shown in **Figure 7-3**. In Bellevue, Renters are more cost burdened than owners. Seventeen percent of renters, and 14 percent of owners are cost-burdened. Fifteen percent of renter households, and 10 percent of owner households are severely cost burdened. The share of severe cost burden for renter and homeowning households decreases as income levels increase.



SOURCE: HUD CHAS 2022; Community Attributes Inc. 2022

FIGURE 7-3 **Distribution of Cost Burdened Status (Households) by AMI and Tenure, Bellevue, 2019**

Relative to the county as a whole, a smaller share of Bellevue renting households is cost burdened and severely cost burdened.

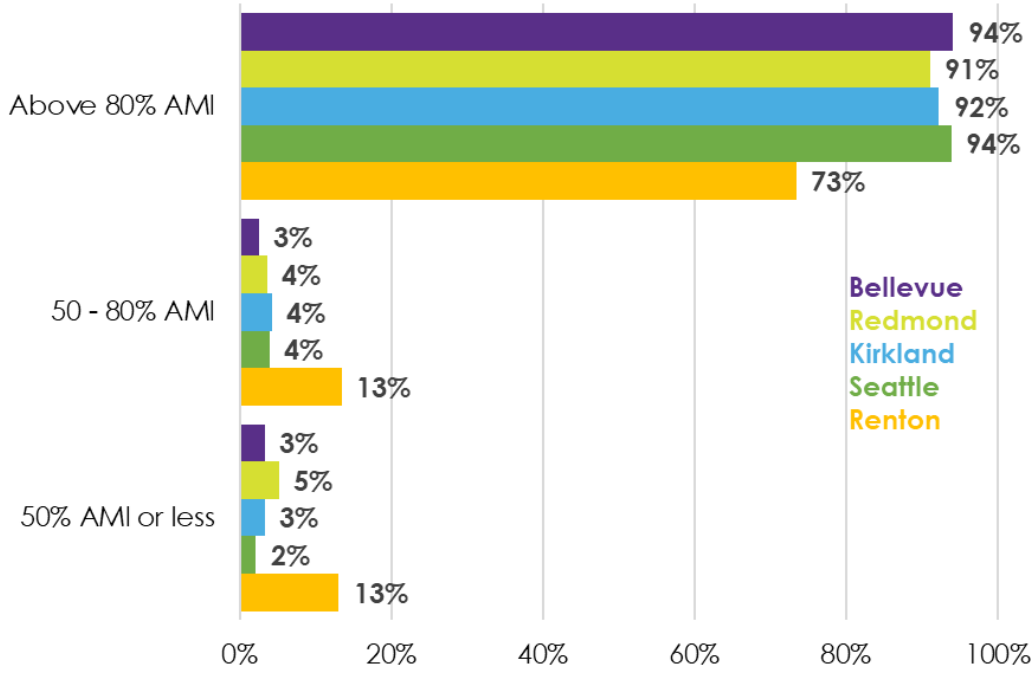
Gaps in Housing Availability by Affordability Level

Citywide, the number of housing units affordable at lower income levels does not match the number of households with said income. Analysis in the Housing Needs Assessment (City of Bellevue 2022) shows that Bellevue has a deficit in the number of units affordable to households in the 30–50 percent AMI and <30 percent AMI income groups. The data also show that the housing inventory that is

affordable to households with incomes above 50 percent AMI is higher than the percentage of households at that income level.

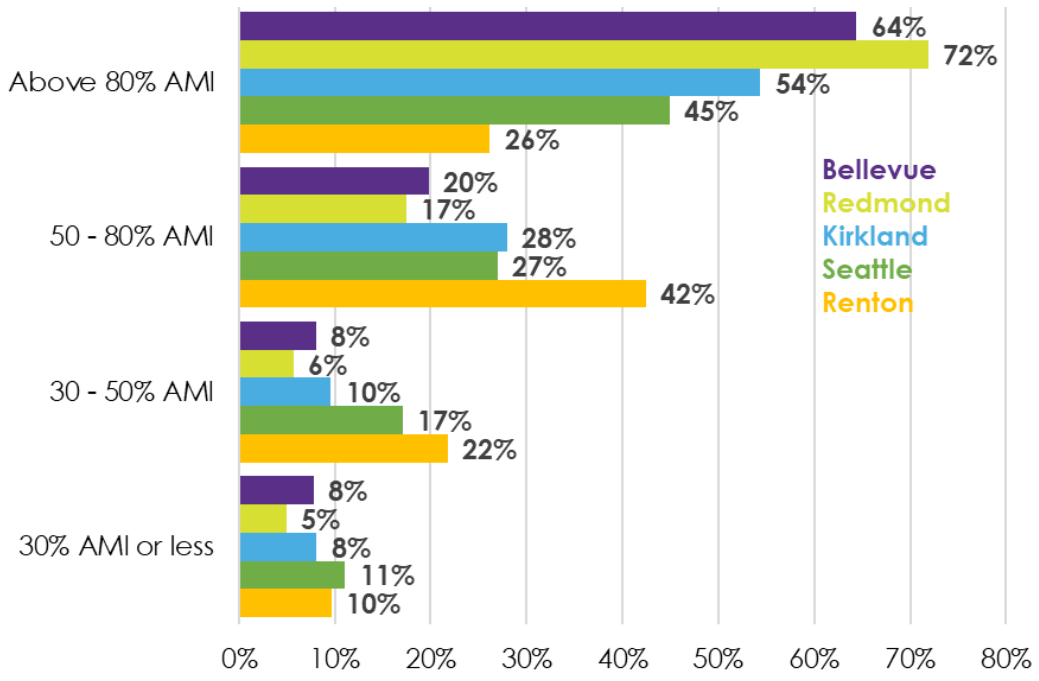
For owner-occupied units, Bellevue has 29,880 owner-occupied units (94 percent) affordable to Bellevue's higher income population (above 80 percent AMI), but only 1,870 units (6 percent) available to its moderate and low-income population. For rental units, while Bellevue has over 23,300 affordable rental units to its middle (50 to 80 percent AMI) and higher income (above 80 percent AMI) populations, fewer than 4,500 affordable rental units are available for its lower income population.

Bellevue's affordable housing units at 80 percent AMI or less are mostly located on the east side of the Bridle Trails neighborhood, in Crossroads, and Lake Hills between 164th Avenue NE and 156th Avenue NE and in the central part of the city, including Wilburton, West Bellevue, and parts of Eastgate/Factoria.



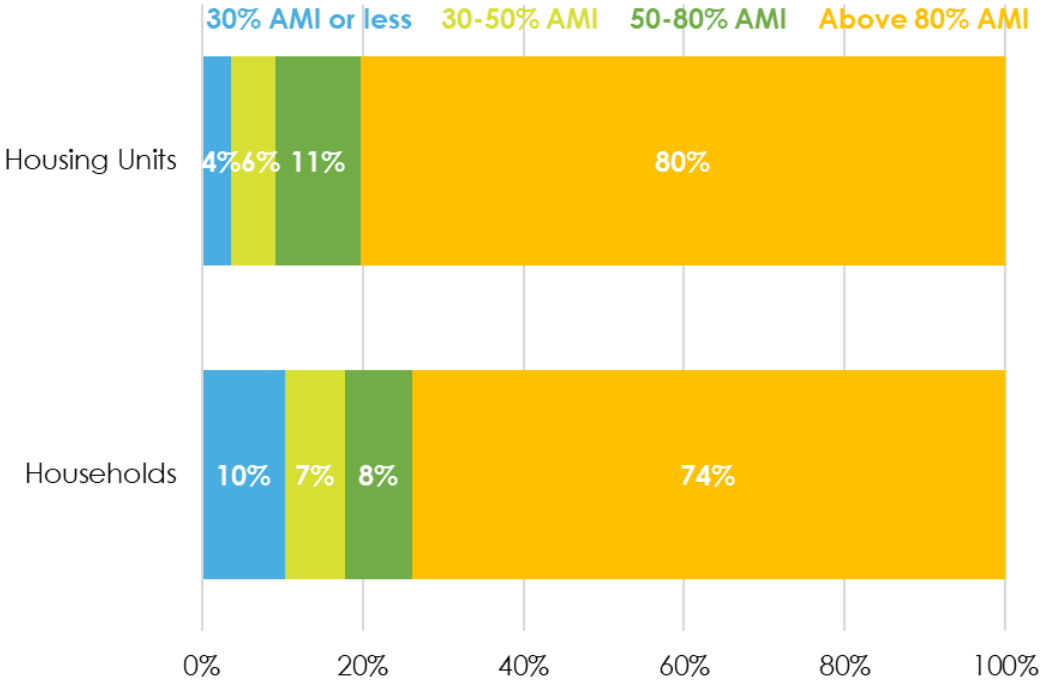
SOURCE: HUD CHAS 2022; Community Attributes Inc., 2022

FIGURE 7-4 **Number of Owner-Occupied Units Affordable to Each Income Level, Bellevue**



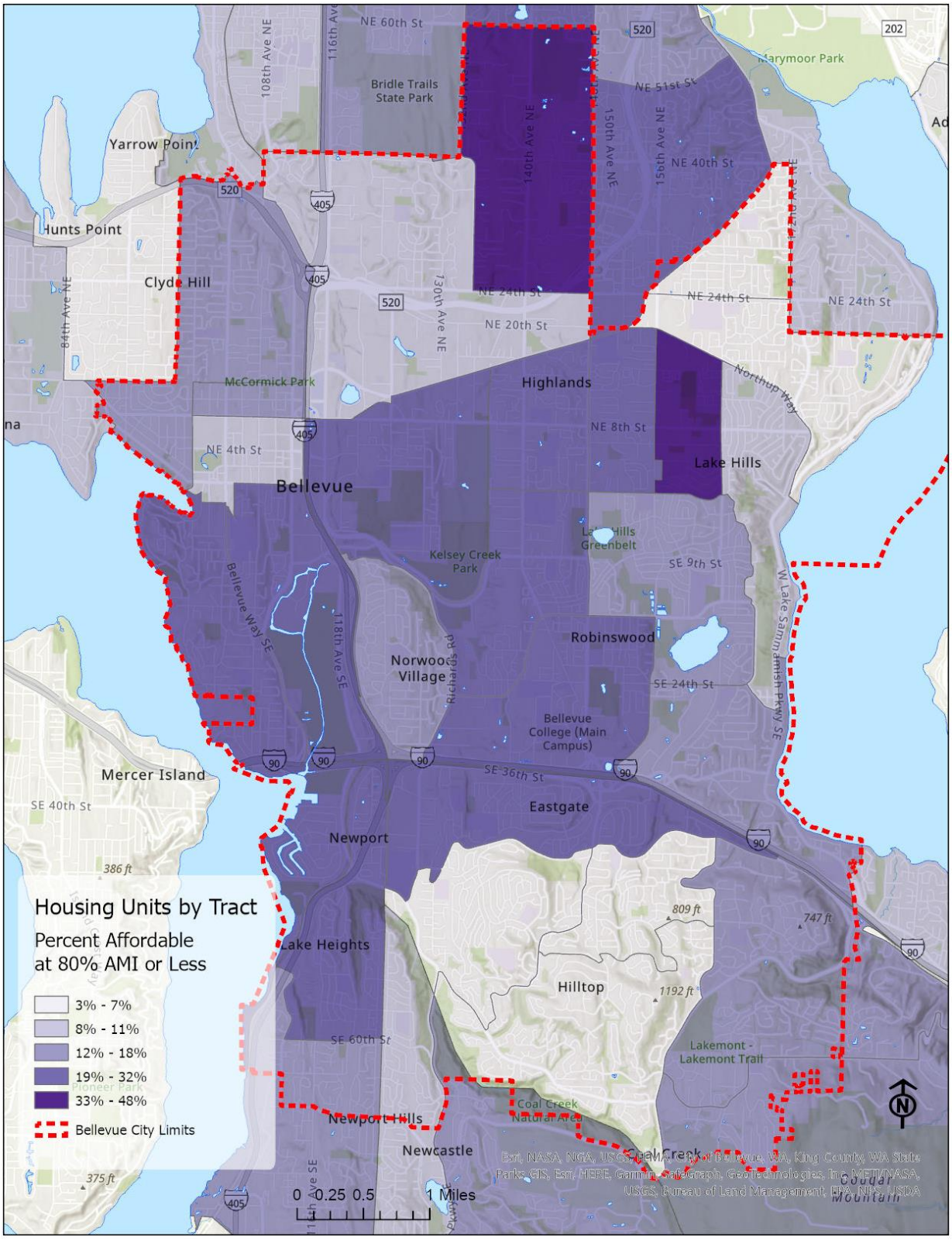
SOURCE: HUD CHAS 2022; Community Attributes Inc., 2022

FIGURE 7-5 **Number of Rental Units Affordable to Each Income Level, Bellevue**



SOURCE: HUD CHAS 2022; Community Attributes Inc. 2022

FIGURE 7-6 **Affordability of Housing Units Compared to Household Incomes, Bellevue, 2019**



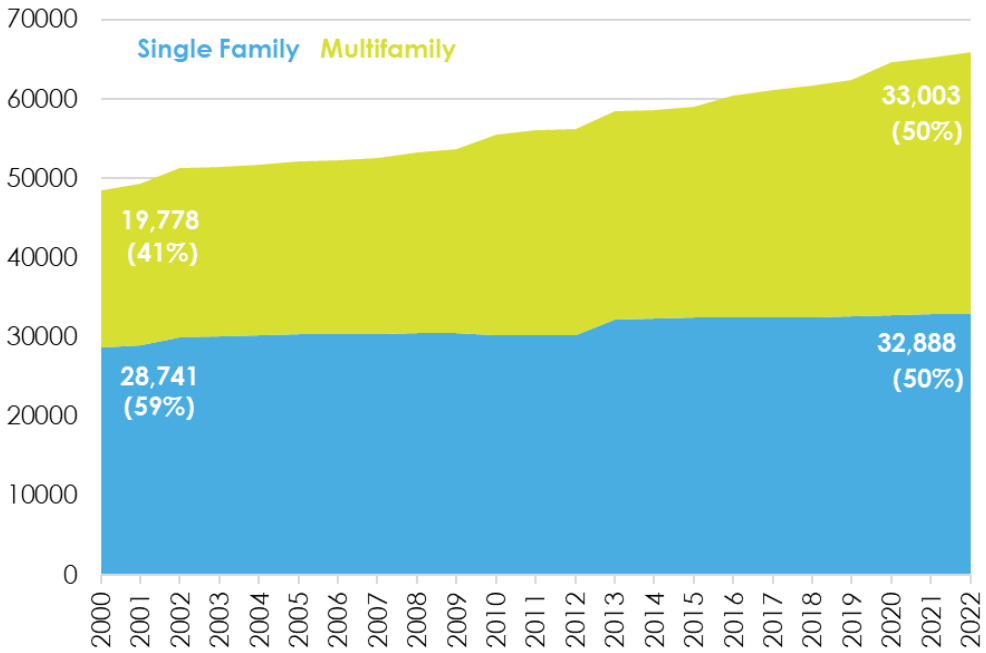
SOURCE: CHAS 5- HUD CHAS 2022; Community Attributes Inc. 2022

FIGURE 7-7 **Share of Housing Units Affordable at 80 Percent AMI or less, Bellevue, 2019**

Housing Diversity

At 50 percent of its housing stock, low-density, single-family housing accounts for roughly half of the existing housing supply in the city. Relative to the county, Bellevue's existing housing inventory has a smaller proportion of single-family housing. Bellevue's 50 percent share of single-family housing units is below that of King County's 54 percent share. It is also lower than cities such as Kirkland (54 percent) and Renton (55 percent), and higher than cities such as Seattle (37 percent) and Redmond (43 percent).

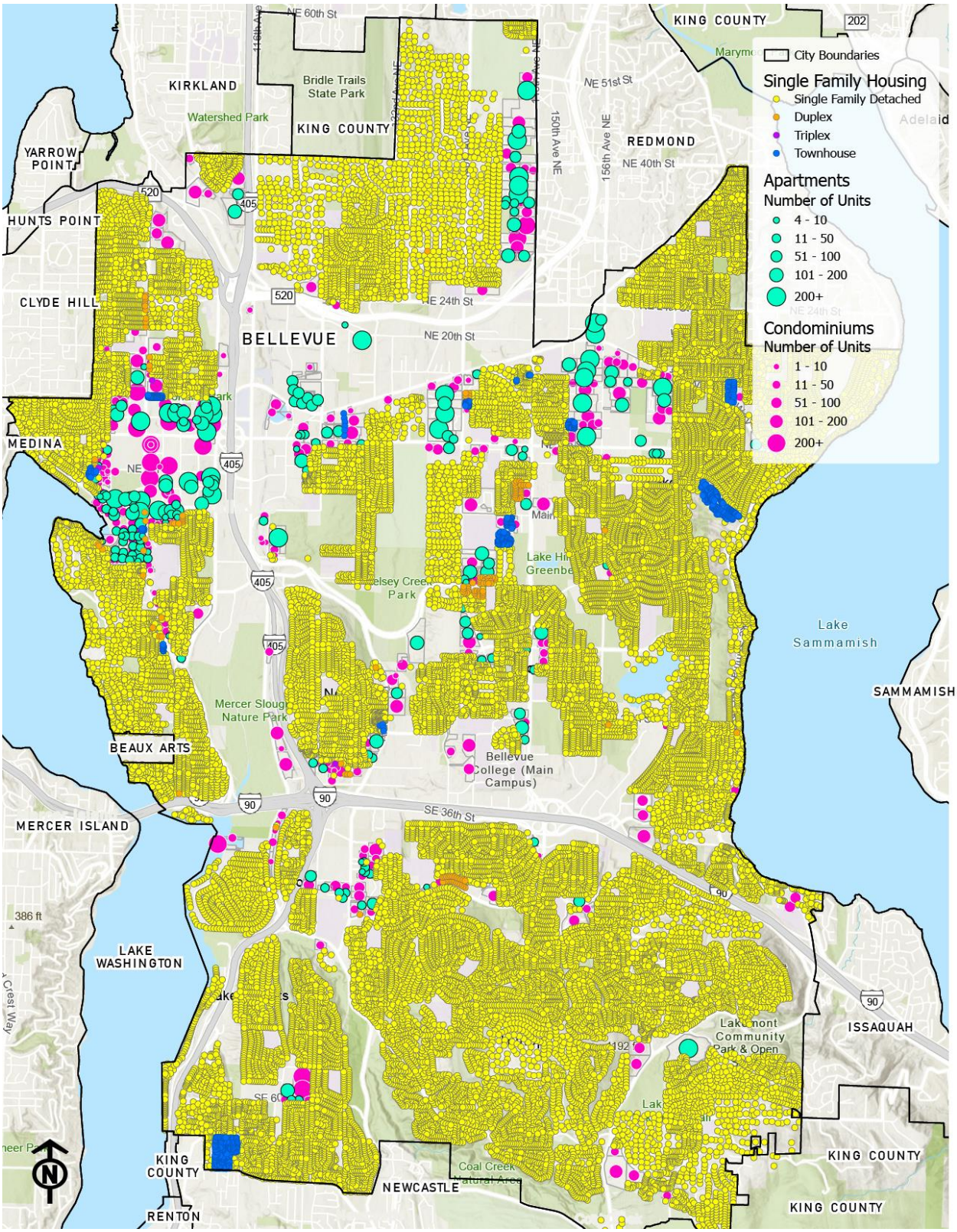
Figure 7-8 shows the distribution of housing unit types across the city of Bellevue, and **Figure 7-9** shows the distribution of these units across the city.



SOURCE: Washington OFM 2022; CAI 2022

FIGURE 7-8 **Housing Units by Number of Units in Structure, Citywide, 2000 to 2022**

Geographically, the highest concentration of condominiums and apartment units is clustered around the Downtown area, west of I-405. Other clusters are in the Bridle Trails (along 148th Avenue NE) and Crossroads neighborhoods. The remainder of multi-family units are dispersed throughout the central neighborhoods of Bellevue.



SOURCE: King County Department of Assessments 2020; CAI 2022

FIGURE 7-9 **Housing Types and Units per Parcel, Citywide, 2020**

Displacement Risk

Figure 7-10 shows displacement risk based on the Regional Displacement Risk Index, created by PSRC as part of the VISION 2050 long-range Regional Growth Strategy effort.

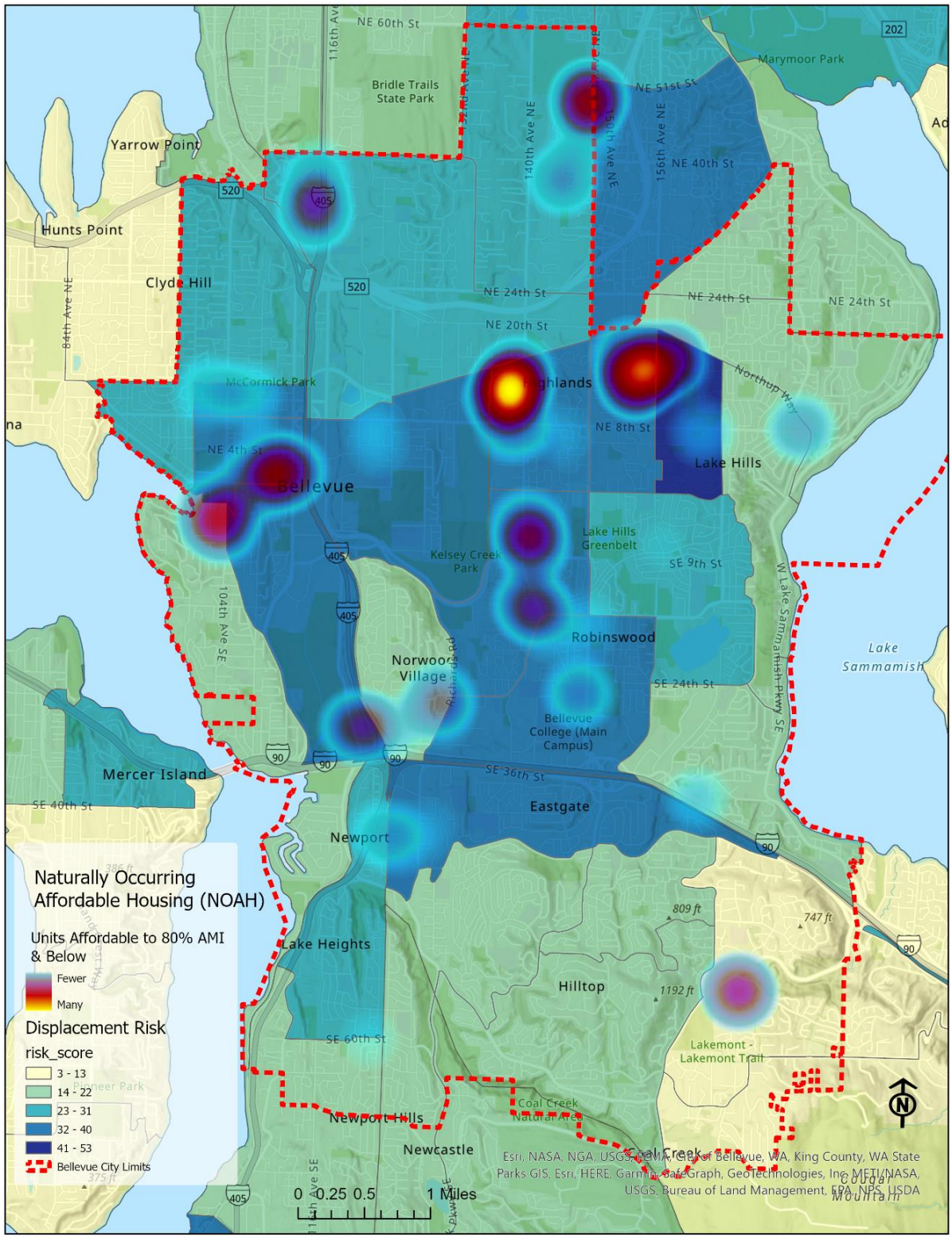
This index combines data at the census tract level about socio-demographics, transportation, neighborhood characteristics, housing, and civic engagement to determine areas that are likely to be the most vulnerable to displacement in the region. The tool identifies places in the central Puget Sound region where people and businesses may be at risk of displacement. It classifies areas as having lower, moderate, or higher risk of displacement based on current neighborhood conditions. This tool assesses a general risk of displacement but cannot accurately predict if displacement will occur, the speed of displacement that occurs, or to what intensity displacement will appear within a community. Displacement can be physical, where building conditions deteriorate or where redevelopment occurs; or economic, where housing-related costs rise.

Figure 7-10 also shows the location of naturally occurring affordable housing (NOAH) properties in Bellevue identified through a separate analysis for the city's Housing Needs Assessment.

There is some overlap in Bellevue between areas with high NOAH density and higher displacement risk. If there is a loss of affordable housing in the community, such as through the renovation or redevelopment of NOAH that reduces its affordability, some households may need to leave the city and move to other locations to find appropriate and affordable housing.

Access to Transit

Of the 64,000 existing housing units, about 19,000 units or 30 percent are in areas with good access to transit.



SOURCE: CoStar 2022; HUD CHAS Income Limits 2022; PSRC Displacement Risk Index, Data collected from American Community Survey (ACS), U.S. Census Bureau; Consolidated Housing Affordability Strategy (CHAS), U.S. Department of Housing & Urban Development (HUD); Google; County elections data; 2011 to 2018; CAI 2022.

FIGURE 7-10 **Naturally Occurring Affordable Housing (NOAH) and Displacement Risk, Citywide**

MIXED USE CENTERS

There are six Mixed Use Centers in the City of Bellevue: Downtown, BelRed, Eastgate, Factoria, Wilburton-East Main, and Crossroads. Downtown is considered a Metropolitan Regional Growth Center in VISION 2050; the others are proposed as Countywide Growth Centers. Note that the boundaries of the Wilburton-East Main Mixed Use Center and Wilburton study area are different.

Current Housing Supply and Diversity

There are about 17,650 housing units within Mixed Use Centers. The bulk of housing units within Mixed Use Centers, about 16,650 units, or 94 percent, are multi-family units. Downtown has the largest proportion of units among centers, while Eastgate has the lowest (**Table 7-2**).

TABLE 7-2 **Current Housing, Units by Type in Mixed Use Centers**

Unit Type	Downtown	BelRed	Eastgate	Factoria	Wilburton-East Main	Crossroads
Single-Family Units	79	0	159	194	50	531
Multi-Family Units	9,884	588	28	1,008	362	4,783
Total	***9,963***	***588***	***187***	***1,202***	***412***	***5,314***

SOURCE: BERK 2023

Downtown

Downtown Bellevue is home to regional shopping destinations, major office buildings, a historic Main Street, and several housing developments. Since the late 1990s, a large number of new residential developments have been built in Downtown, and the area is now one of the city's largest residential neighborhoods. There are currently 9,963 housing units in Downtown representing 15 percent of the units citywide. Multi-family housing accounts for all of the housing in Downtown.

BelRed

BelRed was historically characterized by warehouses and manufacturing. The center has begun to transition with the departure of many of the traditional uses, the expansion of the Medical Institution District, and the introduction of residential uses in close proximity to office and retail uses.

As of 2019, the BelRed Mixed Use Center had over 600 housing units (about 1 percent of units citywide). All of this housing is multi-family housing, primarily larger apartment buildings with studios and one-bedroom units.

Eastgate

As of 2019, the Eastgate Mixed Use Center had 187 housing units (less than 1 percent of units citywide). Housing primarily for students of Bellevue College accounts for most of the housing here.

Factoria

Factoria includes the Market Place at Factoria—a regional retail center—as well as retail and services that cater to the surrounding neighborhoods. As of 2019, the Factoria Mixed Use Center had about 1,200 housing units (2 percent of units citywide). Housing here is primarily multi-family apartment complexes or condos.

Wilburton-East Main

The Wilburton-East Main center is located along the I-405 corridor and includes the Wilburton study area and areas east of the light-rail station to I-405 and southeast to SE 8th Street. The area includes a concentration of offices and hotels and a significant number of auto dealers and large format or "big box" retail stores. As of 2019, about 400 housing units were located in Wilburton-East Main (less than 1 percent of units citywide). Housing here is also all multi-family.

Crossroads

Crossroads is a community commercial center containing retail stores and offices that serve both the nearby neighborhoods and the larger community. As of 2019, about 5,300 housing units (or 8 percent of units citywide) are located here. Housing here is comprised of primarily multi-family apartment complexes or condos with 5 or more units.

Affordability

Downtown

Median rents in the Downtown area are in the $2,300 range. The Housing Needs Assessment estimated rents that are affordable to households at two different income levels: $2,150 for households at 80 percent and $1,345 for households at 50 percent of AMI. This is based on HUD Income Limits for a 3-person household (the equivalent of a 2-bedroom unit when assuming 1.5 people per

bedroom). Based on this assessment, median rents in Downtown are not affordable to these households.

Analysis of market rental units to identify existing NOAH shows that areas to the southeast and southwestern corner of Downtown currently have some NOAH units or existing multi-family rental properties that are affordable without public subsidy to households earning 80 percent AMI or below. According to Zillow data in February 2022, average home values in Downtown are between $1 million and $1.5 million.

BelRed

Median rents in BelRed are in the $2,100 range. Based on the assessment noted above, median rents in BelRed are not affordable to households at 50 percent AMI and just about affordable to households at 80 percent AMI.

Analysis of market rental units to identify existing NOAH shows that areas in the southeast corner of BelRed currently have some NOAH units or existing multi-family rental properties that are affordable without public subsidy to households earning 80 percent AMI or below. This includes units in the southeast (Illahee Apartments) purchased by the city in collaboration with King County Housing Authority and preserved as affordable housing. BelRed also has some rent-restricted units that were built as part of the Amenity Incentive System.

According to Zillow data in February 2022, average home values in BelRed are between $1 million and $1.5 million.

Eastgate

Median rents in Eastgate are in the $2,000 range. Based on the assessment noted above, median rents in Eastgate are not affordable to households at 50 percent AMI but affordable to households at 80 percent AMI.

Analysis of market rental units to identify existing NOAH shows that this center currently has fewer NOAH units or existing multi-family rental properties that are affordable without public subsidy to households earning 80 percent AMI or below. According to Zillow data in February 2022, average home values in Eastgate are between $1 million and $1.5 million.

Factoria

Median rents in Factoria are in the $1,800 range. Based on the assessment noted above, median rents in Factoria are not affordable to households at 50 percent AMI. Rents here are affordable to households at 80 percent AMI.

Analysis of market rental units to identify existing NOAH shows that this center currently has fewer NOAH units or existing multi-family rental properties that are affordable without public subsidy to households earning 80 percent AMI or below. According to Zillow data in February 2022, average home values in Factoria are less than $1 million.

Wilburton-East Main

Median rents in the center are in the $1,700 range. Based on the assessment noted above, median rents in Wilburton-East Main are not affordable to households at 50 percent AMI but are affordable to households at 80 percent AMI.

With its small number of total housing units, however, this center is not a significant location for affordable housing. According to Zillow data in February 2022, average home values in Wilburton-East Main are between $1 million and $1.5 million.

Crossroads

Median rents in the center are in the $1,720 range. Based on the assessment noted above, median rents in Crossroads are not affordable to households at 50 percent AMI but are affordable to households at 80 percent AMI.

Analysis of market rental units to identify existing NOAH shows that Crossroads currently has many NOAH units or existing multi-family rental properties that are affordable without public subsidy to households earning 80 percent AMI or below. According to Zillow data in February 2022, average home values in Crossroads are between $1 million and $1.5 million.

Displacement Risk

A combination of rising housing prices, insufficient affordable housing production, and limited tenant protections has led to increases in displacement. Displacement can be physical, where building conditions deteriorate or where redevelopment occurs; or economic, where housing-related costs rise. Studies have shown that the rates of displacement for very low- to moderate-socioeconomic

groups as a result of new market-rate housing construction are not as high as commonly feared and can be mitigated. Additions of housing supply, especially at the regional level, can address the pressures of economic displacement.

Table 7-3 summarizes housing in the Mixed Use Centers based on displacement risk. The risk of displacement information is based on the Regional Displacement Risk Index, created by PSRC as part of the VISION 2050 long-range Regional Growth Strategy effort.

TABLE 7-3 **Housing in Areas of Displacement Risk, Units by Mixed Use Center**

	Lower		Moderate		Higher	
Mixed Use Centers	**SF**	**MF**	**SF**	**MF**	**SF**	**MF**
BelRed	—	588	—	—	—	—
Crossroads	—	1,069	130	2,082	401	1,632
Eastgate	—	—	159	28	—	—
Factoria	—	—	194	1,008	—	—
Wilburton-East Main	—	72	—	340	—	—
Downtown (Metro Center)	—	—	79	9,884	—	—
Total		***1,729***	***562***	***13,342***	***401***	***1,632***

SOURCE: PSRC 2020; BERK 2023

NOTE: SF=single-family; MF=multi-family

Displacement risk is a composite of indicators representing five elements of neighborhood displacement risks: socio-demographics, transportation qualities, neighborhood characteristics, housing, and civic engagement. The data from these five displacement indicators were compiled into a comprehensive index of displacement risk for all census tracts in the region.

Downtown

The bulk of existing housing within the center is in areas with moderate displacement risk.

BelRed

Existing housing units within BelRed are in areas of low to moderate displacement risk.

Eastgate

The bulk of existing housing within the center is in areas with moderate displacement risk.

Factoria

The bulk of existing housing within the center is in areas with moderate displacement risk.

Wilburton-East Main

The bulk of existing housing within the center is in areas with moderate displacement risk. A small number of multi-family housing is in areas of lower displacement risk.

Crossroads

Roughly 38 percent of housing within the center is in areas at a high risk of displacement. Roughly 42 percent of housing within the center is in areas with moderate displacement risk. Roughly 20 percent or relatively smaller proportion of multi-family are in areas of low displacement risk.

Access to Transit

A total of about 19,000 housing units or 30 percent of existing housing is in areas with good access to transit. Of these, about 13,000 housing units or two-thirds are within Mixed Use Centers. Housing units with access to transit within Mixed Use Centers vary as described below.

TABLE 7-4 **Housing Units with Access to Transit, by Location and Displacement Risk Level**

	Lower		Moderate		Higher	
Transit-Proximate Areas	**SF**	**MF**	**SF**	**MF**	**SF**	**MF**
BelRed	—	—	—	—	—	—
Crossroads	—	970	44	1,316	179	661
Eastgate	—	—	43	28	—	—
Factoria	—	—	89	504	—	—
Wilburton-East Main	—	—	—	306	—	—
Downtown (Metro Center)	—	—	24	8,824	—	—
Total	**—**	***970***	***200***	***10,978***	***179***	***661***

SOURCE: PSRC 2020; BERK 2023

NOTE: SF=single-family; MF=multi-family

Downtown

The bulk of the 9,963 housing units in Downtown have good access to transit since they are within a ¼ mile of the frequent transit network (or FTN), defined as frequent bus service at least every 15 minutes during the daytime and early evening.

BelRed

Existing housing units within BelRed have limited access to transit since they are not within a ¼ mile of the frequent transit network. Note that this is based on current access. As light rail opens in the future, this area will have better access to transit.

Eastgate

In total, 71 or roughly 38 percent of housing units in Eastgate have good access to transit since they are within a ¼ mile of the frequent transit network.

Factoria

In total, 593 housing units or roughly half of existing housing units in Factoria have good access to transit since they are within a ¼ mile of the frequent transit network.

Wilburton-East Main

In total, 306 housing units or 77 percent of existing housing units have good access to transit since they are within a ¼ mile of the frequent transit network.

Crossroads

In total, 3,170 housing units or 60 percent of existing housing units in Crossroads have good access to transit since they are within a ¼ mile of the frequent transit network.

NEIGHBORHOOD CENTERS

Thirteen Neighborhood Centers throughout the city complement the Mixed Use Centers with smaller, neighborhood-oriented retail and services. Bellevue's Neighborhood Centers provide goods and services to local residents and serve as important focal points and gathering spaces for the surrounding communities.

Current Housing Supply and Diversity

Defined as commercial areas, Neighborhood Centers have very little existing housing supply or diversity. Currently, fewer than 200 housing units (less than 0.5 percent of units citywide) are located within the city's Neighborhood Centers. Very few single- or multi-family homes exist in the Neighborhood Centers. The Lake Hills and Northeast Neighborhood Centers are currently the only ones with housing. Roughly 66 units within Neighborhood Centers are within a ¼ mile of the frequent transit network.

Displacement Risk

Since Neighborhood Centers are primarily commercial areas, there is very little displacement risk in adding new housing. Roughly 41 percent of housing units within Neighborhood Centers are in areas with low displacement risk, and 59 percent of existing housing in Neighborhood Centers are in areas with moderate displacement risk.

Good Access to Transit

Good access to transit is defined as frequent bus service (every 15 minutes) during the daytime and early evening.

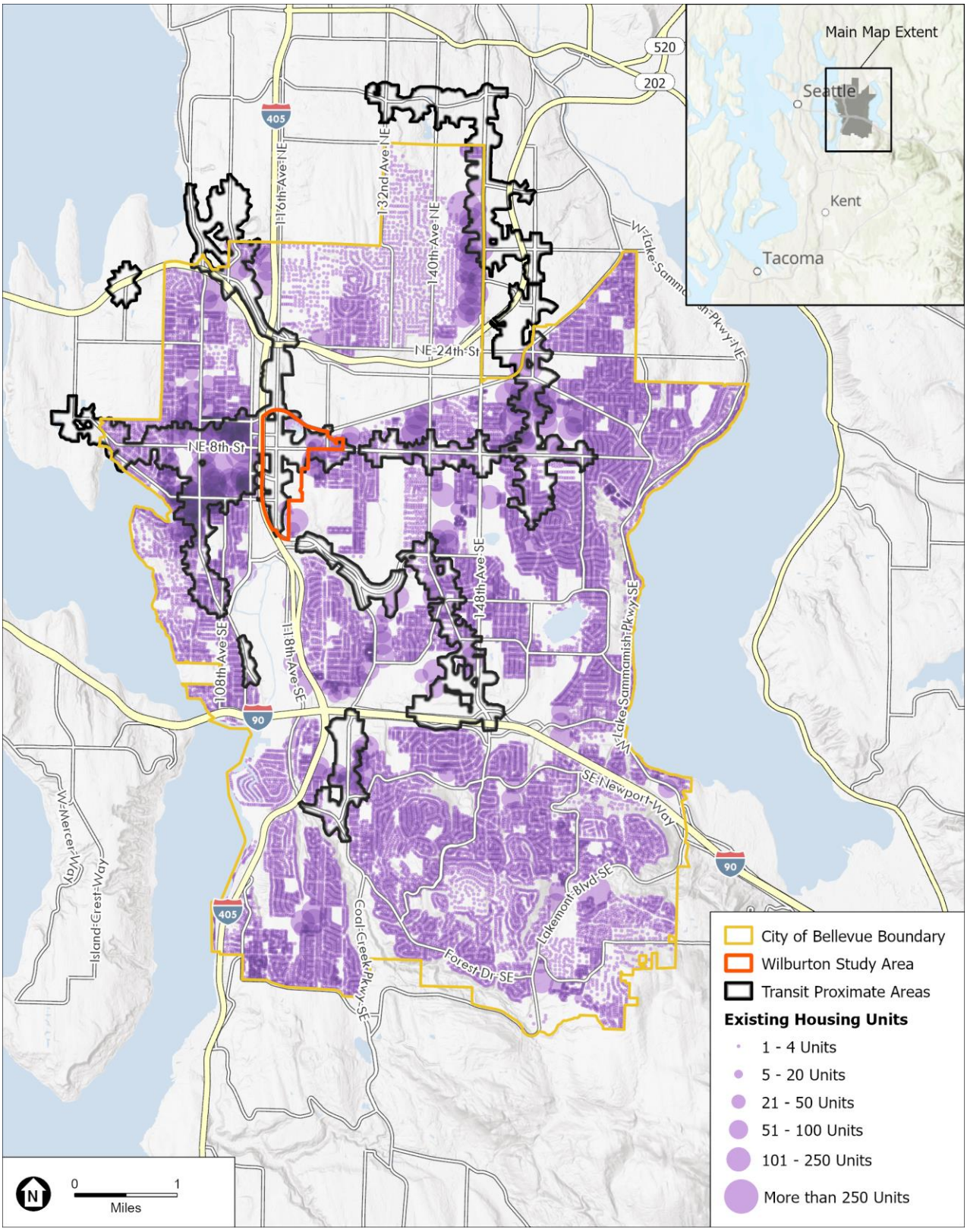
Transit-proximate development is a term used by planning officials to describe (potentially dense) development that is physically near a public transport node (e.g., a bus station, train station or metro station).

TRANSIT-PROXIMATE AREAS

Transit-proximate areas include those areas of the city within ¼ mile of the frequent transit network (defined as frequent bus service at least every 15 minutes during the daytime and early evening). These generally include most of Downtown and the Eastgate Mixed Use Centers, the NE 8th Street corridor between the western city limit and the Crossroads Mixed Use Center, Northup Way north of SR 520, Bellevue Way SE from Downtown to a little south of 112th Avenue NE, 156th Avenue NE south of the city limits to Main Street, 148th Avenue NE north of NE 40th Street, Factoria Boulevard SE between I-90 and Coal Creek Parkway SE, and from East Main to Eastgate via Lake Hills Connector and 145th Place SE. See **Figure 7-11** for a map of areas of the city that currently have good access to transit.

Current Housing Supply and Diversity

As of 2019, a little less than one-third of housing units citywide were located in transit-proximate areas (19,000 units or 30 percent of units citywide). About 39 percent of land within transit-proximate areas is residential; 23 percent is in single-family residential use and 16 percent is in multi-family residential use, yet due to its higher density, multi-family units comprise 86 percent of all housing units in transit-proximate areas.



SOURCE: City of Bellevue 2023; BERK 2023

FIGURE 7-11 **Housing Units within Transit-Proximate Areas**

Housing in the transit-proximate areas is mostly single-family or 5+ units, with the 5+ units concentrated in the areas that overlap Mixed Use Centers and the single-family elsewhere. Single-family housing in transit-proximate areas is primarily outside the designated centers, generally west and south of Downtown, between Downtown and Crossroads along the central portion of the NE 8th Street corridor, south of Crossroads along 156th Avenue NE, and north of Bellevue College along 145th Place SE.

Less than 2 percent of the land in the transit-proximate areas are devoted to 2- to 4-unit multi-family.

Affordability

Median rent in transit-proximate areas is in the $2,000 range. The Housing Needs Assessment estimated median rents that are affordable to households at two different income levels: $2,150 for households at 80 percent, and $1,345 for households at 50 percent of AMI. This is based on HUD Income Limits for a 3-person household (the equivalent of a 2-bedroom unit when assuming 1.5 people per bedroom). Based on this assessment, median rents in transit-proximate areas are affordable to households at 80 percent AMI but not at 50 percent AMI.

Displacement Risk

Roughly 5 percent of housing units within transit-proximate areas are in areas of high displacement risk. The bulk of housing units within transit-proximate areas, roughly 84 percent, are in areas with moderate risk of displacement. Roughly 12 percent of housing units within transit-proximate areas are in areas of low displacement risk. See **Table 7-5**.

TABLE 7-5 **Housing Units and Displacement Risk, by Location**

	Lower		Moderate		Higher	
Transit-Proximate Areas	**SF**	**MF**	**SF**	**MF**	**SF**	**MF**
Within ¼ mile of FTN	493	1,701	1,815	14,050	283	661
Outside ¼ mile of FTN	19,333	2,904	11,718	10,004	439	971
Total	***19,826***	***4,605***	***13,533***	***24,054***	***722***	***1,632***

SOURCE: PSRC; BERK 2023

NOTE: SF=single-family; MF=multi-family

Access to Transit

Transit-proximate areas are within ¼ mile of the frequent transit network (defined as frequent bus service at least every 15 minutes during the daytime and early evening).

WILBURTON STUDY AREA

Current Housing Supply and Diversity

The Wilburton study area currently includes a mix of single-purpose commercial and office uses, Bellevue's "auto row" with a variety of car dealerships, retail and restaurant uses, hotels, and some industrial uses. It has a limited number of multi-family residential developments, located in the east primarily along NE 8th Street, in the south along 118th Avenue SE, and in the northwest corner of Lake Bellevue. A few parcels are considered industrial uses, such as the Mutual Materials site and the Bellevue School District bus depot.

As of 2019, the Wilburton study area had a little over 400 housing units (fewer than 1 percent of units citywide), primarily multi-family housing.

Affordability

Median rents in the Wilburton study area are in the $1,700 range. The Housing Needs Assessment estimated rents that are affordable to households at two different income levels: $2,150 for households at 80 percent, and $1,345 for households at 50 percent of AMI. This is based on HUD Income Limits for a 3-person household (the equivalent of a 2-bedroom unit when assuming 1.5 people per bedroom). Based on this assessment, median rents in the Wilburton study area are not affordable to households at 50 percent AMI but are affordable to households at 80 percent AMI.

Displacement Risk

There is very little housing in the Wilburton study area, and all of this housing is at low or moderate risk of displacement.

Access to Transit

In total, 306 housing units (74 percent of existing housing) are within ¼ mile of the frequent transit network.

7.3 Potential Impacts

7.3.1 Thresholds of Significance

The following impact categories were used to identify potential adverse housing impacts in the study area:

- **Supply, diversity, and affordability:** The action would result in a decrease to the supply, diversity, or affordability of market-rate housing.
- **Displacement risk:** The action would result in increased risk for involuntary residential displacement as a result of redevelopment in areas at high risk for displacement.
- **Access to transit:** The action would result in a decreased proportion of housing within ¼ mile of the frequent transit network (defined as frequent bus service at least every 15 minutes during the daytime and early evening).

Housing impacts of the alternatives are considered significant if there is an acute/severe adverse impact within one of the impact categories defined above, or if there are cumulative housing impacts in multiple categories within one of the defined subareas.

7.3.2 Impacts Common to All Alternatives

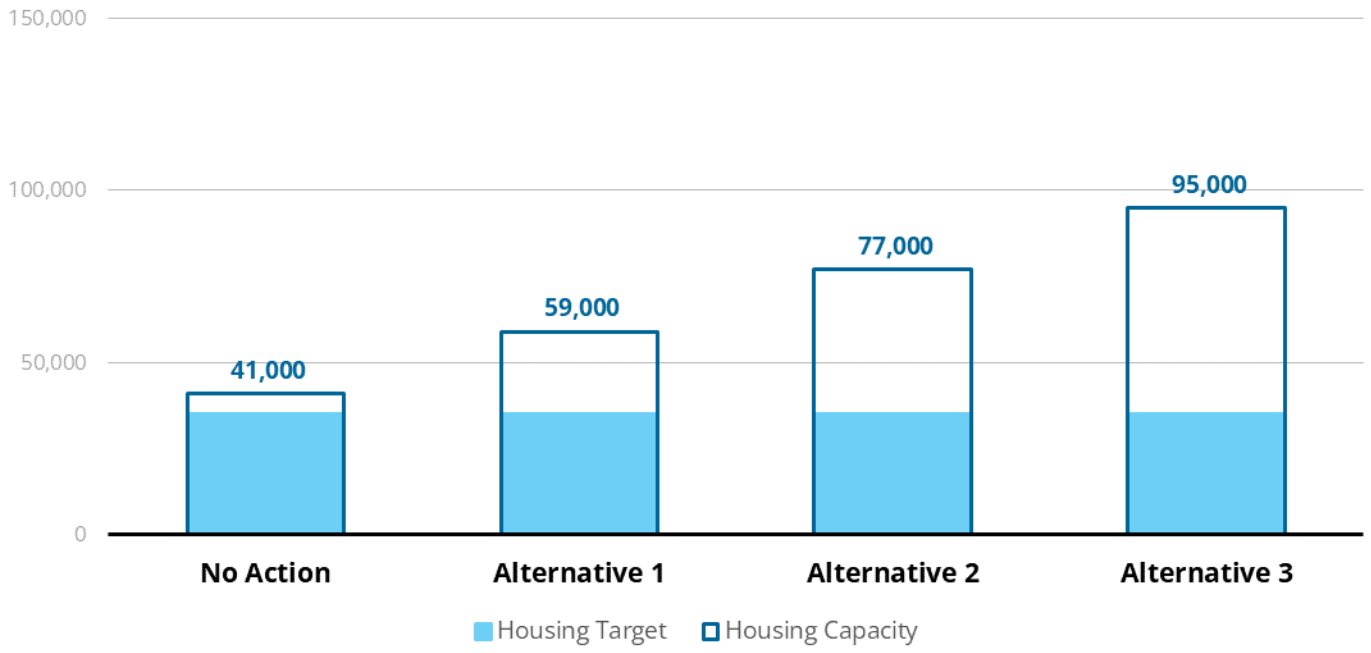
SUPPLY, DIVERSITY, AND AFFORDABILITY

Supply

Housing growth is expected to happen under all the alternatives, although the capacity for growth and the mix of housing would vary by alternative. King County's adopted CPPs establish a housing target of 35,000 for Bellevue.[1]

Housing capacity analyzed under all alternatives will support additional housing supply citywide. **Figure 7-12** summarizes the distribution of capacity for housing capacity citywide compared to the adopted targets. Citywide, the housing and job capacities analyzed under each alternative are higher than the adopted targets.

[1] Growth targets were adopted in 2019. Net capacity for growth under each of the alternatives is relative to 2019 housing and jobs. Housing and job capacity used in this EIS analysis is higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report. See Chapter 2, *Alternatives*, and Chapter 4, *Plans and Policies*, for a discussion of why these numbers are different.



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Growth estimates are rounded to the nearest 1,000. The actual pace of growth could differ or be less than what is shown. Housing capacity used in this EIS analysis is higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report. See Chapter 2, *Alternatives*, and Chapter 4, *Plans and Policies*, for a discussion of why these numbers are different.

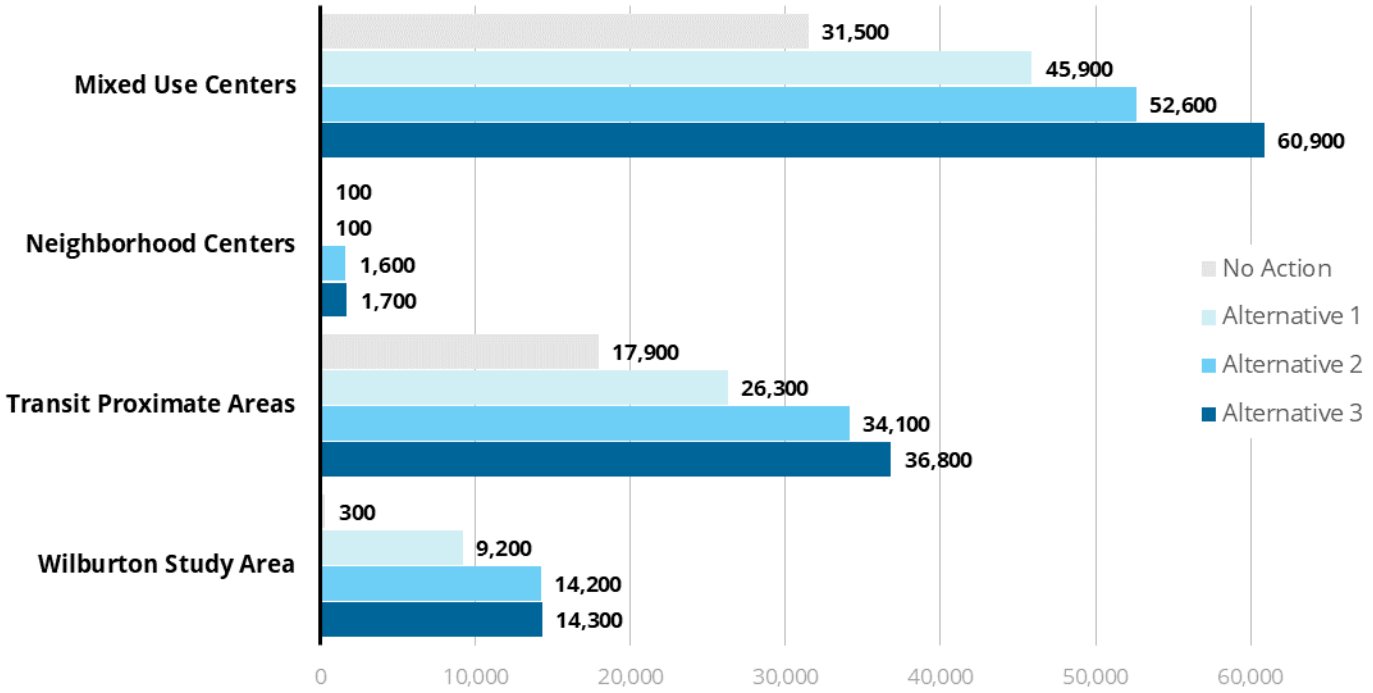
FIGURE 7-12 **Net Capacity for Housing, All Alternatives**

The primary differences between the alternatives are in the proposed geographic distribution and capacity for new housing development in various parts of the city. **Figure 7-13** summarizes capacity for new housing by specific location under each alternative. Capacity within each of the specific locations is generally lowest under the No Action Alternative and highest under Alternative 3.

Diversity

Structure Type and Unit Sizes

Housing capacity analyzed under all alternatives will result in additional housing diversity **citywide**. A wider variety of housing types would be available citywide under the Action Alternatives by expanding the number of housing typologies allowed within low-density residential areas, and by incentivizing larger, family-sized, multi-family units. Duplexes, triplexes, cottage housing, and other low-density typologies would be allowed in single-family areas under the Action



SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Growth estimates are rounded to the nearest 100. The actual pace of growth could differ or be less than what is shown.

FIGURE 7-13 **Net Housing Capacity by Location (2019–2044), All Alternatives**

Alternatives. Additional density and some multi-family or mixed use buildings would be allowed in single-family areas with good access to transit under Alternatives 2 and 3, and near existing Neighborhood Centers and major employment centers under Alternative 3. The No Action Alternative, on the other hand, would focus most of the housing capacity primarily within Downtown and BelRed.

The actual pace and distribution of future housing development and changes in the housing mix would be influenced in part by the implementation of Comprehensive Plan policies, related regulations and actions, and by decisions made by individual property owners and developers.

Table 7-6 compares housing capacity by type under each alternative. A greater share of citywide housing would be shifted to multi-family housing under all alternatives.

TABLE 7-6 **Housing Capacity by Type, by Location, All Alternatives**

	No Action	SF	MF	Alt. 1	SF	MF	Alt. 2	SF	MF	Alt. 3	SF	MF
Low-Density Residential	**34,682**	89.4%	10.6%	**35,528**	87.2%	12.8%	**38,061**	81.4%	18.6%	**45,596**	67.9%	32.1%
Wilburton Study Area	**670**	0.0%	100.0%	**9,612**	0.0%	100.0%	**14,607**	0.0%	100.0%	**14,654**	0.0%	100.0%
Transit-Proximate Areas	**36,908**	6.7%	93.3%	**45,300**	5.4%	94.5%	**53,100**	4.6%	95.3%	**55,800**	4.4%	95.6%
Neighborhood Centers	**267**	0.0%	100.0%	**273**	0.0%	100.0%	**1,761**	0.0%	100.0%	**1,907**	0.0%	100.0%
Mixed Use Centers	**49,171**	1.6%	98.4%	**63,571**	1%	99%	**70,345**	1%	99%	**78,628**	1.0%	99.0%

SOURCE: PSRC; BERK 2023

NOTE: SF=single-family; MF=multi-family

Future housing capacity under all alternatives would likely increase the supply and diversity of housing, both within the Mixed Use Centers and, to a varying extent, in other areas of the city. Under the Action Alternatives, policy changes are expected to increase the amount of affordable housing, although the approaches vary.

Goals and policies in Bellevue's current Comprehensive Plan support diverse and mixed uses, including housing, in the **Mixed Use Centers** to encourage these areas as compact, livable, and walkable parts of the city. Most of the centers are or will be served by the frequent transit network by 2044. These areas currently have a mix of single-family and multi-family housing. Additional capacity for multi-family housing in these areas will increase the supply and diversity of housing and is not likely to have any impacts.

The city's **Neighborhood Centers** support smaller, neighborhood-oriented retail, provide goods and services to local residents, and serve as important focal points and gathering spaces for the surrounding communities. There is currently limited housing supply in Neighborhood Centers. Under all alternatives, housing supply and diversity would increase modestly in these areas. Increases of housing are very modest under the No Action Alternative (100 units over existing) and Alternative 1, and highest under Alternative 3 (1,700 units over existing). Additional capacity for multi-family housing in the Neighborhood Centers under all Action Alternatives would increase the supply and diversity of market-rate housing and

is not anticipated to have impacts. Under the Action Alternatives, policy changes are expected to increase affordability.

Many of the existing and future **transit-proximate areas** of the city overlap with the Mixed Use and Neighborhood Centers (see the discussion above). Outside of the centers, most transit-proximate areas of the city would continue to be comprised of predominantly **low-density residential** plus a range of parks and open spaces under all alternatives. Areas zoned for low density residential would receive between 7 and 15 percent of future housing growth under all alternatives, resulting in higher potential supply and diversity of housing mix in these areas. All Alternatives add housing capacity in transit-proximate areas ranging from 17,900 units in the No Action to 36,800 units in Alternative 3. Additional capacity for multi-family housing in these areas will increase the supply and diversity of housing and is not likely to have any impacts. Under the Action Alternatives, policy changes are expected to increase affordability. The No Action Alternative does not anticipate any additional policy changes over existing and is likely to have significant adverse impacts on affordability.

Affordability

Citywide, the number of housing units affordable at any income level does not match the number of households with said income. Analysis in the Housing Needs Assessment shows that Bellevue has a deficit in the number of units affordable to households in the 30–50 percent AMI and <30 percent AMI income groups.

All alternatives anticipate increasing the amount of affordable housing, yet approaches differ. The No Action Alternative continues existing incentives for affordable housing in Downtown and BelRed. In addition, programs such as the multi-family tax exemption (MFTE), will continue, and this can increase affordable housing. The Action Alternatives include strategies over and beyond these existing conditions. In Alternative 1, mandatory inclusionary affordable housing would be required in the growth corridor, with incentives for affordable housing in other locations. In Alternative 2, voluntary inclusionary affordability would be offered in Mixed Use and Neighborhood Centers. In Alternative 3, mandatory inclusionary affordable housing would be required in Mixed Use Centers, with incentives for affordable housing in other locations.

The city would continue to offer incentives for development of affordable housing under all alternatives. Many incentives are available to developers of multi-family projects—including density bonuses, minimum parking reductions, and property tax exemptions.

Some of these currently apply anywhere multi-family development is allowed, while others are specific to certain neighborhoods and vary by location. The Action Alternatives integrate additional affordability strategies like mandatory and voluntary inclusionary housing to mitigate the impacts on affordability and supply more affordable housing overall. Alternatives 1 and 3 include a mandatory and voluntary inclusionary affordability program in the growth corridor and Mixed Use Centers, respectively, and the expansion of affordability incentives throughout the city. Studies have shown that mandatory inclusionary housing programs can be more effective at creating a larger supply of affordable housing than voluntary programs. Specific elements of program design and market factors will influence the effect of these programs in Bellevue.

However, most new market-rate housing tends to be constructed for residents at or above median income levels. The city will likely need to develop and implement targeted strategies and potential funding sources to encourage the construction of affordable housing for extremely low-income (0–30 percent AMI) and very low-income (31–50 percent AMI) households. Funding sources can include local taxes, tax incentive programs for developers, and state or federal grant programs.

While all alternatives have the potential to increase affordable housing, this potential may be lowest in the No Action Alternative as a result of its lower overall capacity for housing growth and the absence of additional strategies over existing ones to increase affordability. Additionally, the No Action Alternative constrains the capacity for development of a diversity of housing types, leading to further housing price increases. Given this, **significant adverse impacts are expected for affordability** under the No Action Alternative. Adopting policies to preserve existing affordable housing, and using targeted incentives or funding to build new affordable housing are some ways to mitigate affordability concerns as constrained housing supply escalates housing costs.

Wilburton Study Area

Under all alternatives, housing supply and diversity are likely to increase in the **Wilburton study area**. This increase is highest in Alternative 3 (14,300 units over existing) and lowest in the No Action Alternative (300 units over existing). Housing type diversity will increase with the addition of multi-family housing in all alternatives. Building heights in the Wilburton study area would also increase across the Action Alternatives, including areas with buildings up to approximately 45 stories tall, with lower building heights on the edges (ranging by

alternative between 10 and 25 stories). Building heights would not change under the No Action Alternative. Housing in new, high-rise buildings will be more likely in the Action Alternatives compared to the No Action Alternative. The high cost of construction for new high-rise buildings makes it unlikely that housing in these units will be affordable unless specific strategies are in place to ensure affordability. The limited addition of housing capacity and the absence of additional strategies targeted to housing production for households below 50 percent AMI mean that **significant adverse impacts on affordability** are expected under the No Action Alternative in the Wilburton study area.

DISPLACEMENT RISK

Displacement happens when households are forced involuntarily to move out for economic or physical reasons (because of eviction, rent increases, demolition of existing housing, etc.). Rising housing costs, combined with weak tenant protections, can result in households having to involuntarily relocate to more affordable communities. While it is not possible to quantify the number of households displaced in a given year, displacement risk helps us identify those communities under pressure. Displacement can be physical, where building conditions deteriorate or where redevelopment occurs; or economic, where housing-related costs rise.

All alternatives provide capacity for new housing and include some amount of new development or redevelopment. As future development occurs, some residents may be displaced through redevelopment or priced out as land prices and rents increase (economic displacement). The addition of housing capacity in areas of high displacement within each of the specific locations is generally lowest under the No Action Alternative and highest under Alternative 3. Roughly 2,900 housing units are in areas of high displacement in the No Action Alternative compared to 4,570 housing units under Alternative 3. However, capacity numbers are presented as net increases above existing; the presumption is that current housing can be preserved or replaced and there could be additional housing above existing levels. Potential physical displacement could occur under all alternatives but may be lower in the No Action Alternative as a result of lower overall capacity for housing growth. **Table 7-7** summarizes housing growth in areas of high displacement risk by specific location under each alternative.

TABLE 7-7 **Housing Growth In Areas of High Displacement Risk by Location, All Alternatives**

	No Action	Alternative 1	Alternative 2	Alternative 3
Wilburton Study Area	0	0	0	0
Transit-Proximate Areas	953	1,580	1,799	1,807
Neighborhood Centers	0	0	0	0
Mixed Use Centers	2,537	3,390	3,952	3,962

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Some of these geographies overlap with each other.

While potential for physical residential displacement is likely lowest under the No Action Alternative as a result of lower overall capacity for growth, the lower supply overall of new housing units under the No Action Alternative also means fewer units could take advantage of current affordability incentives. Housing typologies, including potential homeownership opportunities, would also continue to be limited in single-family areas, although pressure to convert homes with lower intensity typologies could be lower as fewer typologies would be allowed in these areas. The potential for economic displacement is therefore highest under the No Action Alternative.

Outside of the Mixed Use and Neighborhood Centers and transit-proximate areas, housing units at high displacement risk are in the Lake Hills area just south of the Crossroads Mixed Use Center. About 270 units are in areas of high risk of displacement under the No Action Alternative and Alternative 1; 320 units under Alternative 2; and 440 units under Alternative 3.

Adopting policies to preserve existing affordable housing is one way to discourage and mitigate residential displacement as redevelopment occurs. Studies have found that housing preservation programs for naturally occurring affordable housing have a potentially significant impact on mitigating displacement. Strategies to increase housing production can also decrease displacement by retaining or adding to the affordable housing stock.

The Action Alternatives integrate additional anti-displacement strategies like inclusionary housing to mitigate the impacts of displacement and supply more affordable housing overall. Alternatives 1 and 3 include a mandatory inclusionary affordability program in the growth corridor and Mixed Use Centers, respectively, and the expansion of affordability incentives throughout the city. The city could also consider additional strategies to avoid or mitigate displacement, including neighborhood stabilization efforts such as

rental assistance programs, foreclosure assistance programs, as well as tenant protection policies. The Crossroads Mixed Use Center shows up as an area that should be targeted for anti-displacement strategies. The No Action Alternative does not include these strategies and is likely to have significant adverse impacts.

Wilburton Study Area

All alternatives include some amount of new development or redevelopment in the Wilburton study area, although the amount of housing capacity is substantially higher under the Action Alternatives than the No Action Alternative. As future development occurs, there is potential for the limited number of housing units in existing residential buildings in the study area to be torn down or replaced with larger buildings under any of the alternatives. However, this area only has a low or moderate risk of displacement, and there are no increases to housing capacity in areas at high risk of displacement across all alternatives within the Wilburton study area.

ACCESS TO TRANSIT

All alternatives would increase housing capacity in transit-proximate areas of the city. Alternatives increase housing capacity in transit-proximate areas from the existing 30 percent to 35 percent under the No Action Alternative (36,900 housing units from 19,000 existing), 37 percent under Alternative 1, 38 percent in Alternative 2, and 35 percent in Alternative 3 (55,800 units). All of the alternatives would add housing capacity over the 35,000 housing target established by King County's CPPs. Given this, **no significant adverse impacts on access to transit are expected under any of the alternatives**.

Wilburton Study Area

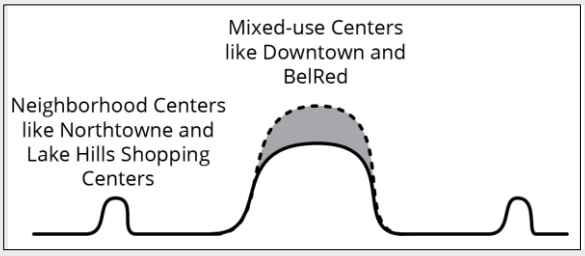
All alternatives provide capacity for new housing in transit-proximate areas of the Wilburton study area. Future housing development under all alternatives in the Wilburton study area would not likely decrease the proportion of housing within ¼ mile of the frequent transit network compared to existing conditions. **No significant adverse impacts** are expected.

7.3.3 Impacts of Alternative 0 (No Action)

SUPPLY, DIVERSITY, AND AFFORDABILITY

The No Action Alternative has the least capacity for new housing among the alternatives. It applies future growth to existing conditions using the policies and zoning that are in place today. Future housing growth under the No Action Alternative would be consistent with current plans, zoning, and development regulations. **Citywide**, Alternative 0 (No Action) would have capacity for 41,000 additional housing units (6,000 units above the 35,000 CPP housing target).[2] There would be capacity for 124,000 new jobs under this alternative, which is above the regional growth target of 70,000 jobs. Figure 7-12 compares housing and job capacity to the adopted targets. Figure 2-2, *Alternative 0 (No Action) Density of Net Housing Capacity*, maps citywide density of housing capacity under the No Action Alternative (see also Figure 7-13 for growth by location). See **Table 7-8**.

TABLE 7-8 **Alternative 0 (No Action): Distribution of Growth and Summary of Housing Strategy**

Growth Level and Pattern	Housing
Capacity for an additional 41,000 housing units (*above* 35,000 target). **FOCUS OF GROWTH:** Primarily within Downtown and BelRed. No changes to city's existing growth framework.  	**HOUSING TYPOLOGIES:** Primarily larger apartment buildings with studios and one-bedroom units, not meeting planning requirements for housing. **HOUSING AFFORDABILITY:** Voluntary inclusionary affordability incentives allow extra density to market-rate projects in exchange for affordable units, generally 5–10% of projects. **HOUSING STRATEGY:** This alternative is required as a baseline for analyzing Action Alternatives 1–3 but does not meet the city's new planning requirements, including affordable housing across income bands, or a range of housing types. It does meet the city's job target. This alternative is based on the city's current capacity for housing and jobs. The city's existing plans, policies, and regulations would continue without changes. This alternative serves as a baseline against which the other alternatives can be measured. There would be no changes to the designations on the Comprehensive Plan Land Use Map and no policy, zoning, or regulation changes.

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Housing and job growth estimates are rounded to the nearest 1,000. Commercial square footage is rounded to the nearest 100,000. The actual pace of growth could differ and be more or be less than what is shown.

[2] While housing capacity is above the adopted target, the No Action Alternative does not meet other new planning requirements, including affordable housing across income bands and a range of housing types. See Chapter 4, *Plans and Policies*.

Growth under the No Action Alternative would be consistent with recent development trends in Bellevue and housing supply and diversity impacts would be similar to those described under Section 7.3.2, *Impacts Common to All Alternatives*. Housing diversity would also continue to be limited in single-family areas. Lower housing capacity under the No Action Alternative also means fewer units could take advantage of current affordability incentives. Given the lower capacity for new housing, the limited changes in single-family areas, and the absence of new policy interventions directed toward affordability, the No Action Alternative has the least potential to increase supply, diversity, and affordability. However, the city's adopted policy framework and development regulations contain provisions meant to encourage housing supply and diversity and increase affordability. Recent development trends in Bellevue have increased the proportion of multi-family housing in the city and thereby increased its housing diversity. Even though new capacity is relatively lower in the No Action Alternative, it is higher than the King County growth target for the city. Therefore, **no significant adverse impacts** are expected with respect to housing supply and diversity under the No Action Alternative.

The No Action Alternative continues existing regulations, incentives, and programs targeted at affordability. Recent development trends have shown decreases in affordability despite these existing tools. Without additional strategies directed toward affordability, the No Action Alternative has the potential to have a **significant adverse impact on affordability**.

Wilburton Study Area

Under the No Action Alternative, the Wilburton study area would retain current policies and codes that provide minimal housing capacity (less than 1 percent of the gross citywide total). This would result in housing supply and diversity similar to existing conditions.

The city would continue to offer existing incentives for development of affordable housing under the No Action Alternative. Many incentives are available to developers of multi-family projects—including density bonuses, minimum parking reductions, and property tax exemptions. Some of these currently apply anywhere multi-family development is allowed, while others are specific to certain neighborhoods and vary by location.

DISPLACEMENT RISK

Capacity for housing under the No Action Alternative is likely consistent with recent development trends in Bellevue, and the city would continue to implement existing housing affordability and anti-displacement strategies as described under Section 7.3.2, *Impacts Common to All Alternatives*. As future development occurs, some residents may be displaced through redevelopment or priced out as land prices and rents increase. While potential residential displacement is likely lowest under the No Action Alternative as a result of lower overall capacity for growth (see Figure 7-13), the lower potential for new housing units under the No Action Alternative also means fewer units could take advantage of current affordability incentives. Relatively lower potential for additional housing supply can increase housing costs and the potential for economic displacement. Housing typologies, including potential homeownership opportunities, would also continue to be limited in single-family areas, although pressure to convert homes with lower intensity typologies could be lower as fewer typologies would be allowed in these areas. Given this, **significant adverse impacts** on displacement risk are expected under the No Action Alternative. See also Chapter 3, *Land Use Patterns and Urban Form*, and Chapter 6, *Aesthetics*.

Mixed Use Centers

The No Action Alternative would include 17,666 housing units within Mixed Use Centers. In total, 2,537, or roughly 14 percent of these housing units, would be in areas at a high risk of displacement (see **Table 7-9**). The bulk of these units (2,340) are in the Crossroads Mixed Use Center.

TABLE 7-9 **Alternative 0 (No Action): Housing Units by Displacement Risk, 2022**

Mixed Use Centers	Lower		Moderate		Higher	
	SF	MF	SF	MF	SF	MF
BelRed	—	9,522	—	—	—	—
Crossroads	—	1,473	128	2,289	197	2,340
Eastgate	—	—	159	367	—	—
Factoria	—	—	170	1,532	—	—
Wilburton-East Main	—	290	—	2,066	—	—
Downtown (Metro Center)	—	—	55	28,583	—	—
Total		***11,285***	***512***	***34,837***	***197***	***2,340***

SOURCE: PSRC; BERK 2023

NOTE: SF=single-family; MF=multi-family

Neighborhood Centers

The No Action Alternative would add capacity for roughly 300 housing units within Neighborhood Centers. None of these units are in areas at a high risk of displacement.

Transit-Proximate Areas

The No Action Alternative includes housing capacity for roughly 36,900 housing units within transit-proximate areas. Roughly 950 or 3 percent of these housing units would be in areas at a high risk of displacement (see **Table 7-10**).

TABLE 7-10 **Alternative 0 (No Action): Housing Units by Displacement Risk, 2022**

	Lower		Moderate		Higher	
	SF	MF	SF	MF	SF	MF
Within ¼ mile of FTN	497	3,119	1,831	30,508	127	826

SOURCE: PSRC; BERK 2023

NOTE: SF=single-family; MF=multi-family

Wilburton Study Area

The No Action Alternative includes a total of 670 housing units within the Wilburton study area. None of these units are in areas at a high risk of displacement.

ACCESS TO TRANSIT

Housing units with access to transit under the No Action Alternative would be consistent with recent development trends in Bellevue, and impacts would be similar to those described under Section 7.3.2, *Impacts Common to All Alternatives*. Under the No Action Alternative, about 36,900 or 35 percent of total housing units would be within a ¼ mile of the frequent transit network. This is higher than the 19,000 units or 30 percent of existing housing with this access to transit. Future housing development under the No Action Alternative would not likely decrease the proportion of housing within ¼ mile of the frequent transit network compared to existing conditions. **No significant adverse impacts** on access to transit are expected under the No Action Alternative.

Mixed Use Centers

The No Action Alternative would have capacity for 49,200 housing units in Mixed Use Centers, of which about 30,300 or 62 percent would be in areas within ¼ mile of frequent transit.

Neighborhood Centers

The No Action Alternative would add capacity totaling 300 housing units in Neighborhood Centers, of which roughly a third are within ¼ mile to frequent transit.

Transit-Proximate Areas

Thirty-five percent of the housing unit capacity in Alternative 1 are within transit-proximate areas or within ¼ mile of the frequent transit network.

Wilburton Study Area

Under the No Action Alternative, 512 of the roughly 634 units in the Wilburton study area would be within a ¼ mile of the frequent transit network. Future housing development under the No Action Alternative in the Wilburton study area would not likely increase the proportion of housing outside ¼ mile of the frequent transit network. **No significant adverse impacts** are expected on access to transit in the Wilburton study area under the No Action Alternative.

7.3.4 Impacts of Alternative 1

SUPPLY, DIVERSITY, AND AFFORDABILITY

Alternative 1 increases citywide housing capacity over the No Action Alternative. **Citywide**, Alternative 1 would have capacity for 59,000 additional housing units (18,000 above the No Action Alternative, and above the CPP housing target). Job capacity in Alternative 1 includes space for an additional 179,000 jobs, which is nearly double Bellevue's regional growth target. Figure 7-12 compares housing to the adopted targets. Figure 2-4, *Alternative 1 Density of Net Housing Capacity*, maps the citywide density of housing under Alternative 1. Also see **Table 7-11**.

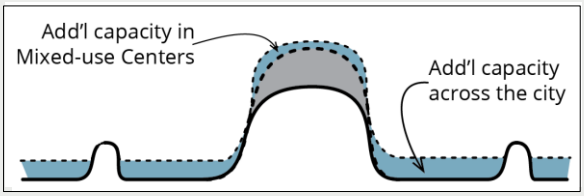
Under Alternative 1, more housing types would be offered **citywide** through incentives for larger multi-family units and mandatory inclusionary housing in the growth corridor (Downtown, East Main, Wilburton, and BelRed). Duplexes, triplexes, cottage housing, or other low-density typologies would be allowed in existing single-family areas. In BelRed, each node with its allowance of higher intensity development would be expanded to include most areas within walking distance of the light-rail stations.

This additional capacity and incentives would increase the supply and diversity of market-rate housing in the city. Alternative 1 includes additional strategies for affordability. These include mandatory inclusionary affordability alongside additional capacity in the growth corridor (Downtown, East Main, Wilburton, and BelRed), and increased incentives elsewhere to meet affordability targets.

Impacts on housing supply, diversity, and affordability for Alternative 1 in the **Mixed Use Centers, Neighborhood Centers**, and **transit-proximate areas** of the city that overlap the centers would be similar to those described under Section 7.3.2, *Impacts Common to All Alternatives*.

A smaller percentage of citywide housing growth would occur in low-density residential areas of the city under Alternative 1 than the No Action Alternative (8 versus 9 percent), although overall capacity in these areas would increase by about 800 units. Alternative 1 also includes policies allowing a greater diversity of low-density housing types throughout the city, such as duplexes, triplexes, and cottage housing. As a result, Alternative 1 would likely result in a wider variety of housing options compared to the No Action Alternative in areas comprised primarily of **low-density residential** (generally outside of the Mixed Use and Neighborhood Centers).

TABLE 7-11 **Alternative 1: Distribution of Growth and Summary of Housing Strategy**

Growth Level and Pattern	Housing
Capacity for an additional 59,000 housing units (*above* 35,000 target). **FOCUS OF GROWTH:** Primarily in Mixed Use Centers (Downtown, BelRed, Wilburton-East Main, Crossroads, Factoria, Eastgate). Gentle density added across the city.  	**HOUSING TYPOLOGIES:** Incentives for larger units in Mixed Use Centers provide additional two-bedroom and larger units. Duplexes, cottage housing, and other low-density typologies are permitted across the city. **HOUSING AFFORDABILITY:** Mandatory inclusionary affordability alongside additional capacity in growth corridor (Downtown, East Main, Wilburton, and BelRed); increased incentives elsewhere to meet affordability targets. **HOUSING STRATEGY:** Focus additional residential density including mixed use growth on **Mixed Use Centers**, including the areas of existing capacity in Downtown, East Main, and BelRed and with a renewed focus on Wilburton, Crossroads, Eastgate, and Factoria. Because focusing on the existing denser Mixed Use Centers does not provide a variety of housing types and affordability levels, additional policies would be adopted to support housing choice and diversity. Policies encouraging **more family-sized housing** in these Mixed Use Centers would be paired with policies allowing a greater diversity of **low-density housing types throughout the city**. This approach includes the smallest number of new housing units and the least diversity of housing types produced, so it is paired with **strong affordable housing policies** to meet state/county requirements. These include a mandatory inclusionary affordability program in the growth corridor and the expansion of affordability incentives throughout the city. This alternative would modestly expand the extent of multimodal transportation investments to accommodate new growth, particularly within the Mixed Use Centers.

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Housing and job growth estimates are rounded to the nearest 1,000. Commercial square footage is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown.

Wilburton Study Area

Alternative 1 would add significant capacity for housing in the **Wilburton study area**, with an estimated capacity for an additional 9,200 housing units. This is approximately 8,900 housing units above the No Action Alternative.

Under Alternative 1, housing capacity would be focused in the core of the Wilburton study area, around the intersection of the Eastrail and Grand Connection south of the Wilburton Light Rail Station.

Alternative 1 would allow for higher density residential in a mixed use node within the core. It would allow primarily lower density residential development in areas east and west of 124th Avenue NE, and in the area south of NE 4th Street and east of Eastrail.

DISPLACEMENT RISK

Potential displacement is likely higher under Alternative 1 than the No Action Alternative because of increased overall capacity for growth (see Figure 7-13) and expanded housing densities and typologies in some parts of the city.

Under Alternative 1, the city would continue to implement existing housing affordability and anti-displacement strategies as described under Section 7.3.2, *Impacts Common to All Alternatives*. Alternative 1 also includes mandatory inclusionary affordability policies in the growth corridor (Downtown, East Main, Wilburton, and BelRed) and increased incentives elsewhere to meet affordability targets. Compared to the No Action Alternative, Alternative 1 has capacity for more housing units overall and within the Mixed Use Centers and transit-proximate areas of the city (see Figure 7-13). As a result, more new housing would either be required to or could take advantage of the existing and new affordability and anti-displacement strategies. Additional low-density typologies like duplexes, cottage housing, and triplexes allowed in single-family areas of the city may also improve affordable homeownership opportunities. All of these measures combined could result in a net gain in affordable housing even though displacement risks are higher.

Mixed Use Centers

About 3,200 multi-family units and 200 single-family units in the Crossroads Mixed Use Center would be in areas at high risk of displacement under Alternative 1 (see **Table 7-12**).

TABLE 7-12 **Alternative 1: Housing Units by Displacement Risk, 2022**

Mixed Use Centers	Lower		Moderate		Higher	
	SF	MF	SF	MF	SF	MF
BelRed	—	10,744	—	—	—	—
Crossroads	—	1,462	128	2,349	197	3,193
Eastgate	—	—	159	466	—	—
Factoria	—	—	170	2,367	—	—
Wilburton-East Main	—	623	—	10,664	—	—
Downtown (Metro Center)	—	—	55	30,958	—	—
Total	—	***12,829***	***512***	***46,804***	***197***	***3,193***

NOTE: SF=single-family; MF=multi-family

Neighborhood Centers

Alternative 1 includes a total of 273 housing units within Neighborhood Centers. None of these units are in areas at a high risk of displacement.

Transit-Proximate Areas

Alternative 1 would include roughly 45,300 housing units within transit-proximate areas. Roughly 1,580 or 3 percent of these housing units would be in areas at a high risk of displacement.

Wilburton Study Area

Housing growth in the **Wilburton study area** would be substantially higher under Alternative 1 than the No Action Alternative. However, no housing units are expected in areas within the area at a high risk of displacement (see Section 7.3.2, *Impacts Common to All Alternatives*).

ACCESS TO TRANSIT

Impacts on access to transit under Alternative 1 would be similar to those described under Section 7.3.2, *Impacts Common to All Alternatives*. Under Alternative 1, about 45,300 or 37 percent of total housing units would be within a ¼ mile of the frequent transit network. This is higher than the 19,000 units or 30 percent of existing housing with this access to transit. Future housing development under Alternative 1 would not likely decrease the proportion of housing within ¼ mile of the frequent transit network compared to

existing conditions. **No significant adverse impacts** on access to transit are expected under Alternative 1.

Mixed Use Centers

Alternative 1 would have capacity for about 63,600 housing units over existing housing units in Mixed Use Centers, of which 38,600 or about 60 percent are within ¼ mile to frequent transit.

Neighborhood Centers

Alternative 1 would have capacity for 300 housing units over existing housing units in Neighborhood Centers, of which about 100 are within ¼ mile of frequent transit.

Transit-Proximate Areas

In total, 45,300 or 37 percent of the housing units in this alternative are within transit-proximate areas or within ¼ mile of the frequent transit network.

Wilburton Study Area

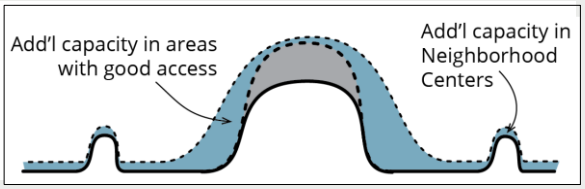
Alternative 1 would have capacity for 9,600 housing units in the Wilburton study area, of which 5,800 or 63 percent are within ¼ mile of frequent transit. Future housing development under Alternative 1 in the Wilburton study area would not likely decrease the proportion of housing within ¼ mile of the frequent transit network compared to existing conditions. **No significant adverse impacts** on access to transit are expected under the No Action Alternative.

7.3.5 Impacts of Alternative 2

SUPPLY, DIVERSITY, AND AFFORDABILITY

Housing capacity under Alternative 2 is similar to Alternative 1 but distributes more housing growth to areas of the city with good access to transit and jobs and within existing Neighborhood Centers. **Citywide**, Alternative 2 would have capacity for 77,000 additional housing units (36,000 above the No Action Alternative, and above the CPP housing target) and space for an additional 177,000 jobs (53,000 above the No Action Alternative, and above the CPP job target). This is approximately 36,000 housing units above the No Action Alternative. Figure 7-12 compares housing capacity to the adopted targets. See **Table 7-13**.

TABLE 7-13 **Alternative 2: Distribution of Growth and Summary of Housing Strategy**

Growth Level and Pattern	Housing Approach
Capacity for an additional 77,000 housing units. **FOCUS OF GROWTH:** Both in Mixed Use Centers and in areas with good access to transit/jobs.  	**HOUSING TYPOLOGIES:** Typologies like townhomes or small apartment buildings in areas with good transit access, duplexes, or other low-density typologies in existing denser single-family areas. Apartment buildings with studios and one-bedrooms in Mixed Use and Neighborhood Centers. Housing Affordability: Tiered voluntary inclusionary affordability alongside additional capacity in Mixed Use and Neighborhood Centers, increased incentives elsewhere to meet affordability targets. **HOUSING STRATEGY:** In addition to adding housing in Mixed Use Centers with existing capacity, expand middle-scale housing in **areas with good access to transit or jobs**. These areas have high demand today, often causing teardown-rebuilds of single-family housing. Additionally, this alternative provides a denser **mix of uses including housing within existing Neighborhood Centers**. This density could extend further along and near the transit-rich arterials running through these areas as well. Additional investments in multimodal transportation capacity in these areas (improved access to transit, targeted traffic congestion relief, low-stress bicycle, and pedestrian facilities, etc.) would accompany the higher density development. Because a variety of typologies are achieved using the above approaches, this alternative examines **low-density housing options in existing denser single-family** areas across the rest of the city. The variety of housing produced in this alternative will provide middle-income (80–120% AMI) housing of a variety of types, but **deeper affordability** will still be required to achieve a majority of new units that are affordable <80% AMI. A tiered voluntary inclusionary affordability program is included in Mixed Use Centers and in Neighborhood Centers, while voluntary affordability incentives are available across the city.

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Housing and job growth estimates are rounded to the nearest 1,000. Commercial square footage is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown.

Most of the additional housing under Alternative 2 would be added in the Mixed Use Centers, including significant capacity added in the Wilburton study area (see below) and more node expansion and increased density around the Spring District/120th and Bel-Red/130th Light Rail Stations in BelRed than Alternative 1.

Alternative 2 also expands middle-scale housing in areas of the city with good access to transit and jobs. This includes additional capacity for small apartment buildings and mixed use buildings near **Neighborhood Centers** and transit and along arterials, increased allowable densities in all existing multi-family areas, and an increased range of allowable housing types in single-family areas with good access to transit. As a result, a slightly higher percentage of citywide housing would be located in the Neighborhood Centers compared to the No Action Alternative or Alternative 1 (see Table 7-6). The intensity and mix of uses in the Neighborhood Centers would shift as infill development and redevelopment occur to reflect a more mixed use development pattern.

Alternative 2 includes additional strategies for affordability. These include tiered voluntary inclusionary affordability alongside additional capacity in Mixed Use and Neighborhood Centers, and increased incentives elsewhere to meet affordability targets.

Like Alternative 1, Alternative 2 also includes policies allowing a greater diversity of low-density housing types throughout the city. As described for Alternative 1, there would be no impacts on housing supply, diversity, and affordability since these changes in **low-density residential** would not likely decrease the supply, diversity, or affordability of market-rate housing. A similar percentage of citywide housing growth would occur in low-density residential areas of the city under Alternative 2 as compared to the No Action Alternative (9 percent), although overall capacity in these areas would increase by about 3,400 units.

Wilburton Study Area

Compared to Alternative 1, Alternative 2 includes more capacity for housing in the **Wilburton study area** and a significant increase over the No Action Alternative. Alternative 2 includes estimated capacity for an additional 14,200 housing units. This is approximately 13,900 housing units above the No Action Alternative and 5,000 units over Alternative 1.

Alternative 2 would spread housing capacity more evenly across the Wilburton study area compared to Alternative 1. Alternative 2 designates more area for residential use and a mix of higher density residential, office, and other commercial uses would be allowed along the east side of 116th Avenue NE and south of NE 8th Street. Primarily medium intensity residential uses would be allowed east of Eastrail, with some higher intensity residential uses adjacent to Eastrail.

As described under Alternative 1, there would be **no impacts** on housing supply, diversity, and affordability since these changes in the study area would not likely decrease the supply, diversity, or affordability of market-rate housing.

DISPLACEMENT RISK

Potential displacement is likely higher under Alternative 2 than Alternative 1 because of increased overall capacity for growth. Residential displacement risks would be similar to those described for Alternative 1. Compared to Alternative 1, Alternative 2 has capacity for more housing units overall and within specific locations but includes voluntary inclusionary affordability policies in the Mixed Use and Neighborhood Centers. Alternative 2 also expands middle-scale housing in areas with good access to transit or jobs. These areas have high demand today, often causing teardown-rebuilds of older existing housing—redevelopment in these areas would likely continue under Alternative 2 but would result in more varied and affordable housing options than the No Action Alternative or Alternative 1.

Mixed Use Centers

About 3,750 multi-family units and 200 single-family units in the Crossroads Mixed Use Center would be in areas at high risk of displacement under Alternative 2 (see **Table 7-14**). This is slightly higher than in Alternative 1.

TABLE 7-14 **Alternative 2: Housing Units by Displacement Risk, 2022**

	Lower		Moderate		Higher	
Mixed Use Centers	**SF**	**MF**	**SF**	**MF**	**SF**	**MF**
BelRed	—	10,711	—	—	—	—
Crossroads	—	1,462	128	2,756	197	3,755
Eastgate	—	—	159	649	—	—
Factoria	—	—	170	3,027	—	—
Wilburton-East Main	—	1,358	—	14,960	—	—
Downtown (Metro Center)	—	—	55	30,958	—	—
Total		***13,531***	***512***	***52,350***	***197***	***3,755***

NOTE: SF=single-family; MF=multi-family

Neighborhood Centers

No housing units in Neighborhood Centers would be in areas at high risk of displacement under Alternative 2.

Transit-Proximate Areas

Roughly 1,670 multi-family units and 120 single-family units would at a high risk of displacement in transit-proximate areas under this alternative (**Table 7-15**).

TABLE 7-15 **Alternative 2: Housing Units by Displacement Risk in Transit-Proximate Areas, 2022**

Transit-Proximate Areas	Lower		Moderate		Higher	
	SF	MF	SF	MF	SF	MF
Within ¼ mile of FTN	491	5,089	1,813	43,868	127	1,672
Total	***491***	***5,089***	***1,813***	***43,868***	***127***	***1,672***

NOTE: SF=single-family; MF=multi-family

Wilburton Study Area

No housing units are expected in areas within the area at a high risk of displacement.

ACCESS TO TRANSIT

Housing units with access to transit under Alternative 2 would be consistent with recent development trends in Bellevue, and impacts would be similar to those described under Section 7.3.2, *Impacts Common to All Alternatives*. Under Alternative 2, about 53,100 or 38 percent of total housing units would be within a ¼ mile of the frequent transit network. This is higher than the 19,000 or 30 percent of existing housing with this access to transit. Future housing development under Alternative 2 would not likely decrease the proportion of housing within ¼ mile of the frequent transit network compared to existing conditions. **No significant adverse impacts** on access to transit are expected under Alternative 2.

Mixed Use Centers

Alternative 2 would have capacity for about 70,300 housing units housing units in Mixed Use Centers, of which 43,140 or about 61 percent are within ¼ mile of frequent transit.

Neighborhood Centers

Alternative 1 would have capacity for 1,800 housing units housing units in Neighborhood Centers, of which about 700 or 39 percent are within ¼ mile of frequent transit.

Transit-Proximate Areas

In total, 53,100 or 38 percent of the housing units in Alternative 2 are within transit-proximate areas or within ¼ mile of the frequent transit network.

Wilburton Study Area

Alternative 2 would have capacity for 14,600 housing units in the Wilburton study area, of which 9,620 or 66 percent are within ¼ mile of frequent transit. Future housing development under Alternative 2 in the Wilburton study area is not likely to decrease the proportion of housing within ¼ mile of the frequent transit network compared to existing conditions. **No significant adverse impacts** on access to transit are expected in the Wilburton study area under Alternative 2.

7.3.6 Impacts of Alternative 3

SUPPLY, DIVERSITY, AND AFFORDABILITY

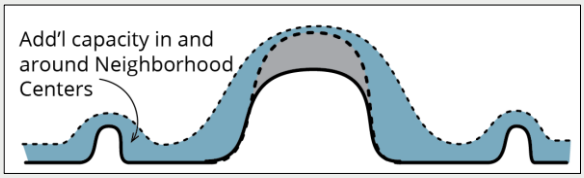
Housing capacity is highest under Alternative 3. **Citywide**, Alternative 3 would have capacity for 95,000 additional housing units (54,000 above the No Action Alternative, and above the CPP housing target) and space for an additional 200,000 jobs (76,000 above the No Action Alternative, and above the CPP job target). Figure 7-12 compares housing capacity to the adopted targets. See **Table 7-16**.

Impacts for housing supply, diversity, and affordability under Alternative 3 in the **Mixed Use Centers** and **transit-proximate areas** of the city that overlap the centers would be similar to those described under Section 7.3.2, *Impacts Common to All Alternatives*.

Compared to Alternative 2, Alternative 3 adds more capacity for housing types like small apartment buildings and mixed use buildings within walking distance of Neighborhood Centers (including along arterials that go through them) and allows small apartment buildings and similar-scale residential buildings close to major employment nodes like Downtown. Alternative 3 also includes policies allowing a greater diversity of low-density housing types throughout the city (like the other Action Alternatives). As a result, a

slightly higher percentage of citywide housing would be located in the Neighborhood Centers compared to the other alternatives (see Table 7-6). The intensity and mix of uses in the **Neighborhood Centers** and **near major employment centers** would shift as infill development and redevelopment occur to reflect a more mixed use development pattern.

TABLE 7-16 **Alternative 3: Distribution of Growth and Summary of Housing Strategy**

Growth Level and Pattern	Housing
Capacity for an additional 95,000 housing units. **FOCUS OF GROWTH:** In Mixed Use Centers, in areas of high opportunity (good access to transit/jobs or near Neighborhood Centers). 	**HOUSING TYPOLOGIES:** Typologies like townhomes or small apartment buildings in areas with good transit access and around Neighborhood Centers; duplexes or other low-density typologies permitted across the city. Larger apartment buildings with studios and one-bedrooms in Mixed Use Centers. **HOUSING AFFORDABILITY:** Mandatory inclusionary affordability alongside additional capacity in Mixed Use Centers; increased incentives elsewhere to meet affordability targets. **HOUSING STRATEGY:** In addition to the growth concepts in Alternative 2 adding housing in Mixed Use Centers, in areas with good access to transit or jobs, and on larger sites across the city, expand housing capacity **in and near Neighborhood Centers** (commercial areas within predominantly residential areas of the city). This alternative also encourages the **creation of new Neighborhood Centers** in areas that currently lack access to essential services within a short distance. This density could extend farther along and near the transit-rich arterials running through these areas as well. Similar to Alternative 2, this alternative would also include more extensive multimodal transportation investments in these areas of higher proposed densities. This alternative focuses on equitably providing **middle-scale housing** in areas of high opportunity across the city. A large variety of middle-scale types will focus on areas of high demand while a smaller variety is available across the rest of the city. The variety of housing produced above will provide middle-income housing (80–120% AMI), but **deeper affordability** will still be required to achieve a majority of new units that are affordable <80% AMI. A mandatory inclusionary affordability program is included in Mixed Use Centers, while voluntary affordability incentives are expanded throughout the city.

SOURCE: City of Bellevue 2023; BERK 2023

NOTE: Housing and job growth estimates are rounded to the nearest 1,000. Commercial square footage is rounded to the nearest 100,000. The actual pace of growth could differ or be less than what is shown.

Alternative 3 also increases allowed density in the lowest density areas of the city. As a result, a slightly higher percentage of citywide housing would be located in low-density residential areas compared to Alternative 2 (see Table 7-6). Overall, a greater percentage of citywide housing growth would occur in low-density residential areas of the city under Alternative 3 than any of the other alternatives (15 percent), and overall capacity in these areas would increase by about 10,900 units. **No impacts** on housing supply, diversity, or affordability are expected under Alternative 3 since these changes in **low-density residential** areas would not likely decrease the supply, diversity, or affordability of market-rate housing.

Alternative 3 includes additional strategies for affordability. These include mandatory inclusionary affordability alongside additional capacity in Mixed Use Centers, and increased incentives elsewhere to meet affordable housing needs.

Wilburton Study Area

Alternative 3 includes the greatest housing capacity in the **Wilburton study area**, with an estimated capacity for an additional 14,300 housing units. This is approximately 14,000 housing units above the No Action Alternative.

Under Alternative 3, the **Wilburton study area** would focus housing capacity in the core of the study area like Alternative 1, as well as in mixed use nodes throughout the study area. Alternative 3 would allow for a mix of higher density residential across the study area. Primarily medium density residential uses would be allowed east of 124th Avenue NE, around Lake Bellevue, and along 118th Avenue SE and NE 1st Street.

DISPLACEMENT RISK

Potential residential displacement is likely highest under Alternative 3 as a result of the highest overall capacity for housing growth (see Figure 7-13).

Residential displacement risks would be similar to those described for Alternative 2. Compared to Alternative 2, Alternative 3 has capacity for more housing units overall and within specific locations (see Figure 7-13) but includes mandatory inclusionary affordability policies in the Mixed Use Centers. Alternative 3 also expands middle-scale housing near Neighborhood Centers (not just within them), encourages the creation of new Neighborhood Centers, and increases allowed density in the lowest density areas of the city. As a

result, Alternative 3 would likely result in the largest net gain in affordable housing even though displacement risks are greatest.

Mixed Use Centers

Similar to Alternative 2, about 3,750 multi-family units and 200 single-family units in the Crossroads Mixed Use Center would be in areas at high risk of displacement under Alternative 3 (see **Table 7-17**). This is similar to the proportion of units in areas of high displacement risk in Mixed Use Centers in Alternative 2.

TABLE 7-17 **Alternative 3: Housing Units by Displacement Risk, 2022**

Mixed Use Centers	Lower		Moderate		Higher	
	SF	MF	SF	MF	SF	MF
BelRed	—	17,501	—	—	—	—
Crossroads	—	1,576	128	2,764	197	3,765
Eastgate	—	—	159	651	—	—
Factoria	—	—	170	3,877	—	—
Wilburton-East Main	—	2,547	—	13,895	—	—
Downtown (Metro Center)	—	—	55	31,343	—	—
Total	—	***21,624***	***512***	***52,530***	***197***	***3,765***

NOTE: SF=single-family; MF=multi-family

Neighborhood Centers

Similar to Alternative 2, none of the housing units within the Neighborhood Centers would be in areas at high risk of displacement under Alternative 3 (see **Table 7-18**).

TABLE 7-18 **Alternative 3: Housing Units by Displacement Risk in Transit-Proximate Areas, 2022**

Transit-Proximate Areas	Lower		Moderate		Higher	
	SF	MF	SF	MF	SF	MF
Within ¼ mile of FTN	491	6,750	1,813	44,891	127	1,680
Total	***491***	***6,750***	***1,813***	***44,891***	***127***	***1,680***

NOTE: SF=single-family; MF=multi-family

Transit-Proximate Areas

Roughly 1,680 multi-family units and 130 single-family units would be at a high risk of displacement in transit-proximate areas under this alternative.

Wilburton Study Area

No housing units in the Wilburton study area would be in areas at high risk of displacement under this Alternative.

ACCESS TO TRANSIT

Housing units with access to transit under Alternative 3 would be consistent with recent development trends in Bellevue, and impacts would be similar to those described under Section 7.3.2, *Impacts Common to All Alternatives*. Under Alternative 3, about 55,800 or 35 percent of total housing units would be within a ¼ mile of the frequent transit network. This is higher than the 19,000 or 30 percent of existing housing with this access to transit. Future housing development under Alternative 3 would not likely decrease the proportion of housing within ¼ mile of the frequent transit network compared to existing conditions. **No significant adverse impacts** on access to transit are expected under Alternative 3.

Mixed Use Centers

Alternative 3 would have capacity for 78,600 housing units in Mixed Use Centers, of which about 45,600 units would in areas within ¼ mile of frequent transit.

Neighborhood Centers

Alternative 3 would have capacity for 1,900 housing units in Neighborhood Centers, of which roughly 760 or 40 percent are within ¼ mile of frequent transit.

Transit-Proximate Areas

In total, 35 percent of the housing unit capacity in Alternative 3 are within transit-proximate areas or within ¼ mile of the frequent transit network.

Wilburton Study Area

Under Alternative 3, 10,400 or 71 percent of the roughly 14,700 units in the Wilburton study area would be within a ¼ mile of the frequent

transit network. Future housing development under Alternative 3 in the Wilburton study area would not likely decrease the proportion of housing within ¼ mile of the frequent transit network compared to existing conditions. **No significant adverse impacts** on access to transit in the Wilburton study area are expected under Alternative 3.

7.3.7 Summary of Impacts

Table 7-19 summarizes and compares adverse housing impacts under each of the alternatives.

TABLE 7-19 **Summary of Housing Impacts by Alternative**

Impact Threshold	No Action	Alternative 1	Alternative 2	Alternative 3
Supply, Diversity and Affordability	▼	△	△	△
Residential Displacement	▼	△	△	△
Access to Transit	▲	▲	▲	▲

SOURCE: BERK 2023.

NOTES: Housing impacts are considered either adverse (▼), moderately adverse (▽), moderately positive (△), or positive (▲).

All alternatives would add capacity over the allocated growth target, add housing diversity, and include incentives/requirements for affordable housing. These capacity increases and policy changes establish readiness conditions that can increase housing production and diversity overall and improve affordability. Funding gaps and limitations for affordable housing production for households below 80 percent AMI and any unknown barriers to housing development from the market mean that housing production in response still remains uncertain.

As future development occurs, some residents may be displaced through redevelopment or priced out as land prices and rents increase. While potential residential displacement is likely lowest under the No Action Alternative as a result of its lower overall capacity for growth, the lower supply overall of new housing units under the No Action Alternative also means that fewer units could take advantage of current affordability incentives. Relatively lower potential for additional housing supply can increase housing costs and the potential for economic displacement under this alternative. Housing typologies, including potential homeownership opportunities, would also continue to be limited in single-family areas, although pressure to convert homes with lower intensity typologies could be lower as fewer typologies would be allowed in these areas.

Adopting policies to preserve existing affordable housing is one way to discourage and mitigate residential displacement as redevelopment occurs. The Action Alternatives integrate additional anti-displacement strategies like inclusionary housing to mitigate the impacts of displacement and supply more affordable housing overall. Alternatives 1 and 3 include a mandatory inclusionary affordability program in the growth corridor and Mixed Use Centers, respectively, and the expansion of affordability incentives throughout the city. The No Action Alternative does not include these strategies and would likely have significant adverse impacts. Impacts of the Action Alternatives can be mitigated through additional anti-displacement strategies. However, the response to incentives and requirements for affordable housing in the Action Alternatives would need to create enough housing production to outweigh the greater potential for displacement caused by the growth anticipated in the alternatives so a moderately adverse impact is anticipated.

7.4 Avoidance, Minimization, and Mitigation Measures

7.4.1 Incorporated Plan Features

The Action Alternatives increase housing capacity citywide above the adopted target. The Action Alternatives also allow additional housing in parts of BelRed and the Wilburton study area, with particular focus in the light-rail station areas.

A wider variety of housing types would be available citywide under the Action Alternatives via expanded allowed housing typologies and incentives such as larger units and inclusionary housing. Duplexes, triplexes, cottage housing, and other low-density typologies would be allowed in single-family areas under the Action Alternatives. Additional density and some multi-family or mixed use buildings would be allowed in single-family areas with good access to transit under Alternatives 2 and 3 and near existing Neighborhood Centers and major employment centers under Alternative 3.

The city would continue to offer incentives for development of affordable housing under all alternatives. Many incentives are available to developers of multi-family projects—including density bonuses, minimum parking reductions, and property tax exemptions. Some of these currently apply anywhere multi-family development is allowed, while others are specific to certain neighborhoods and vary by location. The Action Alternatives

integrate additional affordability strategies like inclusionary housing to mitigate the impacts on affordability and supply more affordable housing overall. Alternatives 1 and 3 include a mandatory inclusionary affordability program in the growth corridor and Mixed Use Centers, respectively, and the expansion of affordability incentives throughout the city.

While it is impossible to avoid all involuntary displacement, housing affordability and choice throughout the city would be greater under the Action Alternatives than the No Action Alternative (with the widest variety of options throughout the city under Alternative 3), thus reducing the risk of involuntary residential displacement.

The Action Alternatives increase housing capacity citywide in areas with good access to transit.

7.4.2 Regulations and Commitments

Bellevue has a variety of its own programs and partnerships through which it can fund the development of diverse housing types such as accessory dwelling units (ADUs) and multi-family housing. The city also has some existing programs to encourage more affordable housing.

CITY OF BELLEVUE PROGRAMS

Currently in Bellevue, development incentives are primarily utilized for creating multi-family projects, including density bonuses, minimum parking reductions, and property tax exemptions. Some additional incentives are offered for development in certain neighborhoods.

Location-Specific Density Bonuses

Bellevue offers density bonuses in specific neighborhoods, which include the following neighborhoods, affordability requirement, and the share of affordability of a development if the density bonus is maximized.

- **Downtown.** Requires 1 square foot of affordable housing for every 2.5 square feet of market-rate units (28.6 percent affordable).
- **BelRed.** Requires 1 square foot of affordable housing for either every 4.6 square feet of market-rate rentals (17.85 percent affordable) or 7.2 square feet of market-rate owner-occupied units (12.2 percent affordable).

- **Eastgate Transit Oriented Development District and Neighborhood Mixed Use Districts.** At least one affordable unit for every 2.5 market-rate units (28.6 percent affordable).
- **East Main Transit Oriented District.** Amenity incentive systems require development to earn 80 percent of incentive bonus through affordable housing (75 percent for nonresidential development). Provision of affordable housing earns development 3.2 bonus square feet per 1 square foot of affordable housing.

Density Bonus (15 Percent Program)

In addition to neighborhood-specific bonuses, the city offers a density bonus of up to 15 percent above existing density limits with the inclusion of affordable units. For each affordable unit proposed, one additional market-rate unit is allowed up to the 15 percent of existing density threshold. Since 1996, this program has resulted in 95 units affordable at 80 percent AMI.

C-1 Affordable Housing Density Bonus

In 2021, the City Council amended the Land Use Code through adoption of the C-1, Phase 1, Affordable Housing Density Bonus, which establishes up to 50 percent density bonus for permanent affordable housing on certain land owned by religious organizations, nonprofit organizations, or public entities.

Increased Affordable Housing Capacity on Faith-Owned Properties

For the next phase of the C-1 legislative program, the city can establish criteria and procedures for certain properties owned by religious organizations and located in single-family land use districts to be rezoned to permit permanently affordable multi-family housing on qualifying properties. Already, cities and counties under GMA must allow an increased density bonus on religious properties for any affordable single-family and multi-family housing (RCW 36.70A.545), and the city has met this GMA requirement through the C-1, Phase 1, Land Use Code Amendment noted above. The city is currently working on additional amendments to the Land Use Code in connection with the C-1, Phase 2, legislative program in order to implement recent changes to the Comprehensive Plan and provide for rezoning/increased capacity on certain faith-owned properties proposing 100 percent affordable housing.

Micro-apartments

The city is processing amendments to the Land Use Code to remove barriers to the construction of micro-apartments. Micro-apartments are typically 200–400 square feet in size and include a living/bedroom area, bathroom, and kitchen. These apartments appeal to students, young professionals, people just moving to Bellevue, and individuals without children. Micro-apartments can provide more housing choices in Bellevue and an opportunity to diversify the city's housing stock. Additionally, micro-apartments create lower cost units due to their small size.

FAR Increase

The city is currently working on amendments to the Land Use Code in two phases to allow higher Floor Area Ratio (FAR) or density for certain residential uses to incentivize residential over commercial development. Phase 1 includes a temporary interim official control (IOC) intended to increase the production of residential units and affordable housing Downtown by adjusting the FAR exemption to allow additional FAR when affordable housing is provided. The IOC will also provide greater development flexibility to projects meeting affordable housing thresholds. Phase 2 would include a permanent Land Use Code amendment for Downtown and targeted mixed use land use districts within the city.

Reduced Permit Fees

Permit review and inspection fees can make up a substantial part of a project's development cost. The city is working on reducing permit review and inspection fees to further incentivize affordable housing production in the city. The city has included fee waiver programs since as early as 1989 with the adoption of a transportation impact fee waiver for qualifying affordable housing projects, and beginning in 1995, the city implemented a school impact fee waiver for qualifying affordable housing projects. This proposal would expand the city's fee waiver program beyond impact fees to include permit review and inspection fees, to help mitigate the cost of development for affordable housing projects.

Multi-family Tax Exemption (MFTE)

The Multi-family Tax Exemption (MFTE) Program is a voluntary affordable housing incentive for new multi-family rental developments. MFTE projects receive a 12-year exemption from property taxes in exchange for setting aside 20 percent of the units

for income-eligible households for that time. The original version of this program was implemented in 2015 in limited areas in Bellevue and did not result in significant utilization. It was expanded citywide in 2021. Today, 84 MFTE units available at 60–80 percent AMI have been created in Bellevue, set to expire between 2031 and 2034.

Housing Stability Program

In October 2020, the city enacted Resolution No. 9826 to collect a 10th of a percent sales tax to support affordable housing and related services. The tax became effective January 1, 2021, collecting more than $9.7 million in 2021 and estimated to collect $10.3 million in 2022. Program priorities for use of these funds include providing housing for households earning less than 30 percent AMI; addressing and preventing homelessness and housing instability; and focusing on underserved and vulnerable residents in Bellevue. Funding is provided to support land acquisition, building acquisition, and construction, as well as operations and maintenance costs that serve program priorities.

A REGIONAL COALITION FOR HOUSING (ARCH) HOUSING TRUST FUND

Bellevue is a member of A Regional Coalition for Housing (ARCH) and has developed several affordable developments with ARCH support. In partnership with ARCH, the City of Bellevue has developed 3,819 units citywide. Most of these were completed using funds from the ARCH Housing Trust Fund. Most homes built with Housing Trust Funds are affordable to households earning less than 50 percent of median income and often support projects for special needs groups. In Bellevue, ARCH funds have supported over 3,800 affordable housing units—3,162 units for families and individuals, 297 units for those currently experiencing homelessness, and 358 units for seniors.

KING COUNTY HOUSING AUTHORITY

The King County Housing Authority (KCHA) partners with jurisdictions to create affordable housing and distributes funding and subsidies to eligible families and individuals. KCHA funds can further support individual units created through the programs and partnerships listed above. Nearly 60 percent of those living in units created through the City of Bellevue's partnership with ARCH also utilize KCHA assistance. Two of the most-utilized programs in King County are described below, although KCHA facilitates several other targeted housing support programs.

Section 8 Vouchers

Tenant-based Section 8 vouchers are funded by HUD and managed by KCHA. They help nearly 12,000 King County households with low incomes rent homes on the private market, including 559 in Bellevue. With a voucher, a tenant pays between 28 percent and 50 percent of their household income on rent and utilities, with KCHA paying the difference.

KCHA Subsidized Housing

KCHA also owns and manages multi-family rental units in which KCHA subsidizes housing for those with the most limited incomes, including older adults, people with disabilities, and single-parent families.

7.4.3 Other Mitigation Measures

The city could pursue the following kinds of actions if it wishes to address affordability and displacement risk, and some of these are under consideration by the city as of the time of this writing:

ADU Reform

The city can remove barriers and encourage the construction of attached Accessory Dwelling Units (ADUs) in Bellevue and create a pathway for separate ownership of ADUs. Identified barriers to ADU construction, include:

- Owner-occupancy requirement
- Condominium prohibition
- Off-street parking requirement
- Design controls, such as the entry door location restriction
- Process requirements

The city can also consider allowing detached ADUs, which are currently not allowed in Bellevue.

Anti-Displacement Strategies

- Neighborhood stabilization efforts such as rental assistance programs, foreclosure assistance programs, as well as tenant protection policies, especially in areas at high risk for displacement.

- Selling or leasing city-owned property to support affordable residential projects.
- Private or private-public partnerships for affordable housing. An example is the city's partnership with major employers such as Amazon, Microsoft, and Sound Transit in their efforts to create and preserve affordable housing.
- Targeted homeownership assistance to residents of neighborhoods that are at high risk of displacement. Fair Housing Laws will need to be considered and complied with for such assistance programs.

The Action Alternatives would also require the development of new or revised zoning and development regulations for the Wilburton study area. New zoning associated with these alternatives is expected to be similar to rules established for the BelRed area in part 20.25D of the Land Use Code. New regulations will need to address the provision of affordable housing and the potential for residential displacement. These regulations will need to be crafted with the intent of creating affordable housing and to avoid or mitigate residential displacement.

7.5 Significant, Unavoidable Adverse Impacts

Citywide housing capacity is above the adopted target under all alternatives. Increased capacity for housing has the potential to increase the supply and diversity. The exact amount and type of housing, and the actual pace and distribution of future housing development, would be influenced in part by the implementation of Comprehensive Plan policies, related regulations and actions, and by decisions made by individual property owners and developers. This uncertainty is unavoidable but is not considered significant or adverse given the increases in capacity and recent development trends.

Incentives/requirements for affordability in the Action Alternatives have the potential to increase the affordability of market-rate housing in the city, and no significant adverse impacts are expected. However, most market-rate housing tends to be constructed for residents at or above median income levels. The city will likely need targeted strategies and funding sources to encourage the construction of affordable housing for extremely low income (0–30 percent AMI) and very low-income (31–50 percent AMI) households.

The No Action Alternative continues existing regulations, incentives, and programs targeted at affordability. Recent development trends have shown decreases in affordability despite these existing tools. Without additional strategies for affordability, **the No Action Alternative will likely have a significant adverse impact on housing affordability** compared to Action Alternatives.

All alternatives provide capacity for new housing and include some amount of new development or redevelopment. As future development occurs (physical displacement), some residents may be displaced through redevelopment or priced out as land prices and rents increase (economic displacement). Potential residential displacement could occur under all alternatives, but physical displacement may be lower in the No Action Alternative because of its lower overall capacity for housing growth. Economic displacement will be higher in the No Action Alternative given that it does not include additional strategies to increase affordability.

Adopting policies to preserve existing affordable housing is one way to discourage and mitigate residential displacement as redevelopment occurs. The Action Alternatives integrate additional anti-displacement strategies like inclusionary housing to mitigate the impacts of displacement and supply more affordable housing overall. Alternatives 1 and 3 include a mandatory inclusionary affordability program in the growth corridor and Mixed Use Centers, respectively, and the expansion of affordability incentives throughout the city. The city could also consider additional strategies to avoid or mitigate displacement including neighborhood stabilization efforts such as rental assistance programs, foreclosure assistance programs, as well as tenant protection policies. With the application of these mitigation measures, **no significant adverse impacts** are expected for the Action Alternatives.

While potential residential physical displacement is likely lowest under the No Action Alternative because of its lower overall capacity for growth, the lower supply overall of new housing units under the No Action Alternative also means that fewer units could take advantage of current affordability incentives. Housing typologies, including potential homeownership opportunities, would also continue to be limited in single-family areas, although pressure to convert homes with lower intensity typologies could be lower as fewer typologies would be allowed in these areas. Economic displacement will be higher in the No Action Alternative. Given this, **significant adverse impacts** related to an increased risk for

involuntary residential displacement are expected under the No Action Alternative.

Future growth will likely increase housing in areas in the city with good access to transit, and **no significant adverse unavoidable impacts** are expected.

INTENTIONALLY BLANK

CHAPTER 8 Air Quality

8.1 Introduction

This chapter examines the air quality and greenhouse gas (GHG) impacts of the City of Bellevue Comprehensive Plan Periodic Update on the city as whole, and in the Wilburton study area. The analysis indicates that the Comprehensive Plan Periodic Update could potentially cause a significant adverse impact related to air quality and greenhouse gas emissions. This potential impact arises from the Action Alternatives exceeding one or more of the thresholds of significance described below. Some future impacts are expected to be addressed under the State Environmental Policy Act (SEPA) on a project-to-project basis to determine their significance. There is also a potential for increases in greenhouse gas emissions in comparison to local or regional goals or targets for greenhouse gas reductions. However, per capita vehicle travel, and associated emissions, are expected to decline for any Action Alternative, in contrast to the No Action Alternative. The analysis identifies mitigation that, if implemented and tracked, will reduce impacts to a less-than-significant level.

The alternatives for the Comprehensive Plan Periodic Update are described in detail in Chapter 2, *Alternatives*. Briefly, the alternatives include a No Action Alternative, which continues the current Comprehensive Plan where growth is focused in the Downtown, BelRed, and East Main Mixed Use Centers. The No Action Alternative has capacity for 41,000 additional housing units and space for an additional 124,000 jobs. For the No Action Alternative and the Action Alternatives, the overall citywide growth targets of 35,000 new

housing units and 70,000 new jobs by 2044 are the same. The Action Alternatives expand capacity to allow space for additional jobs, primarily in Mixed Use Centers, and capacity for a greater diversity of housing types and locations. Alternative 1 would increase opportunities for families citywide by providing capacity for an additional 59,000 units and space for an additional 179,000 jobs. Alternative 2 optimizes for residential growth in the Mixed Use Centers by providing capacity for an additional 77,000 housing units and space for an additional 177,000 jobs. Finally, Alternative 3 would open citywide growth opportunities, combining the first two alternatives and providing capacity for an additional 95,000 housing units and space for an additional 200,000 jobs.

The alternatives being studied include the Wilburton study area. The No Action Alternative includes housing capacity in the Wilburton study area that is less than 1 percent of the citywide total capacity. The Action Alternatives would increase the capacity for housing units in the Wilburton study area as a fraction of citywide capacity increases by 8 percent, 10 percent, and 9 percent, respectively, for Alternatives 1, 2, and 3. Similarly, jobs currently represent less than 7 percent of the city wide capacity total, but will be increased in the Wilburton study area relative to citywide capacity by 17 percent, 15 percent, and 16 percent for Alternatives 1, 2, and 3 respectively.

8.2 Affected Environment

8.2.1 Air Quality

REGULATORY ENVIRONMENT

This section describes the relevant regional, state, and federal regulations and regulatory agencies that guide air emissions within the Bellevue region. These include the U.S. Clean Air Act and Washington Clean Air Act, Ecology, the Puget Sound Clean Air Agency (PSCAA), and other relevant policies.

As required by the 1970 Clean Air Act, the EPA (United States Environmental Protection Agency) initially identified seven criteria air pollutants for which state and federal health-based ambient air quality standards have been established. EPA calls these “criteria air pollutants” because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead are

the six criteria air pollutants originally identified by the EPA. Since then, subsets of PM have been identified for which permissible levels have been established. These include particulate matter that is less than or equal to 10 microns in aerodynamic diameter (PM_{10}) and particulate matter that is less than or equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$).

The Clean Air Act established the National Ambient Air Quality Standards (NAAQS), with primary and secondary standards, to protect the public health and welfare from air pollution. Areas of the U.S. that do not meet the NAAQS for any criteria pollutant are designated by the EPA as nonattainment areas. Areas that were once designated nonattainment but are now achieving the NAAQS are termed maintenance areas. Areas that have air pollution levels that meet the NAAQS or are cleaner are termed attainment areas. In nonattainment areas, states must develop plans to reduce emissions and bring the area back into attainment of the NAAQS.

An area remains a nonattainment area for that pollutant until concentrations are in compliance with the NAAQS. Only after measured concentration design values (EPA's multi-year, per-pollutant metrics that are used for comparisons to the NAAQS) have fallen below the NAAQS can the state apply for re-designation to attainment, and it must then submit a 20-year plan for continuing to meet and maintain air quality standards. During this 20-year period, the area implements a NAAQS maintenance plan.

Table 8-1 identifies the primary NAAQS for the seven criteria pollutants. Ecology and the PSCAA have authority to adopt more stringent standards, and in 1999, the PSCAA Board of Directors adopted a more stringent health goal for 24-hour $PM_{2.5}$ of 25 micrograms per cubic meter ($\mu g/m^3$), based on recommendations from the PSCAA Particulate Matter Health Committee.

Nationally, criteria pollutants are generally showing a reduction in ambient concentrations over time, largely as a function of increasing regulations that apply to stationary sources, off-road equipment (e.g., construction equipment), diesel trucks, and automobiles, among other sources. A graphic of these trends is shown in **Figure 8-1**, where each line is a criteria pollutant's average concentration percentage relative to the respective NAAQS, by year.

TABLE 8-1 **Air Quality Standards**

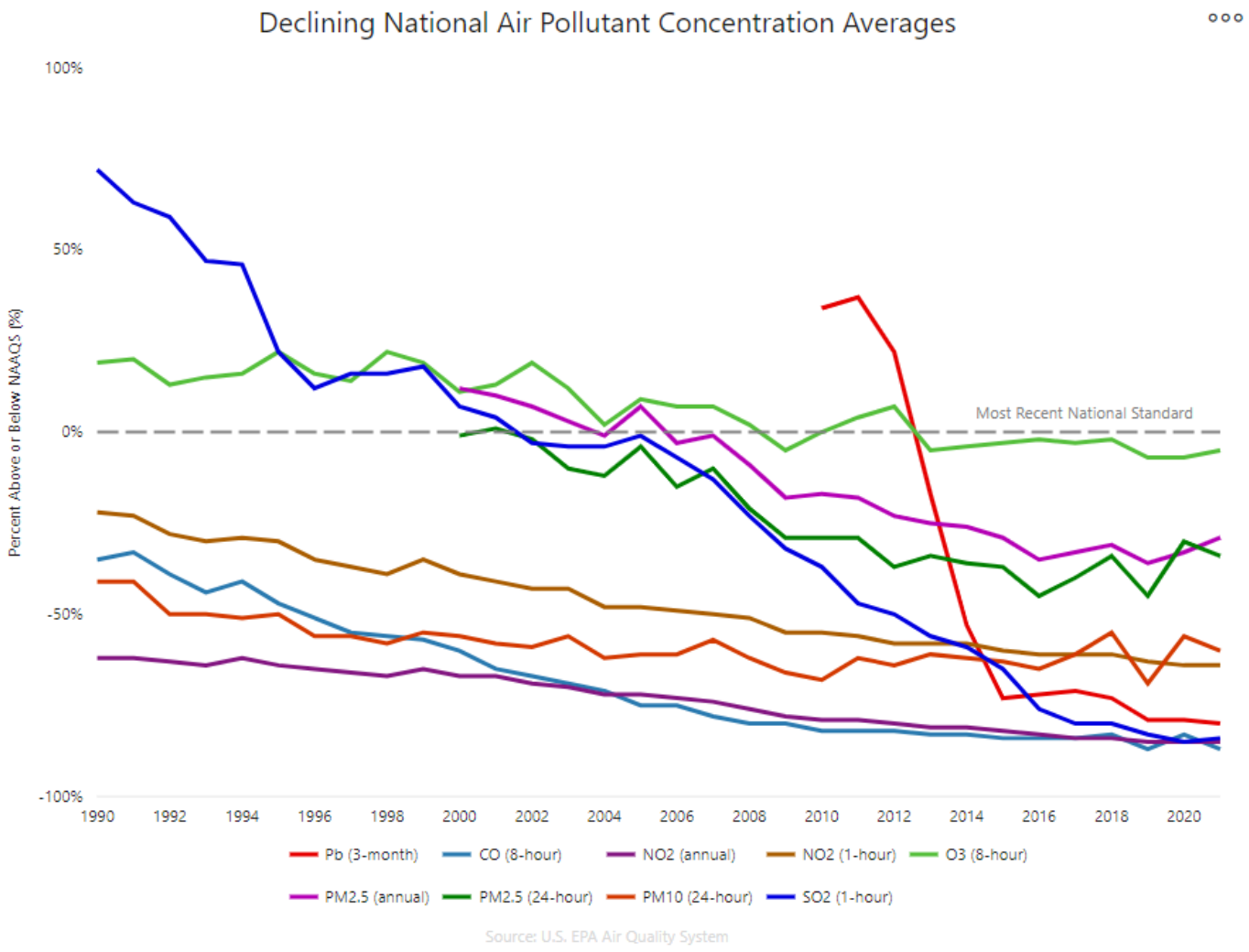
Pollutant	Averaging Time	Primary Federal Standard	State of Washington Standard	Form of the Standard
Ozone (O_3)	8-hour	0.070 ppm	0.070 ppm	(1)
Carbon monoxide (CO)	1-hour	35 ppm	35 ppm	(2)
	8-hour	9 ppm	9 ppm	(2)
Nitrogen dioxide (NO_2)	1-hour	0.100 ppm	0.100 ppm	(3)
	Annual	0.053 ppm	0.053 ppm	(4)
Sulfur dioxide (SO_2)	5-minute			(11)
	1-hour	0.075 ppm(5)	0.075 ppm(5)	See Standard
	3-hour	0.5 ppm	0.5 ppm	(2)
	24-hour		0.14 ppm(2)	(2)
	Annual		0.02 ppm(6)	See Standard
Particulate matter (PM_{10})	24-hour	150 µg/m^3	150 µg/m^3	(7)
Fine particulate matter ($PM_{2.5}$)	24-hour	35 µg/m^3	35 µg/m^3	(8)
	Annual	12 µg/m^3	12 µg/m^3	(9)
Lead	Rolling 3-month average	0.15 µg/m^3	0.15 µg/m^3	(10)

SOURCE: 40 CFR part 50, WAC 173-476-900, Puyallup Tribal Codes 10.12.400

NOTES: ppm: parts per million; µg/m^3: micrograms per cubic meter

(1) Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years.
(2) Not to be exceeded more than once per year.
(3) 98th percentile of 1-hour daily maximum concentrations averaged over 3 years.
(4) Annual Mean.
(5) 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
(6) Not to be exceeded in a calendar year.
(7) Not to be exceeded more than once per year, averaged over 3 years.
(8) 98th percentile, averaged over 3 years.
(9) Annual mean, averaged over 3 years.
(10) Not to be exceeded.
(11) Once in any 8 consecutive hours.

At the regional level, the Puget Sound Regional Council (PSRC) has developed VISON 2050, a regional long-range plan that provides growth planning perspectives and assessment of the potential for environmental implications as part of that planning. VISION 2050 identifies policies for air quality and climate change (PSRC 2022). On the air quality side there are goals to reduce impacts to those disproportionately affected, to meet all federal and state air quality standards, and to continue reducing transportation-related air pollution.



SOURCE: EPA 2022a; EPA 2022b

FIGURE 8-1 **National Ambient Concentration Averages Relative to Their Respective NAAQS**

AIR QUALITY IN PUGET SOUND

The Puget Sound region has a relatively mild, marine climate with cool summers and mild, wet, and cloudy winters. Regionally, weather conditions such as temperature, fog, rain, and snowfall can vary within short distances, influenced by such factors as the distance from Puget Sound, the rolling terrain, and air from the ocean moving inland; within Bellevue, the major influence on weather is topography and associated influences from Lakes Washington and Sammamish. Although the Puget Sound region is one of the most densely populated and industrialized areas in Washington, a well-

mixed and ventilated atmosphere allows for pollutants to be readily dispersed downwind through much of the year.

Air pollution is usually most noticeable in the late fall and winter, under conditions of clear skies, light wind, and a sharp temperature inversion. Temperature inversions occur when cold air is trapped under warm air, preventing vertical mixing in the atmosphere. Inversions can last several days and can prevent pollutants from being dispersed by the wind. Inversions are most likely to occur during the months of January, February, October, November, and December.

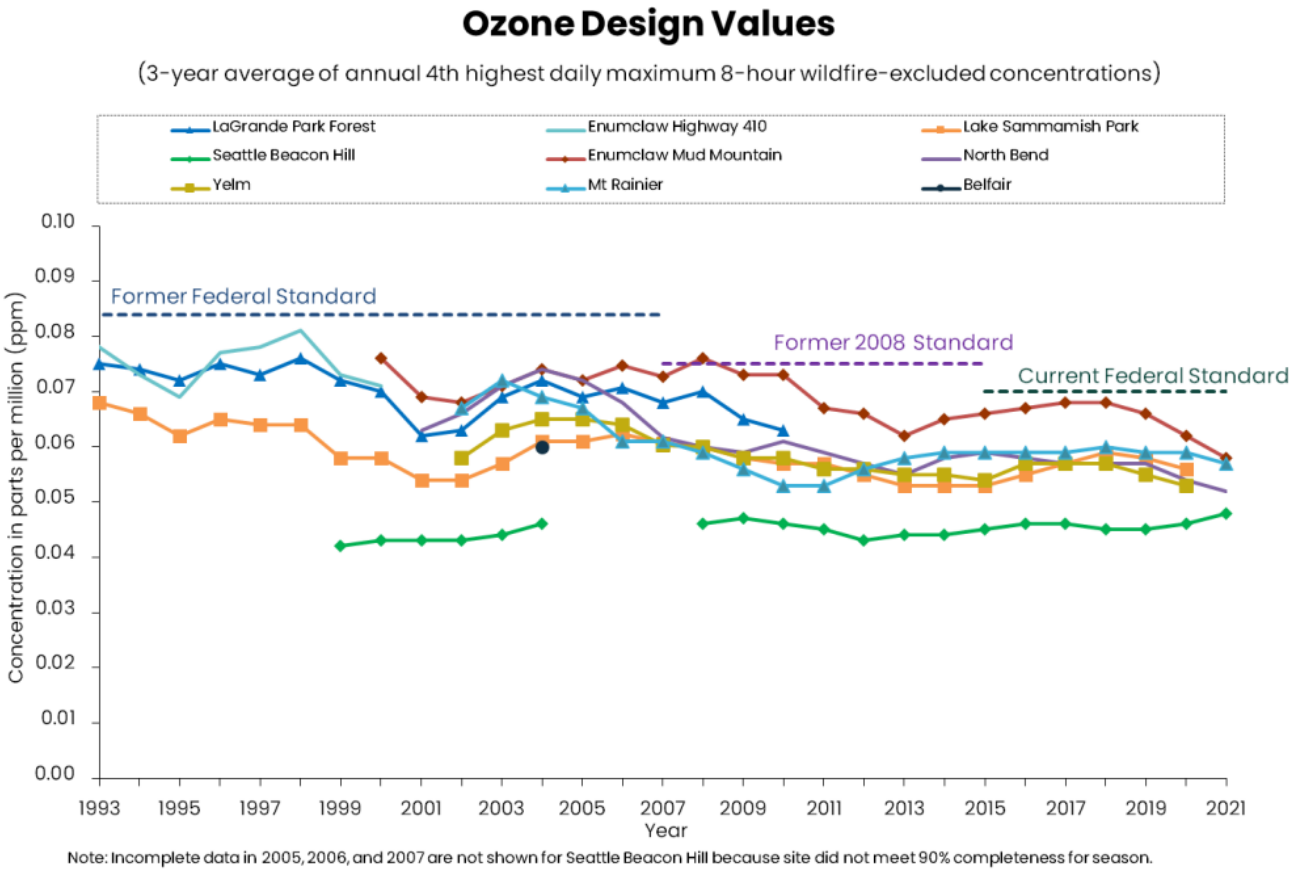
Recent years have shown that the intersection of these inversion events with regional wildfires can result in significantly degraded air quality. If poor dispersion persists for more than 24 hours, the PSCAA can declare an "air pollution episode" or local "impaired air quality." Both Ecology and PSCAA operate ambient air quality monitoring stations to assess the levels of regulated pollutants and to verify continued compliance with the NAAQS.

In the Puget Sound airshed, the primary criteria air pollutants that have historically been of concern are CO, ozone, PM_{10}, $PM_{2.5}$, and ozone precursors (volatile organic compounds [VOCs] and oxides of nitrogen [NOx]). Although urban portions of the Puget Sound region have historically violated the CO standard, CO levels have decreased significantly, primarily due to emissions controls on car engines. EPA designated the Puget Sound region, including Bellevue, as a CO attainment area in 1996 (Federal Register 1996), and its maintenance period expired in October 2016.

With respect to the city's status relative to monitored concentration trends of ozone, Bellevue currently meets the federal 8-hour standard for ozone. Like CO, the region was redesignated as attaining the ozone NAAQS in 1996, and the corresponding maintenance period expired in 2016. However, monitors in King, Kitsap, Pierce, and Snohomish counties exceeded the local PSCAA health goal of 25 $\mu g/m^3$ on 22 days, which were during winter months in 2019 (PSCAA 2020). Measured concentrations of NOx have demonstrated attainment with the NAAQS within the region but are a prominent emissions source from high-volume roadways (e.g., I-405, I-90, SR 520). High -volume roadways are those which have more than 100,000 annual average trips per day – a level of traffic known to produce air concentrations that can be harmful to people's health.

Ozone concentrations have remained generally stable, with some influence from wildfire emissions. However, the urban region near Bellevue and Seattle has remained within the NAAQS regardless of

whether wildfire event days are included or excluded from the analysis. Within the Puget Sound region, only Enumclaw demonstrated some compliance issues with the 8-hour ozone standard due to wildfire influences. **Figure 8-2** provides the 8-hour ozone concentration trends for the Puget Sound region, with the wildfire event days removed from the dataset.



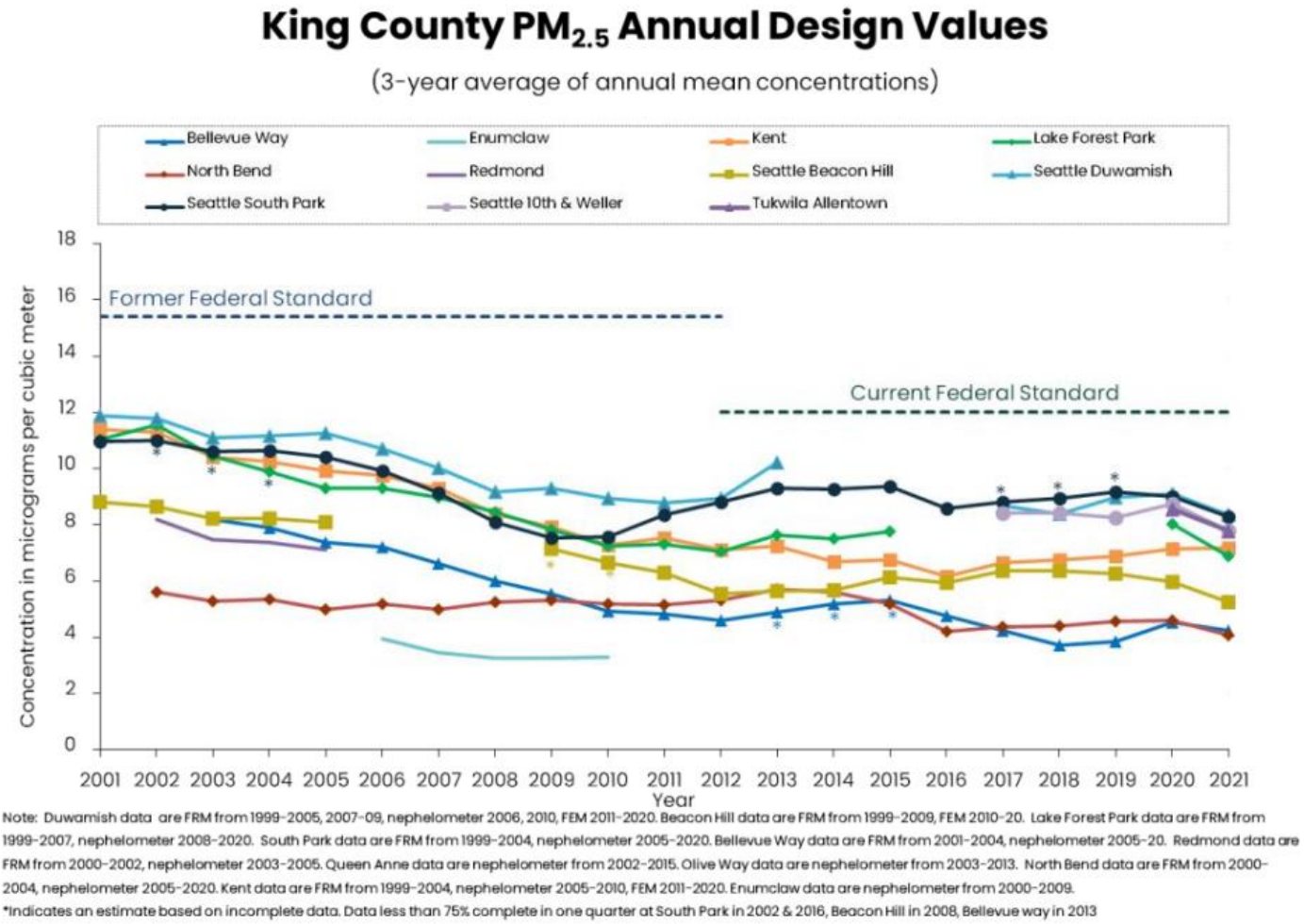
SOURCE: PSCAA 2022

FIGURE 8-2 **Puget Sound Region 8-Hour Ozone Design Value Trends**

On-road emissions contribute to both the GHG footprint and the air quality (primarily for $PM_{2.5}$) footprint of the city to such a large extent, so they are the source of highest concern for this planning process.

Consistent with the air quality trends observed at the national level, the King County air quality trends for $PM_{2.5}$ have generally declined and been within the NAAQS. An air quality trend report produced by PSCAA (2021) demonstrates this trend, as shown in **Figure 8-3**. The figure shows the concentrations including wildfire impacts. The PSCAA also provides figures that remove wildfire impacted days, but

such a change only marginally reduces the design value concentrations in comparison to those with wildfire days. Notably, revised $PM_{2.5}$ standards have been proposed by the federal government, and some regional sites may exceed that standard if it becomes law. While PM_{10} is not routinely measured, it has been estimated by PSCAA by scaling from $PM_{2.5}$ concentrations. The results indicate that if wildfire impacts are removed, the concentrations are well within the NAAQS. However, PM_{10} would be expected to exceed the NAAQS if wildfire events are included.



SOURCE: PSCAA 2022

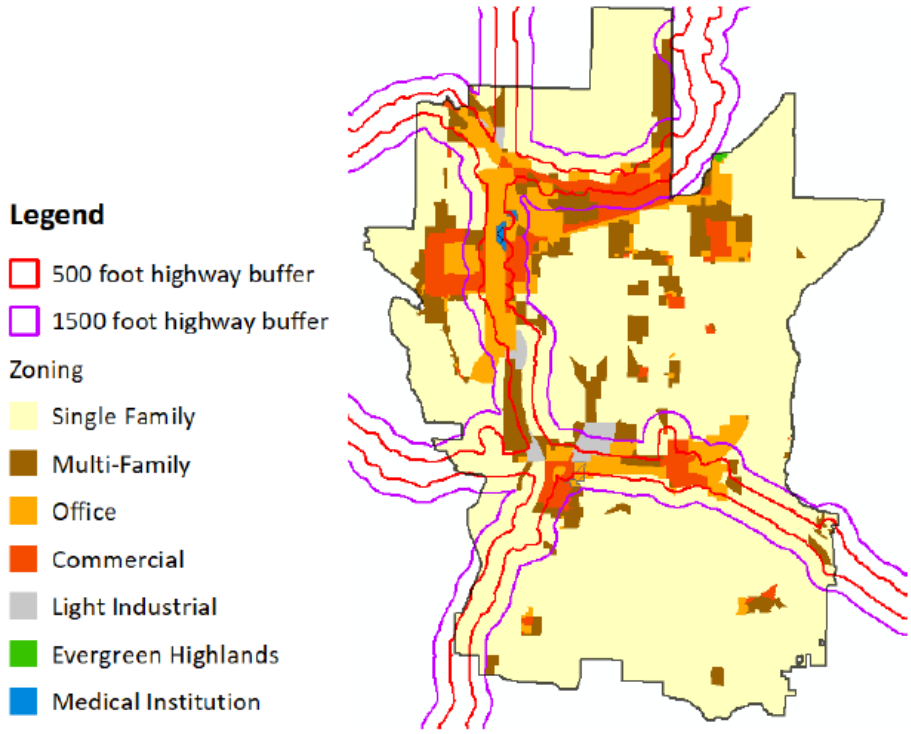
FIGURE 8-3 **King County $PM_{2.5}$ Annual Design Value Trends**

According to the Puget Sound Clean Air Agency 2014 report on Highly Impacted Communities (PSCAA 2014), the Wilburton study area falls within the top 20 air quality impacted communities in King County, along with other nearby communities such as Factoria. The primary

contributor to this designation is the proximity to freeways for these communities. The impact scores for the study were developed using diesel pollution, household income, health sensitivity, industrial density, race, English proficiency, and wood burning household counts as factors.

In addition to criteria pollutants, air toxics can also impact human health. The list of air toxics in Washington includes over 400 pollutants, including diesel particulate matter. Air toxics are measured in strategic locations and often for specific studies. Nationally, the trend has been consistent with the findings of the criteria air pollutants – a general downward trend in concentrations. Currently the PSCAA is undertaking a study of air toxics for the period of 2021–2022. However, the study is focused on specific highly impacted regions (e.g., Georgetown, South Park) and is not region-wide. For the Bellevue area, the primary source of air toxics that residents are exposed to is diesel particulate matter (DPM) from traffic. Approximately 13 percent of the city's land area is within 500 feet of a high-volume roadway. Near-road concentration measurements and trends in the Bellevue area are not readily available. Notably, air modeling tools, such as the Community-LINE Source Model, have been applied to understand the extent of impacts from roadways. These models have indicated that the largest influences are with 300 to 1,500 feet of high-volume roadways.

Most recently, the City of Bellevue produced *Air Quality and Land Use Planning* (City of Bellevue 2023), a document designed to provide a literature review of high-volume roadways, their potential air quality health effects, and mitigation strategies to reduce those effects. The Air Quality and Land Use Planning document is provided in Appendix J. The purpose of the document is to provide information for the city to consider, along with other factors, when making long-range planning decisions to increase development capacity. The document also provides useful information on high-volume roadways within Bellevue, the land uses that exist near them, and mitigation strategies that may be implemented to reduce exposures to elevated air pollution levels in areas located adjacent to high-volume roadways. A depiction of the current generalized zoning districts in Bellevue and high-volume roadways (those exceeding 100,000 annual average trips per day) buffers at both 500 feet and 1,500 feet is shown in **Figure 8-4**.



SOURCE: City of Bellevue 2023

FIGURE 8-4 **Air Quality Highway Buffers in Study Area**

8.2.2 Greenhouse Gases

REGULATORY ENVIRONMENT

A variety of policies at the regional, state, and federal levels will contribute to reducing GHG emissions in the Puget Sound region. Federal and state vehicle emissions standards will contribute to a reduction in on-road emissions, while regionally, reductions in vehicle miles traveled (VMT) are built in to the PSRC's Regional Transportation Plan. At the state level, a variety of policies and programs will contribute to emissions reductions, including Washington's:

- Clean Buildings Act
- Clean Energy Transformation Act
- Clean Fuel Standard
- Climate Commitment Act
- Energy Code

- Hydrofluorocarbon Policies
- Internal Combustion Engine Ban

Of note, the Bellevue 2021–2025 Environmental Stewardship Plan (City of Bellevue 2020) lays out targets for reducing GHG emissions from a 2011 baseline at a rate of:

- 50 percent reduction by 2030
- 80 percent reduction by 2050

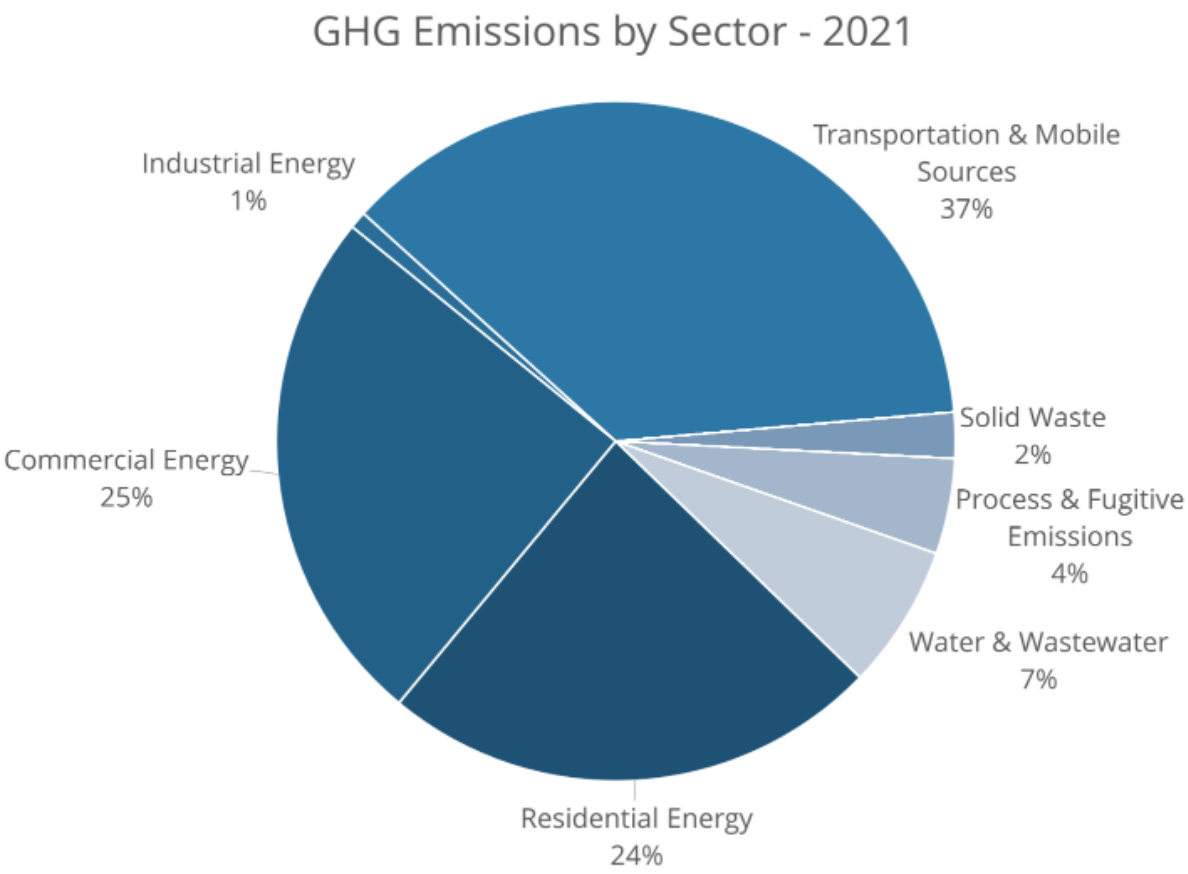
In contrast, the state has targets from a 1990 baseline that propose following the following schedule (see table 3, Ecology 2022):

- 50 percent reduction by 2030
- 70 percent reduction by 2040
- 95 percent reduction by 2050

GREENHOUSE GASES IN THE PUGET SOUND REGION

While the state produced a GHG emissions inventory in 2022 (for calendar years through 2019), more pertinent GHG emissions inventories were developed for King County (King County 2022b) and Bellevue (City of Bellevue 2021). The county emissions inventory included GHG emissions at the city-level where available. For Bellevue, the most recent geographic emissions inventory was provided for the calendar year 20121. In 2021, Bellevue was responsible for 1,386,502 metric tons of carbon dioxide equivalents ($MTCO_2e$), and the breakdown of those emissions by sector is provided in **Figure 8-5**.

While the King County tool provides the ability to evaluate trends over time, the Bellevue-specific data in the tool are only populated for 2019. Looking across the time span available in the Bellevue emissions inventory, a general downward trend is present. These reductions are likely the result of Covid-19, changes in vehicle fleets, and energy mix changes, among other aspects. An uptick in 2021 is likely the result of activity changes with fewer Covid-related restrictions. Looking at the emissions on a per capita basis, a decreasing GHG trend is also prominent for Bellevue–indicating a possible decreased reliance on single occupancy vehicles and an increased use in low-emitting or electric vehicles. The emissions per capita in Bellevue are presented in **Figure 8-6**.

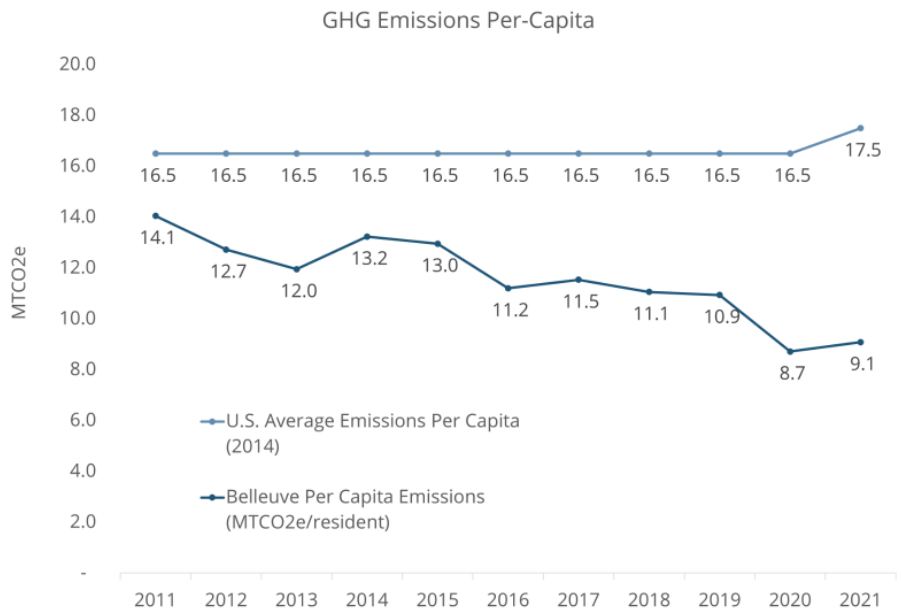


SOURCE: City of Bellevue 2022

FIGURE 8-5 **2021 Bellevue GHG Emissions by Sector**

Overall, the primary contributors to Bellevue's GHG footprint are from electricity use in the built environment and on-road fossil fuel combustion in the transportation sector. Reductions in GHGs as a function of federal, state, regional, and local regulations will also have a related benefit of reducing air quality pollutants, whether those are criteria pollutants or air toxics.

As part of the development of the Strategic Climate Action Plan, a geographic wedge planning tool was produced (King County 2022a). Using this tool and applying it specifically for Bellevue allows a GHG emissions rate per VMT in Bellevue to be calculated for different calendar years assuming all existing national, state, regional, and local policies proceed unimpeded. The emissions rate across the vehicle fleet in Bellevue for 2019 is 741.8 grams of carbon dioxide equivalents (CO_2e) per VMT.



SOURCE: City of Bellevue 2022

FIGURE 8-6 **2021 Bellevue per Capita GHG Emissions by Year**

8.3 Potential Impacts

The potential impacts identified for the No Action Alternative and Action Alternatives include analysis of the "build-out" housing unit capacity and job capacity associated with each alternative. For the No Action Alternative and the Action Alternatives, these capacities for growth are higher than overall citywide growth targets of 35,000 new housing units and 70,000 new jobs by 2044. It is not expected that the "build-out" housing and job capacities would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with the alternatives.

Impacts on air quality from each alternative were determined by reviewing potential construction and post-construction changes to the existing conditions based on the development capacities being analyzed. Construction is considered a temporary activity; therefore, a qualitative analysis of construction impacts common to all alternatives is presented below.

For long-term impacts, the alternatives would increase populations in the study area in the horizon year (2044) compared to the baseline year (2019). The projected citywide increases in VMT were used as a basis for comparison of the alternatives to the base year and No

Action Alternative. The changes in VMT were also examined in the context of the proposed land use changes and potential for increased development proximate to high-volume roadways for each alternative.

8.3.1 Thresholds of Significance

The following categories were applied to characterize the potential for adverse air quality and GHG impacts to the city:

- Increased capacity for development, including residential uses, proximate to high-volume roadways.
- Potential for exceeding the Department of Ecology's Small Quantity Emission Rate (SQER) for DPM of 0.52 pounds per year relative to the No Action Alternative (WAC 173-460-150)
- Change in GHG emissions relative to the No Action Alternative, as compared to Ecology's draft SEPA GHG reporting threshold of 10,000 $MTCO_2e$ (Chapter 173-445 WAC Rulemaking)

Ecology's SQER is a screening metric typically applied to air facilities that require an air permit. Two levels of emissions screening are available: an air toxics de minimis threshold (0.027 pounds per year), and the SQER (0.52 pounds per year). Typically, with permitting, if the SQER is exceeded, the facility would be required to conduct dispersion modeling to characterize the potential downwind concentrations. These modeled concentrations are then compared against a third threshold, the acceptable source impact level (ASIL). Without the level of detail in the Comprehensive Plan Periodic Update to conduct such modeling, the SQER was selected as an upper bound significance threshold.

Criteria for GHGs rely on Ecology's proposed SEPA threshold for certain industrial facilities of 10,000 $MTCO_2e$ per year. The Comprehensive Plan Periodic Update is not applicable to the proposed threshold, but Ecology does not provide other screening metrics, so 10,000 $MTCO_2e$ is the best available threshold and has been applied here.

8.3.2 Short-Term Construction Impacts

During construction, soil-disturbing activities, operations of heavy-duty equipment, commuting workers, and the laying of asphalt may generate emissions that would temporarily affect air quality. The total emissions and their timing would vary depending on the

phasing of the project and options chosen for the project. Typical sources of emissions during construction projects include:

- Fugitive dust generated during excavation, grading, and loading and unloading activities.
- Dust generated during demolition of structures and pavement.
- Engine exhaust emissions from construction vehicles, worker vehicles, and diesel fuel-fired construction equipment.
- Increased motor vehicle emissions associated with increased traffic congestion during construction.
- Ozone precursors (nitrogen oxides and volatile organic compounds) emitted during asphalt paving and painting.

The regulated pollutants of concern for the first two source types (dust) are $PM_{2.5}$ and PM_{10}. Engine and motor vehicle exhaust would result in emissions of ozone precursors, $PM_{2.5}$, PM_{10}, air toxics (e.g., DPM), and GHGs. Given that these emissions are temporary and cannot be easily quantified at the long-range planning level, the temporary influence of the emissions on ambient concentrations is not assessed as part of this analysis. However, federal and state regulations will contribute to reducing the emissions of these construction activities relative to today based on projected fleet turnover, use of alternative fuel technologies, engine regulations, and the influence of pending state regulations.

ALTERNATIVE 0 (NO ACTION)

The No Action Alternative includes construction under existing plans and zoning, but would not induce additional construction, as would be required for the Action Alternatives. Therefore, impacts from construction will result in a **less-than-significant impact** on air quality and GHGs.

COMMON TO ALL ACTION ALTERNATIVES

The Action Alternatives each has distinct durations and complexity of construction due to the varied heights and distinctions among the proposed designs. To the extent that the construction activities span long durations, exposures to certain air pollutants, including toxics, could have impacts on human health. Given that potential risk, each of the Action Alternatives has **potentially significant adverse impacts** for air quality and GHGs related to construction.

8.3.3 Long-Term Impacts

ALTERNATIVE 0 (NO ACTION)

The analysis of the housing capacity and job capacity in the No Action Alternative shows daily VMT increasing by 343,957 citywide, when compared against a 2019 baseline. Of this VMT increase, 16,443 of those miles are forecast to be associated with diesel fueled vehicles, as shown in **Table 8-2**. The citywide estimated overall VMT for the baseline year and the No Action Alternative are presented in **Table 8-3**.

TABLE 8-2 **Diesel VMT and DPM Emissions by Alternative**

Alternative	Daily Diesel VMT Increase from Baseline	Annual Diesel VMT Increase from Baseline[a]	DPM2.5 (lb)[b]	Alt. DPM2.5 Increase (lb)[c]
No Action	16,443	5,375,796	122	—
Alternative 1	23,723	7,755,837	175	53.80
Alternative 2	27,817	9,094,281	206	84.05
Alternative 3	34,282	11,207,983	253	131.83

a. Annual VMT based on 326.935 equivalent workdays as calculated during the transportation modeling for this Comprehensive Plan. The diesel-specific VMT was calculated based on the County's geographic GHG forecasting tool (King County 2022a) for 2044.
b. Emissions rate per VMT in 2044 calculated using the California statewide 2044 forecasted emissions from the diesel on-road fleet. The emissions factor (g/VMT) estimates were produced from the Emission FACtor (EMFAC) model, version EMFAC2021 v1.0.2. California fleet turnover to cleaner technology is expected to be more rapid than Washington due to regulations and thus these estimates are somewhat lower than we might see in Washington.
c. Increases relative to the No Action Alternative

The associated fleet mix, emissions reduction, and technology implementation due to fuel economy standards, alternative fuels, and other innovations may offset emissions relative to this increase in VMT, but King County's current wedge analysis indicates that current policies will not meet the county's GHG targets and further policy developments will be necessary. The county's wedge analysis is capturing reductions that would be external to the city's policies. However, with Bellevue's policies in place, the city is expected to meet and exceed their GHG emissions reduction goals by 2050.

TABLE 8-3 **Project VMT and $MTCO_2e$ Emissions by Alternative**

Alternative	Daily VMT Increase from Baseline	Annual VMT Increase from Baseline[a]	$MTCO_2e$[b]	Alt. $MTCO_2$ Increase[c]
No Action	343,957	112,451,582	24,138	--
Alternative 1	496,238	162,237,571	34,825	10,687
Alternative 2	581,875	190,235,303	40,834	16,696
Alternative 3	717,115	234,449,993	50,325	26,187

a. Annual VMT based on 326.935 equivalent workdays as calculated during the transportation modeling for this Comprehensive Plan.
b. Emissions rate per VMT in 2044 calculated for Bellevue using the King County's Geographic GHG Wedge Planning Tool Data, accessed 3/28/2023, https://your.kingcounty.gov/dnrp/climate/documents/2022/puget-sound-regional-emissions-analysis-project-geographic-ghg-wedge-planning-tool-09-2022.xlsx.
c. Increases relative to the No Action Alternative.

Importantly, a small fraction of the increase in housing units (as discussed in Chapter 5, *Population and Employment*, and Chapter 7, *Housing*) is expected within 500 feet of major roadways. Increases in VMT and increases in housing units near high-volume roadways can lead to increased exposure to a variety of air pollutants, including DPM. From the baseline year to 2044, the No Action Alternative is forecast to generate an additional 122 pounds of DPM, as seen in Table 8-2.

Under the No Action Alternative, the near-road land uses in the Wilburton study area would largely remain medical- and office-based and would not see a large change in the number of potential residents in close proximity to roadways and the associated exposure to criteria air pollutants and toxics.

The region is in attainment for pollutants of concern, and concentrations for those pollutants are trending downward. This alternative is not expected to reverse that trend or cause the NAAQS to be exceeded.

For GHGs, No Action Alternative would result in increased vehicle traffic that would cause emissions to increase linearly with the traffic volumes if vehicle emissions rates are held constant. However, with fleet turnover, scrappage, adoption of new technologies, and increasingly stringent regulations, the increase in VMT is likely to result in GHG growth that is less than linear. The current forecast from the county indicates that an additional 24,138 $MTCO_2e$ will be produced under the No Action Alternative, as compared to the baseline year, these results are provided in Table 8-3.

The built environment will also be a contributor to GHGs and, like with vehicles, new energy regulations and technologies will reduce the GHG emissions intensity from residential, commercial, and industrial entities. The King County planning tools indicate that Bellevue, for year 2044, will have reduced emissions by roughly 79 percent from business-as-usual as a result of changes to the state energy code, the Clean Energy Transformation Act, and the Climate Commitment Act (King County 2022b). Bellevue has additional policies in place that will likely further reduce the city's emissions footprint by 2044.

While there may be increases in emissions of both DPM and GHGs from the No Action Alternative, the significance criteria were designed to assess the impacts relative to No Action. Therefore, the No Action Alternative would result in a **less-than-significant impact** on air quality and GHG.

COMMON TO ALL ACTION ALTERNATIVES

The Action Alternatives are expected to continue growth in the Bellevue region that will result in daily VMT increasing. Notably, the Action Alternatives result in lower VMT per capita due to consolidation of populations near employment and high-capacity transit service. However, looking at the overall VMT indicates a general increase in the GHG footprint for the region under the Action Alternatives. The VMT metrics presented in Table 8-3 provide the overall VMT increases associated with each Action Alternative's housing and job capacities and the increases above the No Action Alternative. Based on the increase in housing and job capacities, the VMT increases with each consecutive Action Alternative, with Alternative 3 having the largest VMT increase above the No Action Alternative. The associated fleet mix, emissions reduction, and technology implementation due to fuel economy standards, alternative fuels, and other innovations may offset emissions relative to this increase in VMT if transportation climate policies change significantly in the future. However, current forecasts indicate that GHGs will increase above the No Action Alternative, as shown in Table 8-3. These forecast emissions take into consideration the variety of climate policies that are currently in place.

In comparing each of the Action Alternative's GHG emissions based on housing and job capacity against the GHG significance threshold (10,000 $MTCO_2e$), all Action Alternatives are identified as exceeding the threshold. It is important to remember that the region is in attainment with air quality pollutants of concern, and those

concentrations are trending downward. The Action Alternatives may not reverse that trend or cause the NAAQS to be exceeded at the citywide level. However, the alternatives' increased density of housing units near roadways (discussed further in Chapter 5, *Population and Employment*) may expose more individuals to air pollution. From the context of DPM emissions, the increases in diesel fueled VMT within the city based on housing and job capacities would increase the DPM emissions at a rate that exceeds the air toxics significance threshold.

For the Wilburton study area, many of the near-highway land uses would transition to mixed use, often office-residential. This transition has the potential to expose more individuals to near-road air pollution. As noted, the City of Bellevue's recent air quality study (2023) provides information regarding potential exposure to high-volume roadway air pollution as well as a discussion of potential mitigation strategies. The distances to the roadways, along with building height relative to the roadways, are important factors to consider when evaluating the potential for exposure.

Under all alternatives this EIS takes a conservative approach with respect to analyzing air quality impact associated with "build-out" housing and job capacities. With all Action Alternatives exceeding both the GHG significance threshold and the air quality significance threshold based on these capacities, implementing the Comprehensive Plan Periodic Update would result in a **potentially significant impact** on air quality and GHGs. It is not expected that the "build-out" housing and job capacities would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with the alternatives.

8.4 Mitigation Measures

8.4.1 Incorporated Plan Features

No features of the Comprehensive Plan Periodic Update are specific to air quality or GHG impact reductions.

8.4.2 Construction Mitigation Measures

For temporary impacts during construction, construction site owners and/or operators are required to take reasonable precautions to prevent fugitive dust from becoming airborne (Washington State Department of Transportation 2017). Fugitive dust may become

airborne during demolition, material transport, grading, driving of vehicles and machinery on and off the site, and wind events.

Controlling fugitive dust emissions may require some of the following actions:

- Spray exposed soil with water or other suppressant to reduce emissions of PM_{10} and deposition of particulate matter.
- Use phased development to keep disturbed areas to a minimum.
- Use wind fencing to reduce disturbance to soils.
- Minimize dust emissions during transport of fill material or soil by wetting down the load, covering the load, or by ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks.
- Promptly clean up spills of transported material on public roads.
- Schedule work to minimize disruption of the existing vehicle traffic on streets.
- Restrict traffic on-site to reduce soil upheaval and the transport of material to roadways.
- Locate construction equipment and truck staging areas away from sensitive receptors as practical and in consideration of potential impacts on other resources.
- Provide wheel washers to remove particulate matter that would otherwise be carried off-site by vehicles to decrease deposition of particulate matter on area roadways.
- Cover dirt, gravel, and debris piles to reduce dust and wind-blown debris.

Emissions of $PM_{2.5}$, PM_{10}, ozone precursors (e.g., volatile organic compounds and nitrogen oxides), sulfur oxides, and CO would be minimized whenever reasonable and possible. Since these emissions primarily result from construction equipment, machinery engines would be kept in good mechanical condition to minimize exhaust emissions. Additionally, contractors would be encouraged to reduce idling time of equipment and vehicles and to use newer construction equipment or equipment with add-on emissions controls.

8.4.3 Long-Term Mitigation Measures

The City of Bellevue is actively working to address air quality issues in the city, and potential mitigation strategies to address air quality impacts associated with locating development in close proximity to

high-volume roadways are provided in the recent Air Quality and Land Use Planning Report (City of Bellevue 2023). A variety of air and GHG mitigation measures can be implemented to reduce the exposure of residents. The following measures could be applied to any of the alternatives to reduce exposure to air pollutants:

- Reduction in exposure to traffic by implementing mitigation strategies, including reducing vehicle miles traveled (VMT), retrofitting diesel vehicles, electrifying the city's fleet, transit-oriented development, land use buffers, improved urban design, roadside barriers, decking or lids over highways, and building design strategies.
- Reduction in vehicle trips and improving vehicle fuel efficiency.
- Application of transit-oriented development to create more walkable communities.
- The leading measure is to limit the development of residential units with land use buffers (e.g., within 500 feet of major roadways in the city). Land use buffers and project-specific mitigation measures to limit exposures to emissions sources such as high-capacity roadways. Land use buffers could include designating areas near high-impact areas as industrial or other nonresidential zones to ensure distance between these areas and residences. Bellevue could also limit residential uses within a certain distance of freeways.
- Enhance the air monitoring network in Bellevue to enable the community to characterize their exposures more accurately. Prioritize highly burdened regions such as the Wilburton study area.
- Continue to prioritize low emissions transportation modes through the development of additional bike/walk pathways, rideshare programs, and other travel demand strategies.
- Identify opportunities to use roadside barriers to reduce exposure to air pollution and to provide the related benefit of reduced noise.
- Produce air quality-specific policies that promote a uniform approach to reducing exposures to Bellevue's future developments.
- Improved urban design to enhance the use of open space and strategic building placement.

- Deploy roadside barriers to reduce the dispersion of emissions from high-capacity roadways, with the co-benefit of reducing noise.
- Decking and lids over highways may also reduce exposures by consolidating emissions releases to certain locations or limiting releases in certain areas.
- Promote the use of high-efficiency ventilation filters in buildings within 1,500 feet of high-volume roadways. Limit sensitive uses on floors that are at or near roadway level.

As part of Washington's Climate Commitment Act, funds will be allocated to assist highly impacted communities and to support the involvement of cities, community members, and other impacted entities. This program is yet to take form but seems to have a variety of similarities to California's Assembly Bill 617. This program will likely provide additional emphasis and consideration of air-related mitigation measures for the Wilburton study area.

8.5 Significant Unavoidable Adverse Impacts

The Action Alternatives would result in **potentially significant unavoidable adverse impacts** on air quality and GHGs because they exceed one or more of the thresholds of significance.

CHAPTER 9 Noise

9.1 Introduction

This chapter examines noise levels in the study area. A desktop survey using aerial photography, Google Earth, ArcGIS, and the updated City of Bellevue Comprehensive Plan and zoning was used to determine locations of noise-sensitive land uses in the study area. Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically include residences, hospitals, schools, childcare facilities, transient lodging, libraries, and certain types of recreational uses. Information is provided on how noise is defined and the noise levels when impacts occur.

The potential impacts identified for the No Action Alternative and Action Alternatives include analysis of the "build-out" housing unit capacity and job capacity associated with each alternative. For the No Action Alternative and the Action Alternatives, these capacities for growth are higher than the overall citywide growth targets of 35,000 new housing units and 70,000 new jobs by 2044. It is not expected that the "build-out" housing and job capacities would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with the alternatives.

After describing existing noise levels and the methods used for the impact analysis, each alternative was analyzed to determine the effects on existing and proposed noise-sensitive land uses within the study area. This includes construction, stationary commercial

activities, and the resulting increased noise levels associated with increases in traffic.

A section on mitigation measures follows that describes features of the alternatives, other city programs and regulations, and other ways to address noise impacts, as applicable.

9.2 Affected Environment

9.2.1 Background

ACOUSTICAL TERMS

Noise is defined as sound that is loud or unpleasant or that causes disturbance. There are several different ways to measure noise, depending on the source of the noise, the receiver, and the reason for the noise measurement. Some statistical noise levels are stated in this EIS in A-weighted decibels (dBA). Noise levels stated in terms of dBA reflect the response of the human ear by filtering out some noise in the low- and high-frequency ranges that the ear does not detect well.

The most frequently used noise descriptors are summarized below:

L_{eq}: The L_{eq}, or equivalent sound level, is used to describe noise over a specified period of time in terms of a single numerical value; the L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The L_{eq} may also be referred to as the average sound level.

L_{max}: The maximum, instantaneous noise level experienced during a given period of time.

L_{dn}: Also termed the day-night average noise level (DNL), the L_{dn} is the average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dB to measured noise levels between the hours of 10 p.m. to 7 a.m. to account for greater nighttime noise sensitivity.

CNEL: CNEL, or Community Noise Equivalent Level, is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dB to measured noise levels between the hours of 7 p.m. to 10 p.m. and after an addition of 10 dB to noise levels between the hours of 10 p.m. to 7 a.m. to account for greater noise sensitivity in the evening and nighttime, respectively.

The effects of noise on people can be listed in three general categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as startling and hearing loss

In most cases, environmental noise produces effects in the first two categories only. Workers in industrial plants, however, may experience noise effects in the last category, physiological effects. No completely satisfactory way exists to measure the subjective effects of noise, or to measure the corresponding reactions of annoyance and dissatisfaction. This lack of a standard is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise. Thus, an important way of determining a person's subjective reaction to a new noise is to compare it to the existing or "ambient" environment to which that person has adapted. In general, the more a new noise exceeds the previously ambient noise level, the less acceptable the new noise will be judged by listeners.

The following general relationships exist between noise levels and human perception:

- A 1- or 2-decibel (dB) increase is not perceptible to the average person.
- A 3 dB increase is just barely perceptible to the human ear.
- A 5 dB increase is readily perceptible to the human ear.
- A 10 dB increase is perceived as a doubling in loudness to the average person.

REGULATORY CRITERIA CITY OF BELLEVUE

The Washington State Department of Ecology (Chapter 173-60 WAC) has classified three areas or zones based on land use and established maximum permissible noise levels, titled Environmental Designation for Noise Abatement (EDNA).

Jurisdictions may designate EDNAs or their own classifications. The City of Bellevue has adopted maximum permissible environmental noise levels in Bellevue City Code (BCC) 9.18.030, as shown in **Table 9-1**.

TABLE 9-1 **Bellevue Maximum Permissible Environmental Noise Levels**

EDNA of Receiving Property (dBA)			
EDNA of Noise Source	**Class A**	**Class B**	**Class C**
Class A Residential	55	57	60
Class B Commercial	57	60	65
Class C Industrial	60	65	70

SOURCE: Bellevue City Code

The code sets allowable outdoor noise levels in residential areas near proposed future commercial and industrial facilities; it is based on noise that may emanate from operations within buildings and does not address transportation noise from motor vehicles, rail transport, or aircraft, which are addressed at the state and federal levels. The allowable noise limits apply to all hours, with 10 dBA lower allowable limits at night (10 p.m. to 7 a.m.) for receiving property in Class A EDNAs.

Temporary construction activity that complies with the allowable hour limitations set by BCC 9.18.020 is exempt from the numerical noise limits.

FEDERAL AND STATE GUIDELINES

This analysis addresses noise standards associated with highways consistent with Washington State Department of Transportation (WSDOT) and Federal Highway Administration (FHWA) guidelines. A major source of noise in urban environments is from vehicles traveling on roads; as growth leads to additional traffic, noise levels may increase. Federal aid projects—transportation facilities receiving federal funding—are subject to federal noise guidelines. WSDOT 2020 Traffic Noise Policy and Procedures (WSDOT 2020) are consistent with those of the FHWA (23 CFR 772) and have been approved by FHWA for use on federal-aid projects in Washington. FHWA guidelines state that noise abatement must be considered when a noise impact affects a particular land use or Activity Category. The FHWA Activity Categories B and C with a Noise Abatement Criteria (NAC) of 67 dBA apply to residences, churches, schools, recreation areas, and similar land use activities in proximity to state or federal highways. **Table 9-2** describes WSDOT's NAC by land use category. Other developed lands (e.g., hotels/motels or other business areas) are included in Activity Category E, with an NAC

of 72 dBA. FHWA determines a noise impact to occur when predicted future traffic noise levels "approach" or exceed the established FHWA NAC for a given Activity Category. WSDOT defines "approach" as within 1 dBA of the FHWA NAC (66 dBA for Activity Categories B and C or 71 dBA for Category E).

TABLE 9-2 **WSDOT Noise Abatement Criteria (NAC) by Land Use Category**

Activity Category	dBA, L_{eq}	Description
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Residential (single- and multi-family units).
C	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings.
D	52 (Interior)	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants, bars, and other developed lands, properties, or activities not included in Categories A through D or F. Includes undeveloped land permitted for these activities.
F	—	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	—	Undeveloped lands that are not permitted.

SOURCE: WSDOT 2020

NOTE: L_{eq} = equivalent noise level

CRITERIA FOR INCREASES IN NOISE LEVELS

FHWA and WSDOT consider a traffic noise impact to occur if future predicted noise levels substantially exceed the existing noise levels. While FHWA guidance does not specifically define what constitutes a substantial increase, FHWA provides state highway agencies the flexibility in establishing their own definition of what constitutes a substantial increase. The WSDOT guidance states that a predicted future traffic noise level of 10 dBA or more above existing noise levels constitutes a substantial increase. For the assessment of

exposing new residential uses to transportation noise, noise levels in excess of the NAC are used to determine a substantial noise exposure impact.

METHODOLOGY

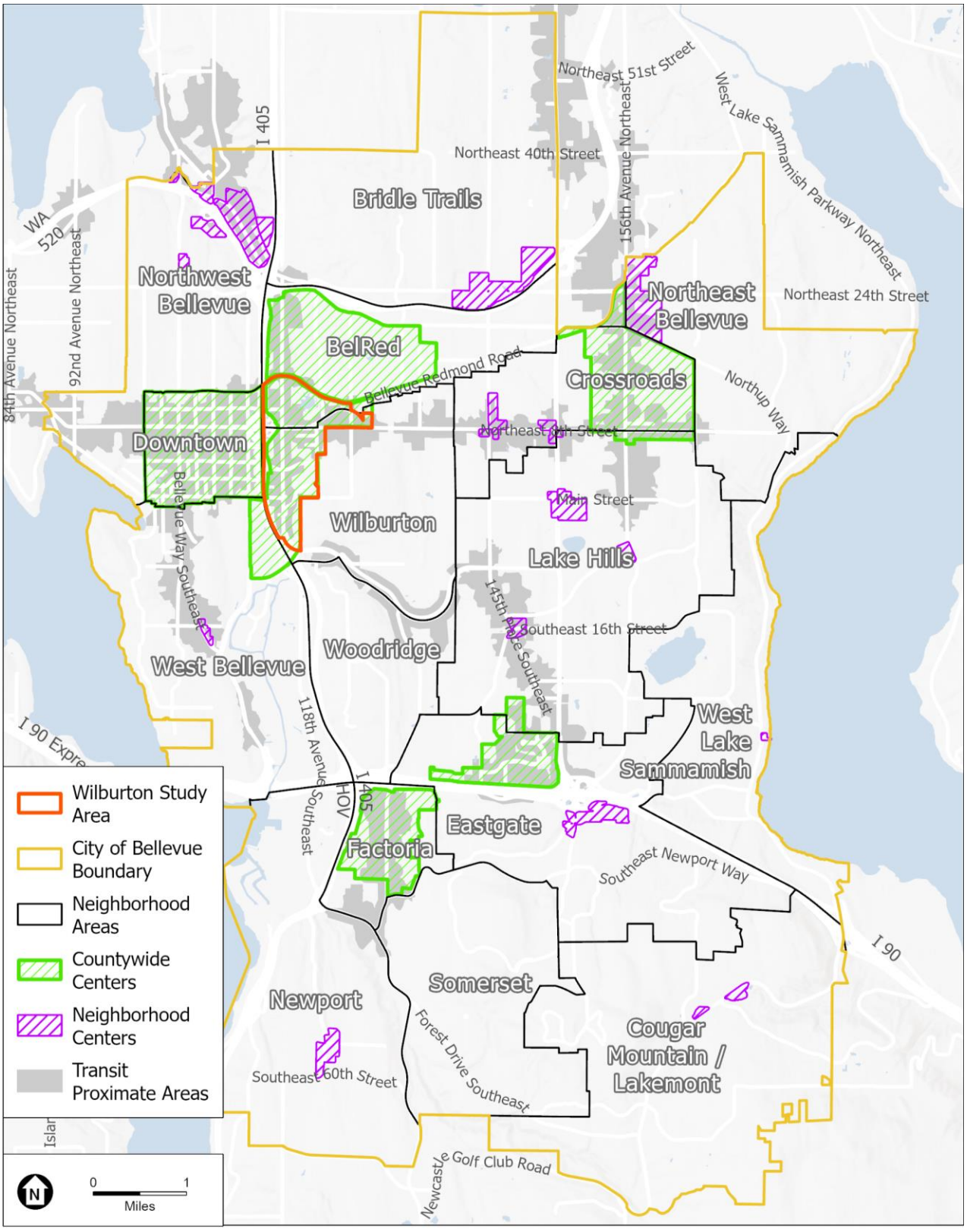
Traffic noise levels were evaluated using algorithms of the FHWA's Traffic Noise Model (TNM). The model is based on reference energy emissions levels for automobiles, medium trucks (two axles), and heavy trucks (three or more axles) with consideration given to vehicle volume, speed, and distance to the receptor. Both existing and future noise receivers were modeled. Documenting noise levels generated by traffic from future development is helpful to local agencies and the public to aid in future land use planning. To capture locations where sensitive noise receivers could be located in the future, noise receivers were modeled at distances along highways throughout the study area in locations where residential uses are located.

NOISE-SENSITIVE RECEIVERS WITHIN THE STUDY AREA

The noise study area covers all areas within the City of Bellevue. Information is provided on a citywide basis as shown in **Figure 9-1**. Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically include residences, hospitals, schools, childcare facilities, transient lodging, libraries, and certain types of recreational uses. Noise-sensitive residential receivers are found throughout the study area.

With respect to inequality of noise exposures in the U.S., it is estimated that nighttime and daytime noise levels are higher in locations with higher proportions of nonwhite residents and people of lower socioeconomic status (Seltenrich 2017). For example, it is estimated as a difference of 4.0 dBA between urban block groups with 75 versus 0 percent black residents, and a difference of 2.9 dBA between urban block groups with 50 versus 0 percent of residents living below the poverty level.

More specifically, in highly segregated metropolitan areas in the United States, differences in political power across race and class lines affect decision-making about the siting of undesirable land uses, including major industries or roadways. This can lead to demographic disparities in noise exposures and potentially increase noise levels overall for everyone (Seltenrich 2017).



SOURCE: City of Bellevue 2023; Prepared by BERK 2023

FIGURE 9-1 **City of Bellevue Geographies**

9.3 Potential Impacts

9.3.1 Thresholds of Significance

The following thresholds of significance are considered in this chapter and would occur under the following:

- Future traffic noise levels of 10 dBA or more above existing noise levels.
- Expose new residential uses to noise levels in excess of the NAC presented in Table 9-2.
- Short-term construction activities occur outside of the exempt hours of BCC 9.18.020.
- Future commercial facilities would use stationary mechanical equipment, outdoor loading docks, or outdoor material storage areas that generate noise in excess of the noise limits of BCC 9.18.030. Future public parks and plazas have the potential to result in public events that involve amplified sound that could also generate noise in excess of the noise limits of BCC 9.18.030.

9.3.2 Impacts Common to All Alternatives

SHORT-TERM IMPACTS

Under all alternatives, there would be temporary impacts in noise during construction. Construction activities would be temporary in nature and it is expected that most activities would occur during daytime working hours. Individual development projects constructed under the Comprehensive Plan Periodic Update would likely not be concentrated in one area at any given time. Typical construction equipment would include dump trucks, cement pumpers, backhoes, excavators, and other heavy equipment. Within Bellevue, construction activities are exempt between the hours of 7 a.m. and 6 p.m. on weekdays and 9 a.m. and 6 p.m. on Saturdays that are not legal holidays. Any construction outside of these hours or on Sundays would require expanded exempt hours and be subject to criteria noted in BCC 9.18.020.C (Noise Exemptions) or would require a noise variance.

Future public parks and plazas have the potential to result in public events that involve amplified sound that could generate noise in excess of the noise limits of BCC 9.18.030. However, operation of sound amplification equipment requires compliance with a permit

issued pursuant to BCC 9.18.045A or a conditional use permit issued pursuant to Land Use Code Chapter 20.30B.

LONG-TERM IMPACTS

Noise from Stationary Commercial Operations

Future commercial facilities could use stationary mechanical equipment that, unless properly designed or controlled, could cause community noise levels to exceed the allowable city noise ordinance limits. In addition, future facilities could use outdoor loading docks and outdoor material storage areas that, unless properly designed and controlled, could generate substantial amounts of noise in the surrounding community. Such uses would be subject to the noise limits of BCC 9.18.030. Mitigation measures to reduce these noise impacts to less-than-significant levels are described in Section 9.4, *Mitigation Measures*.

Traffic Noise Increases Associated with the Plan

Table 9-3 provides a high-level summary of Existing Conditions, No Action Alternative, Alternative 1, Alternative 2, and Alternative 3 potential noise levels from four freeway segments that would support traffic increases resulting from development under each of the alternatives. Receptor locations were modeled at a distance of 150 feet from the center of each highway. As shown in Table 9-3, the existing noise levels adjacent to the freeway segments range from 73 to 77 dBA, and the increases over existing conditions in the alternatives range from zero to 1 dBA. As noted above, an increase of 1 dBA is not perceptible to the average person and a 3 dBA increase is barely perceptible. Because all increase in noise along all roadway segments would be less than 10 dBA, the impact with respect to transportation noise would be **less than significant** for all alternatives.

Depending on funding sources, a more detailed traffic noise analysis could be conducted for specific receptors and considering NAC criteria, as well as including field measurements to identify existing conditions and potential noise impacts and any necessary mitigation measures.

TABLE 9-3 **Existing, No Action, and Future Potential Noise Levels (in dBA)**

Highway Segment	Existing Conditions	No Action Alternative		Alternative 1		Alternative 2		Alternative 3	
		Future Noise	Increase over Existing	Future Noise	Increase over Existing	Future Noise	Increase over Existing	Future Noise	Increase over Existing
I-405 north of SR 520	77	78	1	78	1	78	1	78	1
I-405 between SR 520 and I-90	77	77	<1	77	<1	78	<1	78	1
I-405 south of I-90	76	76	<1	76	<1	76	<1	76	<1
SR 520 west of I-405	73	73	<1	73	<1	73	<1	73	<1
SR 520 east of I-405	74	75	1	75	1	75	1	75	1
I-90 west of I-405	75	75	<1	75	<1	76	1	76	1
I-90 east of I-405	76	77	1	77	1	77	1	77	1

SOURCE: Prepared by ESA 2023

Because the Grand Connection would cross over I-405, there would be increases in noise by bringing the receiver closer to the interstate; for receivers near the Grand Connection, however, the increase in noise over existing conditions would not be perceptible to the average person.

Exposure of New Residential Uses to Excessive Traffic Noise Levels

Action Alternatives could result in new residential uses proximate to freeways that generate the relatively high noise levels indicated in Table 9-3 at a distance of 150 feet. Given that the NAC for residential uses in Table 9-2 is an exterior value of 67 dBA, such noise exposure in excess of this NAC was calculated for each of the highway segments analyzed, and the distance required to avoid exposure in excess of the NAC is presented in **Table 9-4**. These distances are conservative in that they do not account for intervening structures or topography that would attenuate traffic noise.

As can be seen from Table 9-4, if residential development under the Comprehensive Plan Periodic Update were to occur within 2,000 feet of I-405, 1,200 feet of I-90, or 1,000 feet of SR 520, the noise exposure of these uses would likely approach or exceed the NAC. Mitigation measures to reduce these potential noise impacts to less-than-significant levels are described in Section 9.4, *Mitigation Measures*.

TABLE 9-4 **Existing, No Action, and Future Potential Noise Levels (in dBA)**

Highway Segment	Distance (feet) to Residential NAC (67 dBA)			
	No Action Alternative	Alternative 1	Alternative 2	Alternative 3
I-405 north of SR 520	1,890	1,925	1,930	1,950
I-405 between SR 520 and I-90	1,775	1,790	1,805	1,820
I-405 south of I-90	1,390	1,410	1,420	1,425
SR 520 west of I-405	625	665	685	690
SR 520 east of I-405	920	960	980	1,005
I-90 west of I-405	1,110	1,130	1,145	1,150
I-90 east of I-405	1,460	1,925	1,495	1,505

9.3.3 Impacts of Alternative 0 (No Action)

The No Action Alternative would have less capacity for development than Alternatives 1, 2, and 3. Since this is the No Action Alternative, there would not be any change and, therefore, no construction beyond that allowed by current zoning. Stationary commercial operations would be the same, and there are no other impacts beyond those described above in Section 9.3.1, *Impacts Common to All Alternatives*. The No Action Alternative would result in smaller increases in traffic noise compared to Alternatives 2 and 3. As shown in Table 9-3, noise increases along I-90 west of I-405 would increase by 1 dBA under Alternatives 2 and 3, unlike the No Action Alternative.

Noise exposure of new noise-sensitive uses would be the same as that allowed by current zoning.

9.3.4 Impacts of Alternative 1

Construction and stationary commercial operations impacts would be the same as described above in Section 9.3.1, *Impacts Common to All Alternatives*.

Future noise levels due to increases in traffic under Alternative 1 range from 73 to 78 dBA at a distance of 150 feet, with increases above existing levels up to 1 dBA. Similar to the No Action Alternative, noise increases along I-90 west of I-405 would increase by less than 1 dBA. Under Alternative 1, development of new noise-sensitive uses in proximity to freeways could expose people to noise levels in excess of the 67 dBA residential NAC.

9.3.5 Impacts of Alternative 2

Future noise levels under Alternative 2 range from 73 to 78 dBA at a distance of 150 feet, with increases over existing conditions levels up to 1 dBA. Noise increases along I-90 west of I-405 would increase by 1 dBA, unlike the No Action Alternative or Alternative 1. Under Alternative 2, development of new noise-sensitive uses in proximity to freeways could expose people to noise levels in excess of the 67 dBA residential NAC.

9.3.6 Impacts of Alternative 3

Future noise levels under Alternative 3 range from 73 to 78 dBA at a distance of 150 feet, with increases over existing conditions levels 1 dBA or less. Noise increases along I-90 west of I-405 would increase by 1 dBA, unlike the No Action Alternative or Alternative 1. Under Alternative 3, development of new noise-sensitive uses in proximity to freeways could expose people to noise levels in excess of the 67 dBA residential NAC.

9.4 Mitigation Measures

9.4.1 Incorporated Plan Features

There are no features of the Comprehensive Plan Periodic Update that are specific to noise or noise reduction.

9.4.2 No Action Alternative (Alternative 0)

Alternative 0 (No Action) has capacity for adding 41,000 new housing units. This is above the regional growth target for Bellevue, which is 35,000 new units, but does not meet other new planning requirements, including affordable housing across income bands and a range of housing types. There would be capacity for 124,000 new jobs under this alternative, which is above the regional growth target of 70,000 jobs.[1] Housing capacity within the Wilburton study area would be small (less than 1 percent of the citywide total), and the Wilburton study area would have a modest share of citywide job capacity (5 percent) with no changes to allowed uses or building intensities.

[1] Housing and job capacity used in this EIS analysis are higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report.

Development of new commercial uses under Alternative 0 (No Action) could result in new noise impacts from mechanical equipment or loading docks that may exceed the City of Bellevue Noise Standards in BCC 9.18.030. Therefore, compliance with the Class B Commercial Maximum Permissible Noise Levels of BCC 9.18.030 would be a required mitigation measure. Methods of achieving these standards include using low-noise-emitting heating, ventilation, and air conditioning (HVAC) equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels to adjacent land uses. For commercial loading docks, specific design measures could be implemented that may include but are not limited to shielding from features integrated into site design, and/or restrictions on hours for commercial deliveries within commercial and mixed use areas.

While all of this growth would increase traffic on freeways and local roadways, as discussed above, noise levels on freeways throughout the Study Area under the No Action Alternative would increase by 1 dBA or less and would therefore be less than significant, and no mitigation measures are required.

9.4.3 Alternative 1

Alternative 1 allows for apartment and condominium buildings as well as gentle density increases across the city, resulting in capacity for an additional 59,000 housing units. Mandatory inclusionary affordable housing would be required in the growth corridor with incentives for affordable housing in other locations. Job capacity would increase, with space for an additional 179,000 jobs, which is nearly double Bellevue's regional growth target.

The Wilburton study area would increase its shares of total citywide housing capacity to about 8 percent and job capacity to about 17 percent. While all of this growth would increase traffic on freeways and local roadways, as discussed above, noise levels on freeways throughout the Study Area under the Alternative 1 would increase by 1 dBA or less and would therefore be less than significant, and no mitigation measures are required.

Development of new commercial uses under Alternative 1 could result in new noise impacts from mechanical equipment or loading docks that may exceed the City of Bellevue Noise Standards in BCC 9.18.030. Therefore, compliance with the Class B Commercial Maximum Permissible Noise Levels of BCC 9.18.030 would be a required mitigation measure. Methods of achieving these standards

include using low-noise-emitting HVAC equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels to adjacent land uses. For commercial loading docks, specific design measures could be implemented that may include but are not limited to shielding from features integrated into site design, and/or restrictions on hours for commercial deliveries within commercial and mixed use areas.

Under Alternative 1, development of new noise-sensitive uses in proximity to freeways could expose people to noise levels in excess of the 67 dBA residential NAC. Therefore, construction of new noise-sensitive land uses should either provide a buffer distance commensurate with the distances provided in Table 9-4, or project plans should be reviewed by a qualified acoustical consultant to ensure that appropriate construction upgrades (typically higher-rated Sound Transmission Class [STC] values for windows) are specified to ensure compliance with the interior noise criterion of 45 dBA L_{dn}.[2]

9.4.4 Alternative 2

Alternative 2 focuses growth in more Mixed Use Centers as well as in areas with good access to transit and jobs. It allows for high-rise residential buildings in Mixed Use Centers as well as townhouses and small multi-family residential buildings in Neighborhood Centers and along transit corridors; duplex and other lower-density housing types would be allowed across the city. Existing multi-family areas would allow a broader array of housing typologies at higher densities. There would be capacity for 77,000 additional housing units. Voluntary inclusionary affordability would be offered in Mixed Use and Neighborhood Centers. Similar to Alternative 1, job capacity would increase to include space for an additional 177,000 jobs, 53,000 above the No Action Alternative. The Wilburton study area would have the highest share of total citywide housing capacity at 10 percent, and (like Alternative 1) it would have a 15 percent share of total citywide job capacity. While all of this growth would increase traffic on freeways and local roadways, as discussed above, noise levels on freeways throughout the Study Area under the Alternative 2 would increase by 1 dBA or less and would, therefore, be less than significant, and no mitigation measures are required.

[2] An interior noise level of 45 dBA L_{dn} is the commonly accepted maximum recommended interior noise level for residential uses (HUD 2009).

Development of new commercial uses under Alternative 2 could result in new noise impacts from mechanical equipment or loading docks that may exceed the City of Bellevue Noise Standards in BCC 9.18.030. Therefore, compliance with the Class B Commercial Maximum Permissible Noise Levels of BCC 9.18.030 would be a required mitigation measure. Methods of achieving these standards include using low-noise-emitting HVAC equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels to adjacent land uses. For commercial loading docks, specific design measures could be implemented that may include but are not limited to shielding from features integrated into site design, and/or restrictions on hours for commercial deliveries within commercial and mixed use areas.

Under Alternative 2, development of new noise-sensitive uses in proximity to freeways could expose people to noise levels in excess of the 67 dBA residential NAC. Therefore, construction of new noise-sensitive land uses should either provide a buffer distance commensurate with the distances provided in Table 9-4, or project plans should be reviewed by a qualified acoustical consultant to ensure that appropriate construction upgrades (typically higher-rated STC values for windows) are specified to ensure compliance with WSDOT's interior noise standard of 45 dBA, L_{dn}.

9.4.5 Alternative 3

Alternative 3 would allow a greater diversity of housing types in all centers and along transit corridors, combining the areas of focus in Alternatives 1 and 2. There would be capacity for 95,000 additional housing units. Mandatory inclusionary affordable housing would be required in Mixed Use Centers, with incentives for affordable housing in other locations. Like Alternative 2, existing multi-family areas would allow a broader array of housing typologies at higher densities. Additional density would also be allowed within the city's existing lowest density areas. Job capacity would increase slightly to include space for an additional 200,000 jobs (76,000 above the No Action Alternative). The Wilburton study area would increase its share of total citywide housing unit capacity to 9 percent and (like Alternatives 1 and 2) would have capacity for 16 percent of total citywide job capacity. While all of this growth would increase traffic on freeways and local roadways, as discussed above, noise levels on freeways throughout the Study Area under the Alternative 2 would increase by 1 dBA or less and would, therefore, be less than significant, and no mitigation measures are required.

Development of new commercial uses under Alternative 3 could result in new noise impacts from mechanical equipment or loading docks that may exceed the City of Bellevue Noise Standards in BCC 9.18.030. Therefore, compliance with the Class B Commercial Maximum Permissible Noise Levels of BCC 9.18.030 would be a required Mitigation Measures. Methods of achieving these standards include using low-noise-emitting HVAC equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels to adjacent land uses. For commercial loading docks, specific design measures could be implemented that may include but are not limited to shielding from features integrated into site design, and/or restrictions on hours for commercial deliveries within commercial and mixed use areas.

Under Alternative 3, development of new noise-sensitive uses in proximity to freeways could expose people to noise levels in excess of the 67 dBA residential NAC. Therefore, construction of new noise-sensitive land uses should either provide a buffer distance commensurate with the distances provided in Table 9-4, or project plans should be reviewed by a qualified acoustical consultant to ensure that appropriate construction upgrades (typically higher rated STC values for windows) are specified to ensure compliance with the interior noise standard of 45 dBA, L_{dn}.

9.5 Significant Unavoidable Adverse Impacts

Under all alternatives, noise would occur citywide and in the Wilburton study area. Transportation noise impacts would be less than significant and noise from stationary sources and loading docks associated with commercial uses would be less than significant with mitigation. Therefore, there would be no significant, and unavoidable noise impacts.

CHAPTER 10 Public Services and Utilities

10.1 Introduction

This chapter describes the potential impacts on public services and utilities associated with each alternative. Public services are defined as police, fire and emergency medical services, parks, and schools. Utilities addressed in this section include electricity, water, wastewater, and solid waste.

Each alternative's amount and location of growth and effect on levels of services is considered. Mitigation measures to address increased demand are proposed.

10.2 Affected Environment

This chapter addresses existing public services and utilities in the City of Bellevue. The review is conducted on a citywide scale and for the Wilburton study area. The analysis relies on published information provided by the City of Bellevue, such as City of Bellevue–maintained websites, annual reports from the Police Department, Fire Department, and Utilities Department and planning documents from the school districts.

10.2.1 Current Policy and Regulatory Framework

Relevant city policies and regulations for public services and utilities include:

- Bellevue City Code Chapter 9.26 Solid Waste.
- Bellevue City Code Title 23 Construction Codes.
- Bellevue City Code Title 24 Utilities Codes.
- 2018 International Fire Code as Amended by the State of Washington and the City of Bellevue.
- Bellevue Fire Department Standards of Response Coverage which establishes baseline and benchmark standards for the Fire Department.

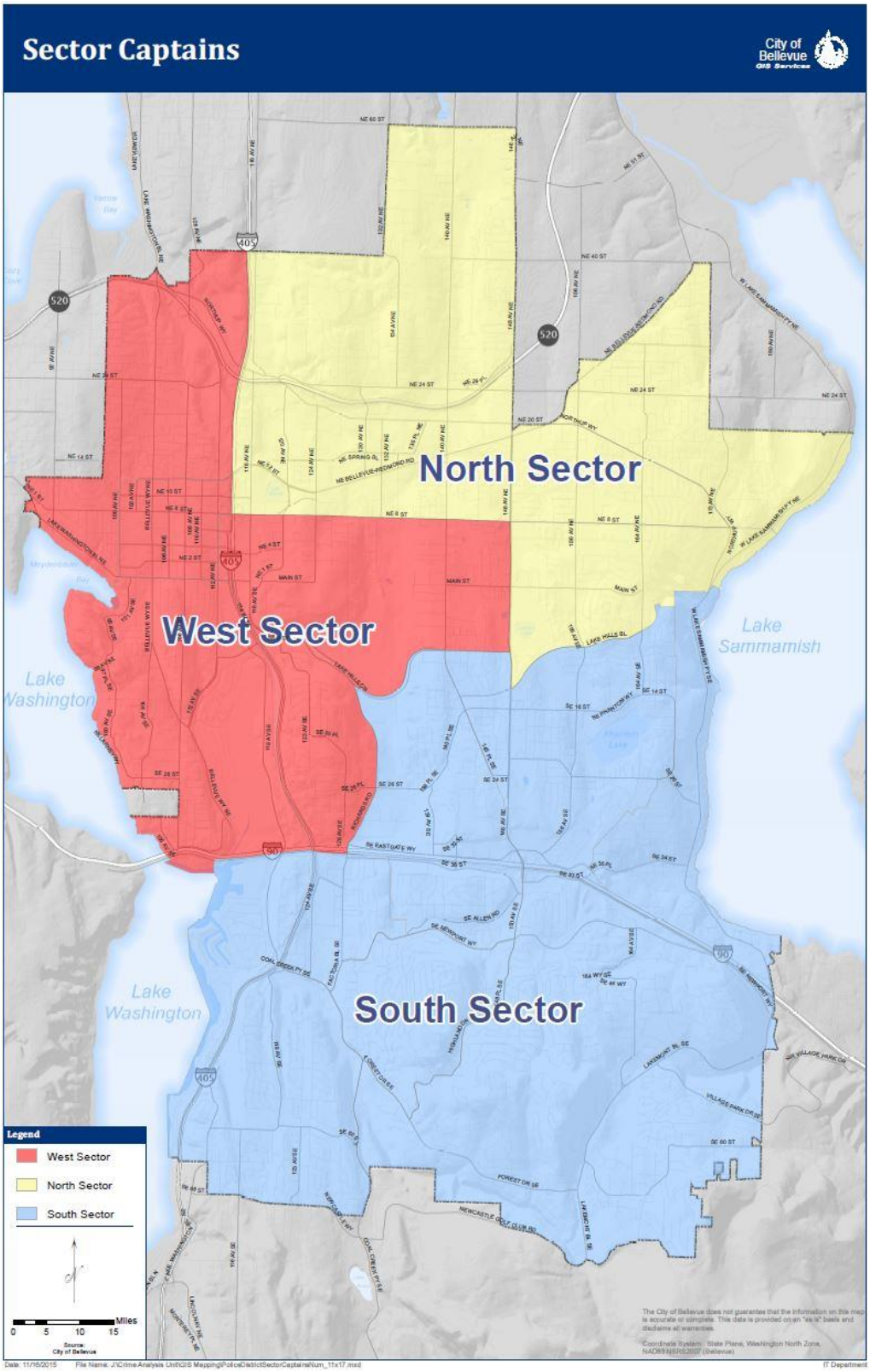
10.2.2 Public Services

POLICE PROTECTION

The City of Bellevue provides police protection throughout the city. The department headquarters is located at City Hall (450 110th Avenue NE). Community police substations are also located at the Crossroads (15600 NE Eighth Street Unit C3) and Factoria shopping centers (3915 Factoria Blvd. SE).

The Police Department is comprised of 249 staff including 199 commissioned employees and 50 non-commissioned personnel (Bellevue Police Department 2021). The Bellevue Police Department serves a population of more than 145,000 in a roughly 33-square-mile area (Bellevue Police Department 2023).

The department is divided into five divisions – Administration, Operations, Investigations, Planning/Research and Program Management and Administrative Services. Operations is the largest division, comprised of 143 commissioned police officers, two limited commissioned parking enforcement officers and a civilian crime prevention employee (Bellevue Police Department 2021). The city is divided into three sectors by geographic area to form the North, West, and South sectors (**Figure 10-1**). Sector captains work collaboratively with other city departments, sector-designated police officers, residents, and businesses to address problems and concerns. The 2021 Annual Report notes a number of vacancies that the department is working to fill (Bellevue Police Department 2021).



SOURCE: City of Bellevue 2016

FIGURE 10-1 **City of Bellevue Police Sectors**

The Planning/Research and Program Management major is a newly created position to oversee the department's strategic planning and policy development. The major is assigned to research and implement new technologies and resources such as body-worn cameras and the Community Crisis Assistance Team to improve services and transparency of the department within the community. (Bellevue Police Department 2021).

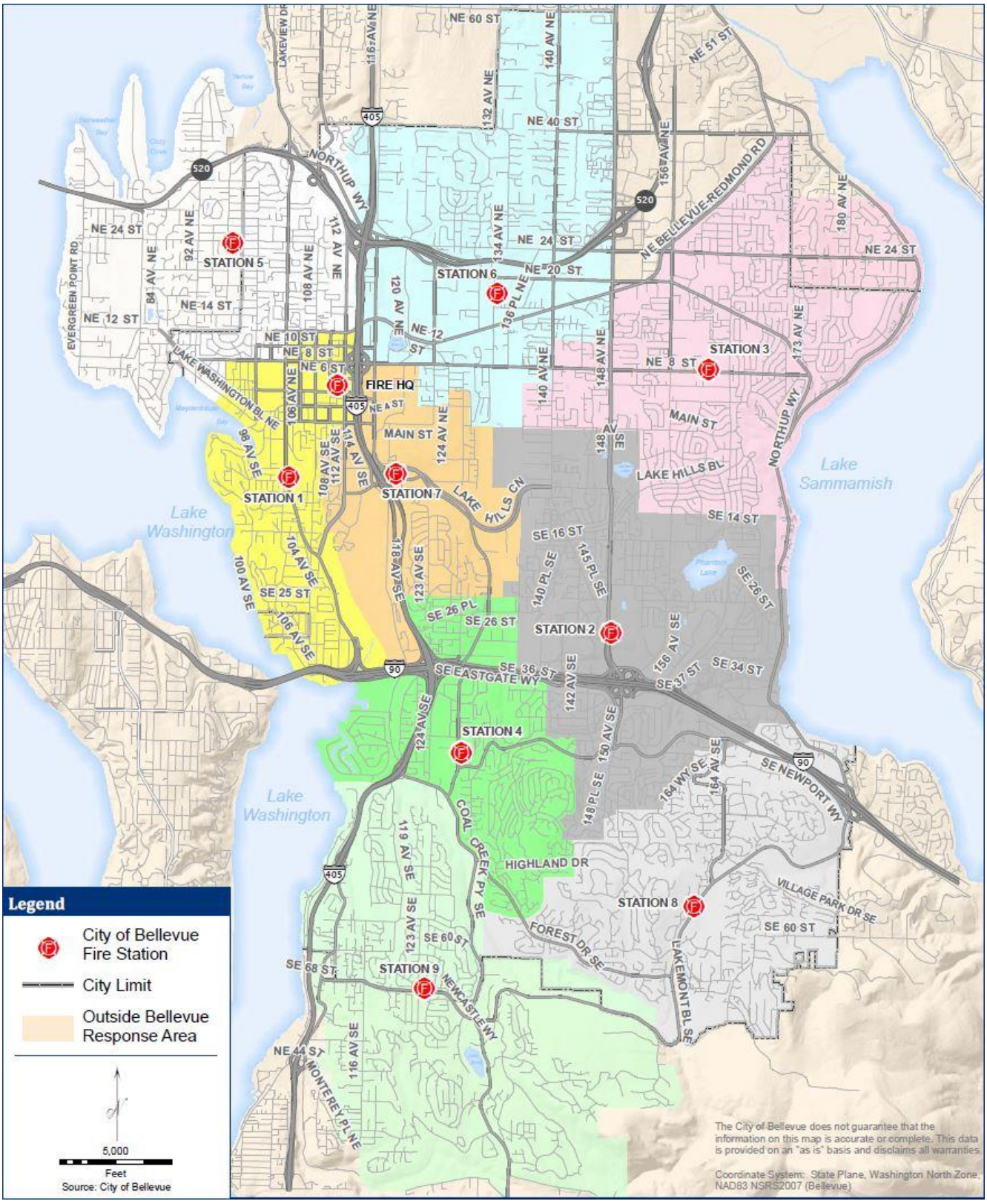
The Wilburton study area is served by the Bellevue Police Department and falls within the North and West Sectors.

FIRE PROTECTION AND EMERGENCY MEDICAL

Fire protection and emergency medical services in Bellevue are provided by the Bellevue Fire Department. Services provided by the Fire Department include fire suppression and prevention; emergency medical services (EMS), including Basic Life Support and Advanced Life Support; Hazardous Materials Response; Technical Rescue; Active Shooter/Hostile Event Response; Emergency Management; and Community Risk Reduction.

The Fire Department serves the City of Bellevue and the communities of Newcastle, Medina, Clyde Hill, Hunts Point, Yarrow Point and Village of Beaux Arts–approximately 39 square miles (Bellevue Fire Department 2021). The department includes 268 total employees: nine chief officers, 179 firefighter-emergency medical technicians (EMTs), 34 firefighter-paramedics and 46 civilian employees (Bellevue Fire Department 2021). The Fire Prevention Division of the Fire Department inspects new construction and redevelopment to ensure compliance with the International Fire Code. In 2021, the Fire Department completed 3,596 maintenance inspections and 5,400 new construction inspections (Bellevue Fire Department 2021).

The City of Bellevue is currently divided into nine response areas with one station per response area (**Figure 10-2**). These stations are staffed 24 hours a day, seven days a week, by three separate shifts (Bellevue Fire Department 2021).



SOURCE: City of Bellevue 2015

FIGURE 10-2 **City of Bellevue Neighborhood Fire Stations**

Fire Department Incident Response

In 2021, calls for service to the Bellevue Fire Department increased 20 percent over the previous year to 22,545, which is more than 3,800 more calls than the previous year. Calls for service include responses to fire and EMS and other calls such as false alarms, service calls, patient assist and non-injury incidents. The Fire Department estimates taller and more abundant high-rise buildings, elevated and below ground light rail, homelessness, opioid use, and an increased population may be influencing the increased calls for service. This increase demonstrates a likely trend for increased reliance on emergency service delivery (Bellevue Fire Department 2021).

The Fire Department established baseline performance standards as part of the 2012 Standards of Response Coverage Report. The baseline states that the first unit shall arrive on-scene in less than 8 minutes, 20 seconds, no less than 90 percent of the time (Bellevue Fire Department 2012).

Fire Department Planning

The Fire Facilities Levy passed in 2016 will fund a number of fire projects.

- **Construction of Fire Station 10 in Northwest Bellevue.** Fire Station 10 will be built on the west side of 112th Avenue NE and NE 12th Street, north of McCormick Park. Site selection was based on improved response times, site configuration, traffic impacts and freeway access. Fire Station 10 will improve response times for fire and medical emergencies in the Northwest Bellevue, Downtown and BelRed areas and will relieve pressure on resources throughout the city that must frequently respond into Downtown. Engine 110, Aid 101, Medic 101, and Battalion 101 will be posted there. (Bellevue Fire Department 2022).
- **New Fire Station 4 in Factoria.** Land acquisition and construction of a new facility for improvement of Ladder and Battalion Chief coverage.
- **Fire Station 6 Remodel in Bridle Trails.** Remodel to improve Ladder coverage.
- **Logistics Center Warehouse** to consolidate spare equipment and logistics services.
- **Seismic upgrades.** Upgraded facility infrastructure to meet current seismic code at Fire Station 1, Fire Station 2, Fire Station 3, Fire Station 7, Fire Station 8, and Fire Station 9.

Emergency Medical Services

Approximately 75 percent of calls for service received by the Bellevue Fire Department are for medical assistance. Every Bellevue firefighter has either an emergency medical technician or paramedic level of medical training (Bellevue Fire Department 2023). In 2021 the Bellevue Fire Department responded to a total of 15,951 medical/aid incidents, 10,693 for Basic Life Support and 5,258 for Advanced Life Support (Bellevue Fire Department 2022). There are four medic units operated daily by Bellevue Firefighters (Bellevue Fire Department 2022). Baseline standard of service for EMS is the first unit arriving on-scene in less than 8 minutes, no less than 90 percent of the time (Bellevue Fire Department 2012).

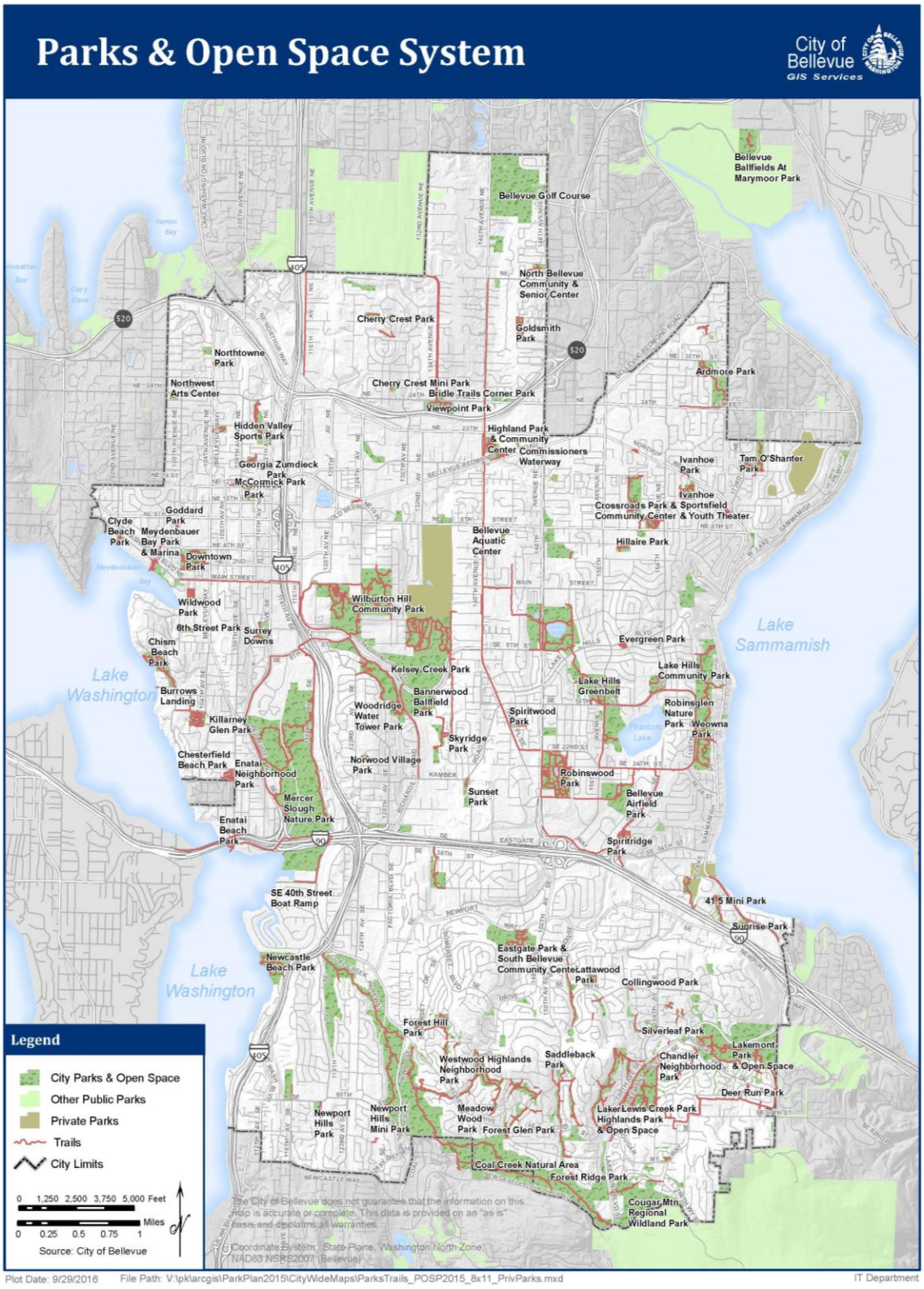
Bellevue is a part of Bellevue's Medic One system which is responsible for the City of Bellevue as well as Issaquah and North Bend Areas. Medic One locations include a Mobile Intensive Care Paramedic Unit stationed at the Overlake Hospital; Bellevue Fire Station 2; Eastside Fire & Rescue – Station 87 in North Bend; and Eastside Fire & Rescue – Station 74 in Issaquah.

The Wilburton study area is served by Fire Station 6, Fire Station 7, and the Bellevue's Medic One system.

PARKS

Bellevue's parks and open space system includes over 2,700 acres of land within city limits and about 80 additional acres outside of the city (see **Figure 10-3**). The Parks and Community Services Department manages 78 developed park sites and over 98 miles of multi-use trails. Street trees are present along many major roads throughout Bellevue, with a concentration of street trees in the Downtown area.

Some facilities within developed parks and open space include 18 ballfields, 12 soccer (or multi-use) fields, 47 playgrounds, 26 basketball courts, 37 tennis courts (some lined for pickleball), 13 picnic shelters, three community farms, and 100 community garden plots. The Parks and Community Services Department maintains 100 buildings totaling 267,000 square feet.



SOURCE: City of Bellevue 2016

FIGURE 10-3 **City of Bellevue Parks and Open Space System**

Four large multi-use community centers and other recreation facilities serve different geographic areas of the city and offer services targeting specific population groups, including community outreach and environmental education programming. Through the Recreation Division, the parks system provides opportunities for sports, visual and performing arts, special community events, after-school and summer day camps, youth leadership development, and life-long learning skills. These programs lead to over 700,000 interactions with program participants annually. Finally, through the Parks and Community Services Department's Human Services Division, funding partnerships are maintained with 49 non-profit agencies to support over 118 different programs serving the needs of low- and moderate-income Bellevue residents.

Decisions on the preservation of open space and development of the park and trail system in Bellevue are guided by two primary documents, the Bellevue Comprehensive Plan, and the Parks & Open Space System Plan. The Comprehensive Plan establishes the overall framework while the Parks & Open Space System Plan provides more specific goals and objectives designed to promote the community's vision for parks, recreation, and open space. The Parks & Open Space System Plan also works in tandem with or supports other city policies and initiatives.

The Parks & Open Space System Plan includes a 20-year vision for future acquisition and capital project priorities. The pace of change is rapid in Bellevue, so the 20-year list is revisited every six years to determine if new information warrants a course correction.

Through a partnership between the City of Bellevue and the Bellevue School District, school properties are also used to meet recreational needs for residents.

The 2022 Parks & Open Space System Plan was adopted by City Council on July 11, 2022. The Parks & Open Space System Plan is the primary tool used to guide the long-term growth and development of Bellevue's parks and open space system. The core of the plan is a set of 20-year capital project objectives. These long-term objectives are reviewed and updated approximately every six years. Funding to implement the long-term recommendations within the plan is determined through the Capital Investment Program budgeting process. The Parks & Open Space System Plan identifies seven major focus areas around which Parks & Community Services meets the park, open space and recreation needs of the community. In general, these focus areas have remained consistent since the 1987 edition of the plan, although they have been re-structured and modified over time to meet contemporary needs.

Based on a level of service analysis, the following neighborhood areas are identified as having significant gaps in walkable access to parks and trails:

- **BelRed** – An emerging area of need as residential population will increase over time as high density mixed use redevelopment occurs. The neighborhood will be better served by development of the publicly owned West Tributary property.
- **Bridle Trails** – This neighborhood is close to Bridle Trails State Park and the Bellevue Golf Course. Additional neighborhood park facilities have increased unstructured open space and playground areas. The northeastern portion of the neighborhood will be better served when the neighborhood park along 140th Avenue is developed. Trails systems in this neighborhood are often informal with no easement protecting public access. These serve the neighborhood, but do not fully integrate with the city's overall trail network.
- **Cougar Mountain/Lakemont** – Trails are the hallmark of this neighborhood. While parks and trails are generally distributed throughout the neighborhood, residents find walkable access challenging due to the steep topography.
- **Crossroads** – This area has neighborhoods without walkable access to parks, along with a higher population density than many other areas.
- **Downtown** – Areas lacking walkable access are geographically small; however, the high population density creates significant park supply gaps in the northwest and southeast quadrants of Downtown. The northwest quadrant stands out as the area most lacking neighborhood park access.
- **Eastgate** – This neighborhood includes a significant number of recently incorporated residential households south of I-90. This area is underserved by both park and trail access, creating a need for additional neighborhood park facilities.
- **Factoria** – An unconnected street network and lack of neighborhood park facilities in this neighborhood leaves most households without walkable access to parks. The high population density of workforce and multi-family residential populations exacerbate this need.
- **Newport** – Park facilities and access to existing trail systems are improving but are still limited. Newport Hills Woodlawn neighborhood park will help. There remains a need for new

neighborhood-scale park facilities and improved access to the South Bellevue/Coal Creek Greenway and associated trail system.

- **Northwest Bellevue** – The southwest part of this neighborhood may be served by new park facilities developed in neighboring areas. The western edge and center of the neighborhood will be better served when the publicly owned Chapin property is developed into a neighborhood park. The area north of SR 520 is the least served portion of the neighborhood.
- **Northeast Bellevue** – The area could benefit from additional park facilities added to the north and east of the Crossroads neighborhood. Enhanced trail connections could also improve access. The southern tip of this neighborhood is on a steep grade and may only be adequately served by a small future neighborhood-scale park directly within the neighborhood.
- **Somerset** – Trails are the hallmark of this neighborhood. While parks and trails are generally distributed throughout the neighborhood, residents find walkable access challenging due to the steep topography.
- **West Lake Sammamish** – Public waterfront access is a major need in this neighborhood. Future development of recently acquired publicly owned properties on Lake Sammamish will help address this need.
- **Wilburton** – While this neighborhood includes three major community parks, the northern end of the area lacks neighborhood-scale facilities that are within walking distance. This area may benefit from future park and trail development in BelRed or if the publicly owned Highland Glendale property is developed. Eastrail will provide trail connections and possible parks amenities across the neighborhood.

Bellevue uses local public opinion surveys and park and trail service area/accessibility standards to track community levels of service data. The three service measures that Bellevue uses are:

- **Individual Active Participation** – Measured by the percentage of population that participates in one or more active outdoor activities
- **Public Satisfaction** – Measured by the percentage of population satisfied with the condition of existing park and recreation facilities
- **Walkable Access Service Area** – Measured by the percentage of households within ⅓ mile (a 10-minute walk) of a park or trail access point.

SCHOOLS

Most of Bellevue is served by the Bellevue School District. Students are also part of the Lake Washington School District, Issaquah School District, and Renton School District, depending on where they live.

Enrollment in the Bellevue School District peaked in the 2019–2020 school year and has dropped to 18,400 students in the 2022–2023 school year (Bellevue School District 2023).

The district was faced with a $31 million shortfall for the 2023 budget. The district reported that in October 2022 it became clear that enrollment would not go back to pre-pandemic levels, as a result of lower birth rates, higher housing costs, more educational options for families including private schools, lower immigration levels, and families moving to more affordable areas. The impact of the drop in enrollment will hit the district's financial position in the 2023–2024 school year. The magnitude of the situation serves as the rationale behind consolidation considerations.

As of October 2022, eight of Bellevue's 18 elementary schools had less than 400 students. The forecasted enrollment for the 2023–24 school year would result in 10 of Bellevue's 18 elementary schools having fewer than 400 students, according to the district. The district started discussions to consolidate schools and proposed in early 2023 to consolidate three elementary schools to save costs due to low enrollment, a trend expected to continue. The district voted in March 2023 to consolidate two elementary schools.

The Lake Washington School District (LWSD), which serves part of north Bellevue, had 30,423 students in 57 schools for the 2021–2022 school year. In October 2022, 30,423 students were enrolled in the district (Lake Washington School District 2023). LWSD moved from the sixth-largest school district in the state to the second-largest in a period of just five years. An additional 3,500 students are expected by 2030 (Lake Washington School District 2022).

The Renton School District serves southwest Bellevue, Renton, Newcastle, Kent, Tukwila, South Seattle, and parts of unincorporated King County (Renton School District 2023a). As of February 2023, the Renton School District serves 14,376 students across four high schools, four middle schools, 15 elementary schools and an early childhood learning center. Enrollment is declining (Renton School District 2023b).

Bellevue School District Enrollment

Enrollment in the Bellevue School District has dropped to 18,400 students in the 2022–2023 school year. The district reported that in October 2022, it became clear that enrollment would not go back to pre-pandemic level, as a result of lower birth rates, higher housing costs, more educational options for families including private schools, lower immigration levels, and families moving to more-affordable areas.

The Issaquah School District serves southeast Bellevue. It currently has capacity to serve 18,630 students in permanent facilities and 4,290 students in portables at 95 percent capacity. The Issaquah School District is expecting increased enrollment over time especially at the elementary and high school levels (Issaquah School District 2022).

The Wilburton study area is served by the Bellevue School District. Students within the Wilburton study area typically attend Wilburton Elementary, Chinook Middle School, Odle Middle School, Sammamish High School and Bellevue High School or a Choice School within the Bellevue School District.

10.2.3 Utilities

This section provides information on electricity, water, wastewater, and solid waste.

ELECTRICITY

Electricity in the City of Bellevue is provided by Puget Sound Energy (PSE). PSE serves roughly 1.1 million electric customers across King, Kitsap, Skagit, Thurston, Whatcom, Island, Kittitas, and Pierce counties. Six in-person paystations are located within the city of Bellevue (PSE 2023a).

- The Eastside Needs Assessment Report determined that overloads are expected to occur in extreme weather (Quanta Technology 2013).
- The Supplemental Eastside Needs Assessment Report written in 2015 predicted a capacity deficiency in the Eastside area that would develop by the winter of 2017–18 and that the deficiency in the Eastside area would increase beyond that date (Quanta Technology 2015).
- In 2021, 98 distribution circuits served Bellevue customers. Of these, 79 circuits had reliability numbers better than the systemwide performances and 17 circuits experienced no unplanned outages. 19 circuits had System Average Interruption Duration Index or System Average Interruption Frequency Index figures that exceeded the 2021 PSE system wide performance values (PSE 2022).

Energize Eastside Project

Federal regulations require PSE to have sufficient infrastructure to meet foreseeable demand requirements or plan for intentional load shedding (also referred to as rolling blackouts or rotating outages) to customers. PSE is currently in the process of addressing future electrical needs by building elements of the Energize Eastside project. The Energize Eastside project resulted from the review of the studies listed in the previous section that showed that the region needs upgrades in electric infrastructure to keep up with the demand for electricity.

The Energize Eastside project includes a new substation to provide additional capacity, 18 upgraded transmission lines within the existing corridor to deliver additional power to homes and businesses, and continued conservation. The new lines will bring more power to the cities of Bellevue, Kirkland, Newcastle, Redmond, and Renton. Construction is expected to be complete at the end of 2024.

Energize Eastside

Puget Sound Energy's Energize Eastside project includes a new substation to provide additional capacity, 18 upgraded transmission lines within the existing corridor to deliver additional power to homes and businesses, and continued conservation. The new lines will bring more power to the cities of Bellevue, Kirkland, Newcastle, Redmond, and Renton. Construction is expected to be complete at the end of 2024.

WATER

Bellevue provides drinking water to more than 37,000 homes across Bellevue's service area via 600 miles of pressurized water mains (Bellevue Utilities Department 2023e). Water is acquired through the Cascade Water Alliance, an association of water districts and cities that serves as a regional water supply agency and wholesale water provider. Water comes from the protected watersheds of the Cedar and South Fork Tolt rivers in the Cascade Mountains and meets or exceeds state and federal water quality requirements (Bellevue Utilities Department 2023g).

The City of Bellevue prepared a Watershed Management Plan in 2022. The Watershed Management Plan recommends actions for the city in four categories:

- **Projects**, such as controlling and treating rainwater runoff from city streets before it gets into streams.
- **Programs**, like helping people who live near streams to better care for them and removing barriers so fish can move easily through our streams.
- **Policies or regulations**, such as incentives for developers or homeowners to build facilities to clean runoff before it gets into streams.
- **Enhanced maintenance**, like more street sweeping to prevent pollutants from entering streams.

Watershed Management Plan

The City of Bellevue prepared a Watershed Management Plan in 2022. A watershed is an area of land that drains to a body of water that includes streams, lakes, and wetlands. Ultimately, what happens on the land impacts the health and water quality of waterways. Bellevue is home to four major watersheds that include a diverse variety of fish and other wildlife. The four watersheds are:

1. Coal Creek Watershed
2. Kelsey Creek Watershed
3. Lake Sammamish Watershed
4. Small Lake Washington Watershed

The city will be able to act upon the recommendations to accommodate the need for water quantity and quality for all areas of the community (City of Bellevue 2023h).

The current City of Bellevue Storm and Surface Water System Plan (City of Bellevue 2016) establishes the city's storm and surface water policy and is a major update of Bellevue's 1994 Comprehensive Drainage Plan. Intended for residents, business owners, city staff, developers and other interested parties, the new plan supports Bellevue's Comprehensive Plan, evaluates the management of the city's storm and surface water system, provides a "road map" for future planning, and helps the city meet federal, state, and regional regulations (City of Bellevue 2022).

The Bellevue Utilities Department actively maintains its water infrastructure, which includes pipes, reservoirs, pump stations, pressure zones and fire hydrants, through regular maintenance, repair or rehabilitation and replacement. Approximately 5 miles—or 26,000 linear feet of water pipeline—are replaced each year (Bellevue Utilities Department 2023a). Bellevue has about 30 water main breaks per year (Bellevue Utilities Department 2023a).

Bellevue has two levels of services that directly affect customers: the number of unplanned water service interruptions (outages) and the frequency of water main breaks. The maximum threshold for target level of service for unplanned water service outages is three per 1,000 customers. The maximum threshold for water main break frequency is 10 times per 100 miles of pipe (Bellevue Utilities Department 2016).

The Utilities Department is replacing outdated, manually read water meters with new wireless-read Smart Water Meters at businesses and homes. Over its 20-year lifespan, the Utilities Department projects that the $23 million investment in the Smart Water Meter upgrade will cost less than the manually read meter system. The Smart Water Meters project will not result in any additional rate increases.

The City of Bellevue is developing a master plan for providing an emergency source of drinking water in the event of disruption to the water currently supplied by Seattle Public Utilities (SPU) via the Cascade Water Alliance.

The CIP Plan is a schedule of major public facility improvements to be implemented over a seven-year period. The CIP Plan includes details on project design, land acquisition, construction costs, and

financing sources. The City Council approved the most recent Bellevue CIP Plan in December 2020.

The CIP Plan organizes projects into topics including transportation, parks, general government, public safety, community development, economic development, neighborhood enhancement program, neighborhood investment strategy, water, sewer, and storm drainage.

The Capital Facilities Element of the Comprehensive Plan references the CIP Plan and provides broader policy guidance for capital facility planning.

The CIP is updated every two years as part of the city's biennial budget process. Activities in the CIP include planning, design and construction for projects that support renewal and replacement of aging infrastructure; capacity for growth; environmental preservation; and service enhancement.

The following projects have been identified for investment over the next 20 years (Bellevue Utilities Department 2023f):

- Water Main Replacement
- Pressure Reducing Valve Rehabilitation
- Minor Water Capital Improvement Projects
- Reservoir Rehabilitation or Replacement
- Water Pump Station Rehabilitation or Replacement
- Replacement of Large Commercial Meter Vaults
- Water Service Line & Saddle Replacement Program
- Water Supply Inlet Rehabilitation
- Water System Planning
- Supervisory Control and Data Acquisition System Upgrade
- 170th Pl. SE Pressure Improvements
- Increase Drinking Water Storage Availability for West Operating Area
- Maintenance and Operations Yard
- Somerset Highlands Capacity Improvements
- Groundwater Well Improvements

WASTEWATER

Wastewater is the water that leaves the inside of a residence or business through sinks, toilets, washing machines, etc. and enters Bellevue's wastewater (sewage) collection system. Bellevue operates, maintains and extends the sewage collection system to respond to the needs of residents and commercial establishments. The collection system discharges into larger pipes owned and operated by the King County Wastewater Treatment Division that transports the sewage for treatment and eventual discharge into Puget Sound.

Bellevue's wastewater collection system includes approximately 525 miles of mainline pipes, 130 miles of service stubs, 18.7 miles of "lake line" sewer pipe, 10 flush stations, 36 pump stations and 14,360 manholes (Bellevue Utilities Department 2014). The wastewater utility serves 37,000 customer accounts across 37 square miles, including the entire City of Bellevue, Clyde Hill, Medina, Hunts Point, Yarrow Point, Beaux Arts and small adjacent portions of the City of Issaquah and unincorporated King County (Bellevue Utilities Department 2023g).

Bellevue owns 15 miles of submerged wastewater pipeline in Lake Washington and approximately 4 miles of submerged wastewater pipeline in Lake Sammamish. These "lake lines" were constructed in the late 1950s and 1960s and are nearing the end of their useful life. The city maintains them and is evaluating their condition to determine when rehabilitation and/or replacement will be necessary. The cost for this work will be substantial. Management of the lake lines is critical to maintaining and protecting water quality in Lake Washington and Lake Sammamish. The city is currently in the process of developing a management plan for improvements to the existing Lake Washington lake lines.

Bellevue relies on both a Storm and Surface Water System Plan and a Wastewater System Plan to guide decisions on infrastructure. The current Storm and Surface Water System Plan establishes the city's storm and surface water policy and is a major update of Bellevue's 1994 Comprehensive Drainage Plan. Intended for residents, business owners, city staff, developers, and other interested parties, the new plan supports Bellevue's Comprehensive Plan, evaluates the management of the city's storm and surface water system, provides a "road map" for future planning, and helps the city meet federal, state, and regional regulations.

The Wastewater System Plan is the culmination of months of policy review, a technical evaluation of the wastewater system, followed by

Lake Washington Lake Lines

Bellevue's lake lines are an important part of the wastewater system, located along the shorelines of Lake Washington and Lake Sammamish. A management plan is being developed for just the Lake Washington line. The Lake Washington wastewater pipes are either underwater or on land adjacent to the lake. Lake line pipes carry raw sewage from shoreline properties to sewer pump and/or lift stations, which in turn, pump the sewage into an upland King County sewer system to eventually discharge into a county sewer treatment plant.

development of plan recommendations that will guide future management and operation of the wastewater utility system.

Both the plans are updated regularly, and as growth continues, other projects to accommodate future needs would be addressed.

On-Site Sewage Disposal Systems

On-Site Sewage (OSS) Disposal Systems

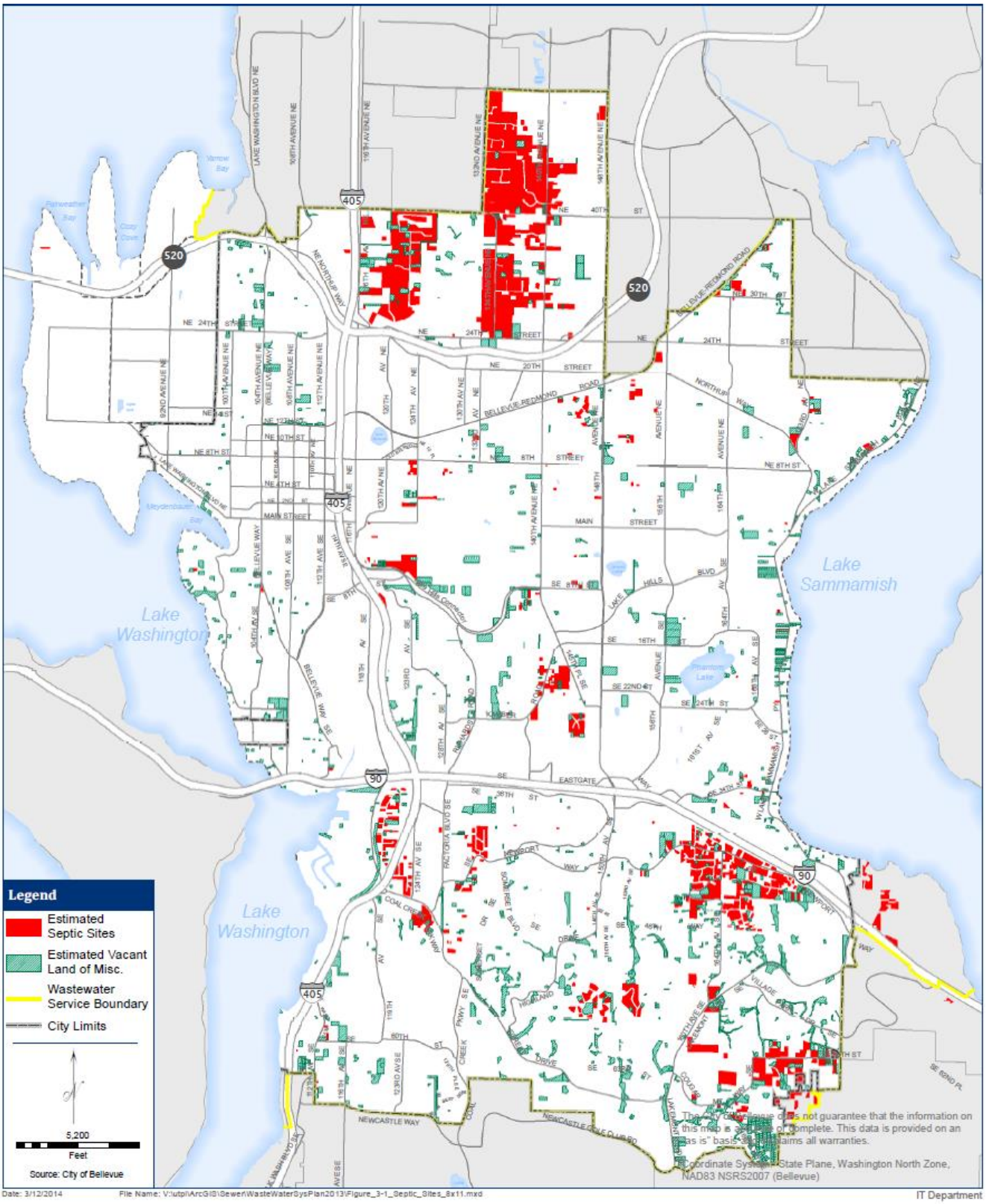
OSS disposal systems treat wastewater when homes and buildings are not connected to public sewer systems. The King County Public Health OSS Program provides educational, advisory, and permitting services for owners of septic systems and certifications for septic professionals.

Significant sections of the city still use on-site sewage (OSS) disposal systems. The term typically refers to a system using a septic tank in combination with a drainfield, such as a leachfield or mound. When operating properly, OSS disposal systems are an acceptable means of treating and disposing of sewage on a small scale. If on-site systems are improperly maintained or constructed in soils with poor percolation rates, OSS disposal systems can fail. Poorly treated septic waste can surface or pond on the site or percolate into the groundwater. See **Figure 10-4** for non-sewered parcels. These areas include portions of the Bridle Trails neighborhood in northern Bellevue, areas near Cougar Mountain (southeastern Bellevue) and the Coal Creek area.

Bellevue Ordinance No. 4232, adopted February 22, 1991, prohibits any new buildings from connecting to septic systems except by variance. Since that time, only 16 variances have been approved to allow septic systems. The 2023–2029 Capital Investment Program Plan Sewer Fund allocates funds to ensure that current and future generations have reliable wastewater services and help protect the natural environment (Bellevue Utilities Department 2023a).

Sewer Capital Investment Projects proposed in the 2023–2029 CIP include (Bellevue Utilities Department 2022):

- Sewer Pump Station & Force Main Improvements
- Sewer System Pipeline Major Repairs & Replacement
- Minor (Small) Sewer Capital Improvement Projects
- Lake Washington Sewer Lake Line Management Plan
- Sewer System Pipeline Replacement
- Sewer Planning Program
- Supervisory Control and Data Acquisition (SCADA) System Upgrade



SOURCE: City of Bellevue 2014

FIGURE 10-4 **Non Sewered Parcels**

King County's Public Health OSS Program also helps to ensure that over 84,000 septic systems are safe. They provide educational, advisory, and permitting services for owners of septic systems.

- Operations and Maintenance Yard
- Sewer Extensions in Septic System Areas
- Post-construction Monitoring and Maintenance Program

The wastewater systems have limited capacity to carry sewage and runoff that enters the system. More-intense rainfall may lead to more runoff entering the wastewater system through cracks and defects (infiltration) or through leaky manhole covers or direct connections to stormwater systems (inflow). This causes excess flows and surcharging, which is when the volume of wastewater exceeds the capacity of the system. During surcharge events, wastewater may back up and overflow and cause damage to private property or disrupt septic systems.

Ensuring access to safe decentralized wastewater treatment is an important water equity issue. More than 20 percent of Americans use decentralized systems, many of them in rural areas that are not served by municipal sewer systems (U.S. Water Alliance 2020). While most of these households have access to safe, functional systems, some vulnerable communities do not. According to the census, approximately two million people in the U.S. lack access to indoor plumbing, running water, or safe wastewater treatment. Some low-income households pipe untreated wastewater into yards or streams. Households that cannot afford to install septic systems, or maintain the systems they have, face health issues caused by wastewater backing up in homes and yards. These wastewater challenges affect primarily low-income people, communities of color, rural areas, and tribal communities. For these households, access to safe decentralized wastewater systems is key to protecting their health and wellbeing.

Ensuring Access to Safe Decentralized Wastewater Treatment is an Equity Issue

Some low-income households pipe untreated wastewater into yards or streams. Households that cannot afford to install septic systems, or maintain the systems they have, face health issues caused by wastewater backing up in homes and yards. These wastewater challenges affect primarily low-income people, communities of color, rural areas, and tribal communities. For these households, access to safe decentralized wastewater systems is key to protecting their health and wellbeing.

SOLID WASTE

Bellevue contracts with Republic Services for collection of garbage, recycling and organics from residents and businesses, citywide litter pickup and customer service and billing. The city manages the solid waste collection contract with Republic Services and provides outreach, education and technical assistance to residents and businesses to promote waste prevention, recycling and proper disposal of hazardous and moderate risk wastes. Per the 2017 Amended and Restated Solid Waste Interlocal Agreement between King County and

the City of Bellevue, the King County Solid Waste Division provides regional planning, transfer and recycling and disposal services for Bellevue, as well as 32 other cities (King County 2017).

Materials in Bellevue are processed as follows (Bellevue Utilities Department 2023b):

- **Recycling** – Republic Services sorts and processes Bellevue's recyclables at its material recovery facility in Seattle.
- **Organics** – Cedar Grove processes the city's organics into compost at its facility in Maple Valley.
- **Garbage** – Republic Services hauls Bellevue's garbage to one or more of eight transfer stations in the King County transfer station system, where it is compacted and delivered for permanent landfilling at the county-owned Cedar Hills Regional Landfill.

10.3 Potential Impacts

10.3.1 Thresholds of Significance

In addition to a general analysis of public services and utility impacts, the following thresholds of significance are included in this chapter:

- Reduce access to parks and open space facilities.
- Result in increases in students and lack of facilities.
- Negatively affects the response times for police and/or fire and emergency medical services identified by the Bellevue Police Department and Bellevue Fire Department.
- Increase demand for special emergency services beyond current operational capabilities of service providers.
- Result in inconsistencies with planned growth and capital plans for the utility system.
- Potentially require major new projects or initiatives for energy system upgrades to accommodate redevelopment.

In addition, each alternative is evaluated using the equity and environmental sustainability performance metrics:

- Qualitative discussion of gaps in sewer infrastructure and where capacity is increasing in combination with the location of septic systems.

10.3.2 Impacts Common to All Alternatives

The potential impacts identified for the No Action Alternative and Action Alternatives includes analysis of the "build-out" housing unit capacity and job capacity associated with each alternative. For the No Action Alternative and the Action Alternatives, these capacities for growth are higher than overall citywide growth targets of 35,000 new housing units and 70,000 new jobs by 2044. It is not expected that the "build-out" housing and job capacities would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with the alternatives.

The No Action and Action Alternatives have varying amounts of housing capacity and job capacity, which may increase the need for public services and utilities based on the percentage of increase.

Potential population growth associated with increased housing capacity will increase under each alternative, particularly with Alternative 3 the most and Alternative 1 the least.

Potential future population and employment growth will increase the demand for public services including police, fire/EMT, and schools. Incremental growth over the planning period would be addressed during the city's regular capital planning efforts. Each service provider in conjunction with the city could evaluate levels of service and funding sources to balance with expected growth; if funding falls short, adjustments may be needed to level of service targets or to growth targets as part of regular planning under the Growth Management Act.

PUBLIC SERVICES

Police

Increases in population and employment in the City of Bellevue, under all alternatives could potentially increase calls for police service. In addition to the increases in densities, other factors may influence crime levels as areas grow. Under all alternatives, Bellevue would see growth of population and employment, creating more demand for fire and emergency medical services while continuing to challenge staff to meet response time targets.

Fire

Increased development under all alternatives would likely increase calls for fire service. As the area grows, additional staff, equipment,

and potentially new fire stations would be required to maintain current level of service standards. In addition, to meet response time requirements as growth occurs, the city may need to re-evaluate staffing levels and equipment at specific fire stations located closest to areas planned for high levels of growth. As congestion increases, satellite storage for emergency response equipment may be needed.

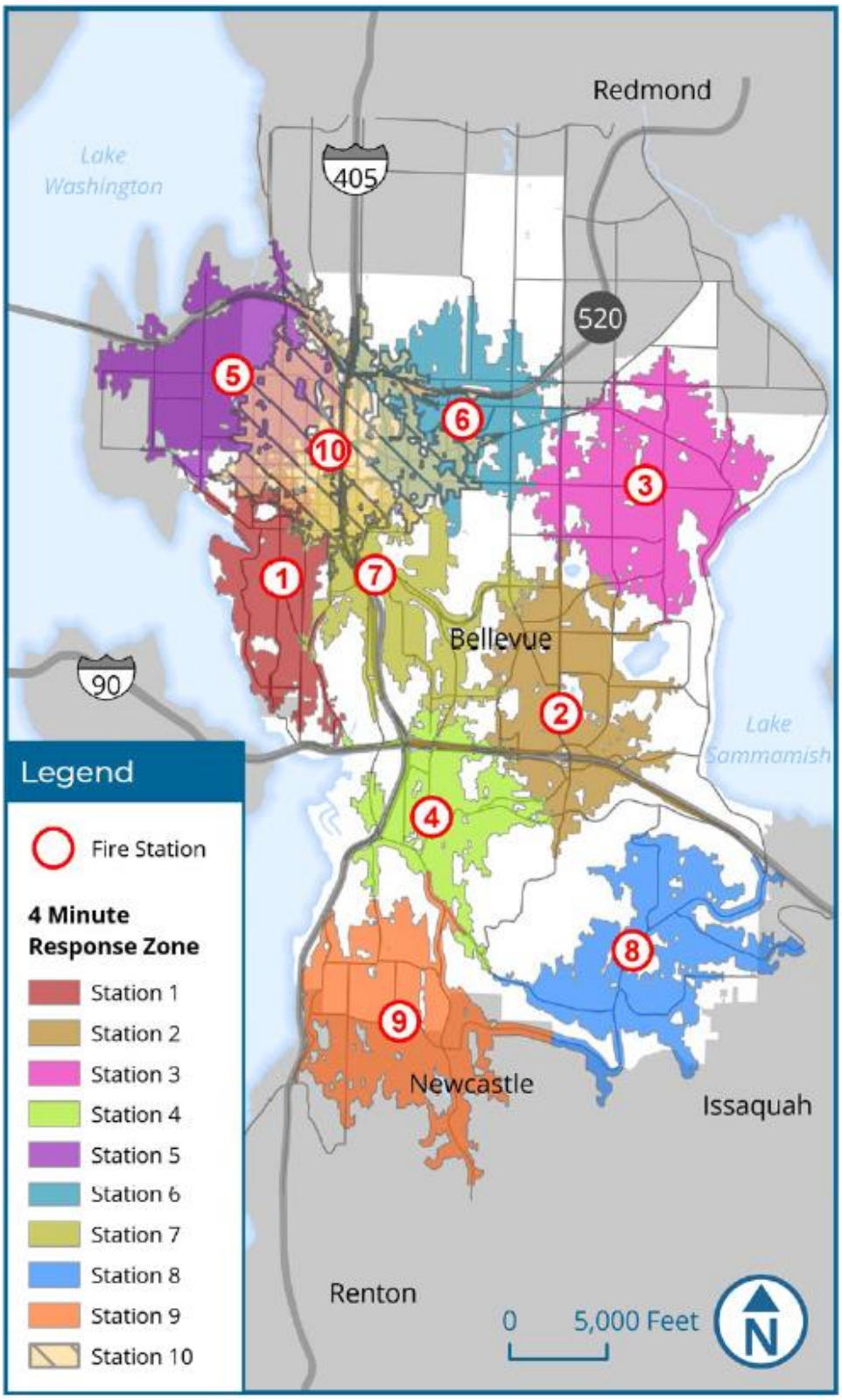
With the passage of the Fire Facilities Levy in 2016, the City of Bellevue is planning to start construction on the new Fire Station 10. The construction and operation of Station 10 and the proximity to high-rise buildings will help with response times, including vertical response times (time to travel from curbside to location in a high-rise building). The new station will enable the department to effectively access Downtown, BelRed, and the area around the Wilburton Light Rail Station, where greater growth and taller buildings are planned. **Figure 10-5** demonstrates four-minute response times with the addition of Fire Station 10.

Significant impacts on response times are not expected. The passage of the levy also provides funding to upgrade other stations and facilities to ensure the department can meet the growing demand in services and maintain response times.

Parks

As population increases in the city from new development, demand for parks and recreation would increase. The city relies on the Bellevue Comprehensive Plan and the Parks & Open Space System Plan to identify and accommodate gaps in service. As mentioned in Section 2.2.1, the following neighborhood areas are currently identified as having significant gaps in walkable access to parks and trails: BelRed, Bridle Trails, Cougar Mountain/Lakemont, Crossroads, Downtown, Eastgate, Factoria, Newport, Northwest Bellevue, Northeast Bellevue, Somerset, West Lake Sammamish, and Wilburton.

The city would rely on the Parks & Open Space System Plan future updates and funding to accommodate the need for increased population needs for parks and recreation spaces under all of the alternatives. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on parks or recreation in the City of Bellevue or in the Wilburton study area are expected**.



SOURCE: Bellevue Fire Department 2022

FIGURE 10-5 **Four-Minute Response Zone with Station 10**

Schools

New residential development may result in additional students. The alternatives have varying amounts of housing capacity and approaches to adding new housing types.

The Bellevue School District, Renton School District, Lake Washington School District, and Issaquah School District will continue to monitor student enrollment and plan for changes by implementing short-term and long-term solutions. As mentioned above, the school districts are experiencing lower enrollments. Through school district planning, the schools can accommodate changing student numbers. The school districts currently believe they can accommodate students. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on schools in the City of Bellevue or in the Wilburton study area are expected**.

UTILITIES

Electricity

New residential development and commercial development may result in additional electrical utility use on a system that already has circuits that exceed customer minute interruption goals. The reliability of the electrical system is reviewed by assessing the reliability metrics that indicate the performance of the system relative to planned and unplanned outages. Electric system reliability is measured by standard industry metrics of System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI).

PSE's Energize Eastside program is currently under construction and is intended to be able to supply adequate electrical needs to the city even as the population grows.

This is a non-project action that will not create significant adverse impacts. Specific projects proposed will need to provide evidence that the city has the provisions for electricity. During project review, the city may determine they do not have enough electricity to provide for larger projects. In that case, they may not be able to accommodate the anticipated new growth under any of the alternatives. If the city is able to respond to additional demand for electricity as part of their planning (as they are doing with Energize Eastside), there should be **no significant impacts on electrical supply**.

System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI)

- SAIFI measures the number of outages an average customer experiences in a year.

  SAIDI reflects the amount of outage time an average customer experiences during a year.

Water

New residential development and commercial development may result in an increase in need for additional water supply.

All alternatives would result in an increase in water demand, although the use of higher efficiency and low-flow fixtures could reduce per-capita demand. The Water System Plan is updated on a 6- to 10-year cycle to address aging infrastructure, expansion to accommodate development and recommended improvements.

Currently, all alternatives fit within the water system plan build-out analysis, and any increases in the water demand are expected to be covered under existing agreements with the Cascade Water Alliance. The Cascade Water Alliance is planning for the growth of the communities it serves and has contracts and opportunities to secure the necessary water for the region's growth.

All development may require developer-financed improvements to the water system serving that development. These improvements will be constructed concurrently with the development. Some projects to serve the additional growth may benefit a larger area and several future projects. The upcoming water system plan update will need to re-evaluate these required water system projects. In most cases, areas proposed for commercial, multi-family, or mixed used development that are served by lines that are smaller than 12 inches will be required to increase the water line serving their development to at least 12 inches.

Under all alternatives, the city is expected to see growth and may require water system improvement to increase the fire flow to meet current standards. To ensure fire flow is not affected in areas of growth, developers will be required to install improvements to the water system to ensure fire flow standards are met.

Provided that the actions above are met, **no significant impacts on water supply are expected**.

Wastewater

Development of any of the alternatives would result in greater demands on the local wastewater collection system and on the downstream conveyance and treatment facilities.

The Wastewater System Plan is one of the tools the city uses to track that there is adequate sewer infrastructure and show where capacity is increasing in combination with the location of septic systems. The

city will need to ensure that safe decentralized wastewater treatment is provided to all households in order to provide access to safe decentralized wastewater systems and protect their health and wellbeing.

Although demand for stormwater and other water services would increase, the application of regular capital facility planning, updated system plans, existing regulations, plans, or other mitigation measures can reduce impacts associated with future growth under all alternatives. New development and redevelopment must also comply with the current stringent stormwater regulations to be approved. Part of plan updates should include an emphasis on providing safe decentralized wastewater treatment to all households. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on wastewater in the City of Bellevue or in the Wilburton study area are expected**.

Solid Waste

All alternatives would result in increases in population density and commercial development, which would increase demand for garbage, recycling and organics collection.

10.3.3 Alternative 0 (No Action)

The No Action Alternative continues the current plan with growth focused in the Downtown, BelRed, and East Main Mixed Use Centers. The No Action Alternative has capacity for adding 41,000 new housing units over the 2023–2044 planning horizon. This is above the regional growth target for Bellevue, which is 35,000 new units, but does not meet other new planning requirements, including affordable housing across income bands and a range of housing types. There would be capacity for 124,000 new jobs under this alternative, which is above the regional growth target of 70,000 jobs. Housing capacity within the Wilburton study area would be small (less than 1 percent of the citywide total), and the Wilburton study area would have a modest share of citywide job capacity (5 percent), with no changes to allowed uses or building intensities.

The No Action Alternative would have the least amount of pressure on public services and utilities. Under Alternative 0, there would be the least growth and the least increase in demand for public services. The No Action Alternative is consistent with the expected growth in current water and wastewater system plans, which did not yet incorporate a more intense mixed use development pattern. With

implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected**.

10.3.4 Alternative 1

Alternative 1 allows for larger residential buildings, as well as gentle density increases across the city, resulting in capacity for an additional 59,000 housing units. Alternative 1 job capacity is 179,000. Alternative 1 would place more demand on public services and utilities than the No Action Alternative based on the "build-out" capacity. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected**.

10.3.5 Alternative 2

Alternative 2 focuses growth in Mixed Use Centers as well as in areas with good access to transit and jobs. There would be capacity for an additional 77,000 housing units. Alternative 2 job capacity is 177,000, slightly less than Alternative 1. Alternative 2 would place more demand on public services and utilities than the No Action Alternative and Alternative 1, but less than Alternative 3. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected**.

10.3.6 Alternative 3

Alternative 3 would allow a greater diversity of housing types in all centers and along transit corridors. There would be capacity for an additional 95,000 housing units. Alternative 3 job capacity is 200,000 (76,000 above the No Action Alternative). Alternative 3 would place the most demand on the public services and utilities in Bellevue.

Potential future population and employment growth associated with increased capacity will increase the demand for public services including police, fire/EMT, and schools. This growth would occur incrementally and be addressed during the city's regular capital planning efforts. Each service provider in conjunction with the city could evaluate levels of service and funding sources to balance with expected growth; if funding falls short, adjustments may be needed

to level of service targets or to growth targets as part of regular planning under the Growth Management Act. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected**.

10.4 Avoidance, Minimization, and Mitigation Measures

Through the capital facilities planning process, the City of Bellevue would continue to address changes in services for police, fire, and utilities. The growth planned for the area would be incremental, and the planning process to relevant plans would address improvements required to maintain response times, ensure access to parks, address student growth, and ensure that utilities can accommodate growth.

10.4.1 Other Mitigation Measures

- Explore opportunities to develop new parks, open space, and recreation facilities, especially in the northern portion of the city, to address the ⅓-mile gap in access.
- Concentrate growth in areas with adequate water and sewer infrastructure.
- Build in additional population density into upcoming plan or service updates such as the Bellevue Fire Department Standards of Response Coverage, CIP Plan, and Police Initiatives.
- Invest in building new facilities for water, wastewater, and stormwater services. Non-city utility providers will also experience increased demand for services and will need to plan for new or improved facilities.
- Extend water and wastewater utility service to unserved areas of the utility service area to ensure that all citizens have equitable access.
- Require wastewater connections for all new development, including single-family plats, unless otherwise allowed by state or county regulations.
- Encourage the use of low-impact development and stormwater best management practices to manage stormwater runoff, which

may result in smaller facilities constructed on- and off-site for flow control, conveyance, and water quality.

- Reduce vulnerability to surcharging during rainstorms by running the sewer model using forecast climate change rainfall amounts, expected to increase at highest percentages. The results will identify where retrofits may be required, but also where new development and redevelopment can mitigate for the future by installing pipes that carry a larger capacity.
- Update the Wastewater Management Plan to identify projects in the Capital Improvement Program or other studies that address known deficiencies for on-site disposal systems. Several areas have existing deficiencies that could be addressed as capital projects.
- Consider including the equity issues of provision of utilities in future updates to their Wastewater Management Plan to ensure all members of the community are provided safe means of handling wastewater.

10.5 Significant Unavoidable Adverse Impacts

Under all alternatives, potential future population and job growth would occur citywide and in the Wilburton study area. Effects on population growth on public services and utilities could be mitigated through the strategies in Section 10.4.1 above. The growth planned for the area would be incremental. Through the capital facilities planning process, the City of Bellevue would continue to address changes in public services and utilities. The school districts would continue to address changes in student enrollment.

While all alternatives will generate additional demand for water and sanitary sewer facilities, no significant unavoidable adverse impacts are expected with regular capital facility planning, updated system plans, and application of codes and standards. With implementation of mitigation measures and regular periodic review of plans, **no significant unavoidable adverse impacts on public services or utilities in the City of Bellevue or in the Wilburton study area are expected**.

CHAPTER 11 Transportation

11.1 Introduction

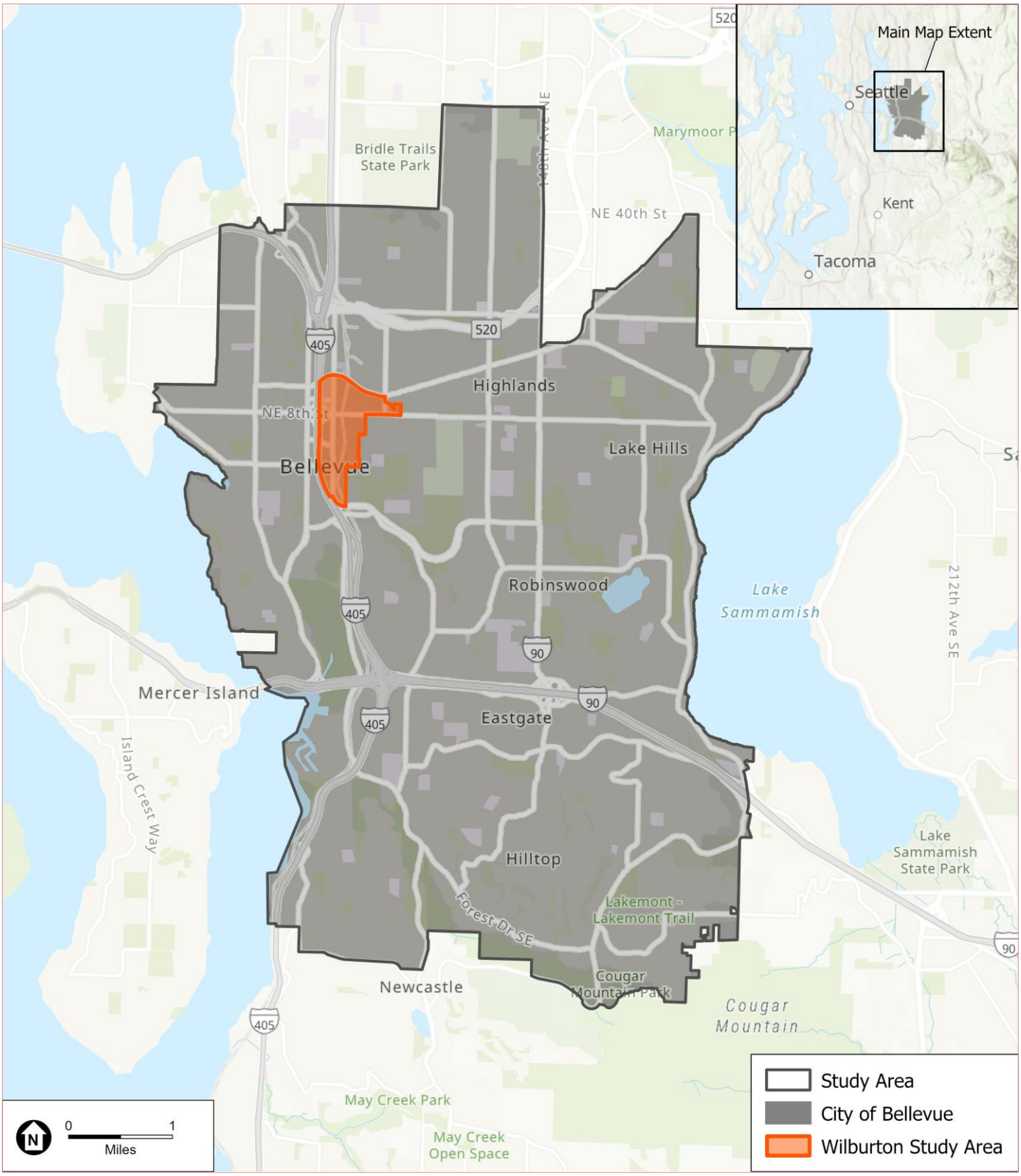
This chapter presents a multimodal transportation analysis to evaluate the potential impacts from implementing the various growth alternatives under consideration. The section documents existing transportation conditions in Bellevue, as well as future transportation conditions under four alternatives. The alternatives include the No Action Alternative where land use designations remain the same, and three Action Alternatives in coordination with potential land use designation changes. Bellevue's approach to mitigating potentially significant impacts on the transportation system is presented in the Avoidance, Minimization, and Mitigation Measures section, followed by a discussion of significant unavoidable adverse impacts.

Mixed Use Centers

Bellevue's Mixed Use Centers include the urban core of Downtown, BelRed, Wilburton, and East Main, as well as Factoria, Eastgate, and Crossroads.

11.1.1 Transportation Study Area

The transportation study area covers all areas within the City of Bellevue. Information is provided on a citywide basis and includes a focus on the Wilburton study area as shown in **Figure 11-1**.



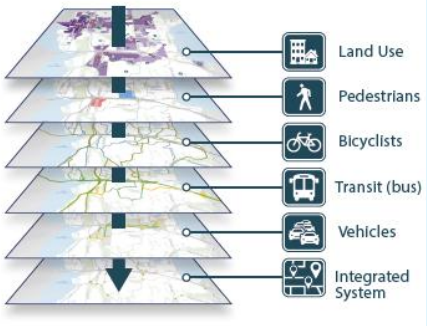
SOURCE: ESA 2023

FIGURE 11-1 **Bellevue Study Area**

11.2 Methods

As Bellevue continues to grow and attract more people and jobs, it is essential that the transportation system accommodates people using all modes of travel. Until recently, Bellevue's primary tool to measure the performance of the transportation system focused exclusively on private vehicle travel. In 2022, the City Council adopted the Mobility Implementation Plan (MIP), which provides a suite of multimodal metrics and tools to ensure that the transportation system better meets the needs of current and future residents. These metrics, described in this Methods section, are used as the foundation for analysis in this EIS.

The MIP is based on a concept called the "layered network." The layered network begins with land use and identifies a series of networks for each mode that "layer" together to create an interconnected multimodal transportation system. The layered network acknowledges that the existing and planned land uses influence expectations for transportation system performance.



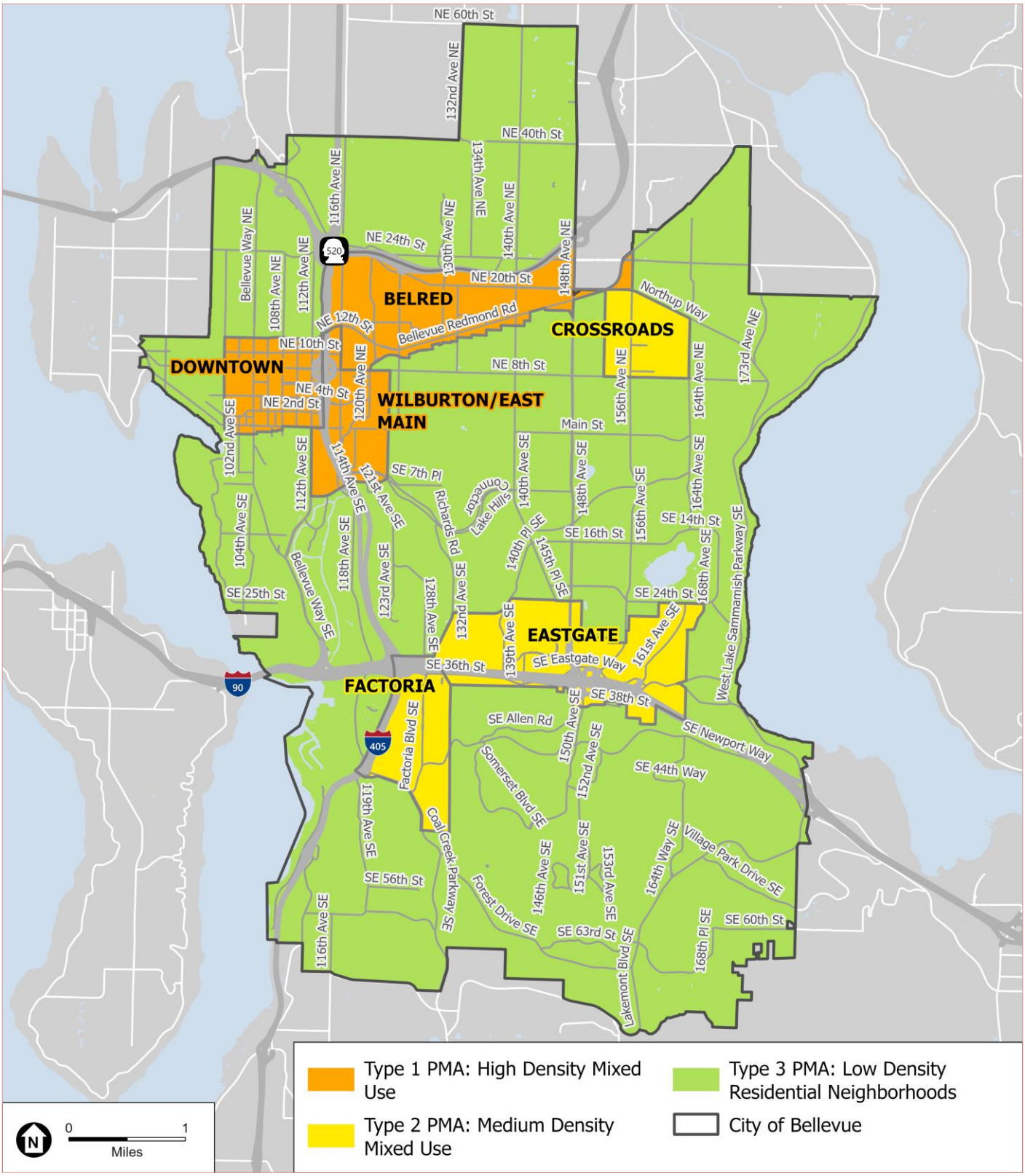
Layered Network Concept

Using the layered network approach, Bellevue has identified performance metrics and performance targets for each mode to evaluate the intended design and function within the transportation system. The layered network contains a comprehensive and connected network for pedestrians, bicyclists, transit users, and vehicles.

Bellevue has identified three Performance Management Areas (PMAs) that acknowledge the unique context and needs of the transportation system in response to varying surrounding land uses. The three PMAs are defined as:

- **Type 1 PMA – High Density Mixed Use:** Downtown, BelRed, and Wilburton-East Main are Mixed Use Centers with high density and growing land uses, light rail service, and many mobility options that provide access within the PMA and to other areas.
- **Type 2 PMA – Medium Density Mixed Use:** Crossroads, Eastgate, and Factoria are mixed commercial/residential Activity Centers with moderate density land use and frequent bus transit service.
- **Type 3 PMA – Residential:** The remainder of the city is characterized by primarily lower density residential areas with supporting retail/service land uses and fewer mobility and accessibility options.

The PMAs are used to set and monitor performance targets. Each PMA has its own set of targets for pedestrian, bicycle and vehicle modes that reflect the mobility needs and land use context of these different areas within the city. PMAs are presented in **Figure 11-2**.



SOURCE: City of Bellevue 2023

FIGURE 11-2 **Performance Management Areas**

11.2.1 Pedestrian Network Performance

Two metrics are used to measure the completeness and accessibility of the city's pedestrian network: pedestrian network completeness and arterial crossing spacing.

PEDESTRIAN NETWORK COMPLETENESS

Bellevue aspires to have a complete and connected pedestrian network with sidewalks on both sides of all arterial corridors. Each arterial is categorized as follows: sidewalks on both sides of the street; sidewalk on one side of the street; or sidewalk missing on both sides. The completeness of the network is expressed as a percentage.

ARTERIAL CROSSING SPACING

The second pedestrian network metric is spacing between designated arterial crossings at intersections or at mid-block locations. The MIP outlines spacing varying from 300 feet to 800 feet depending on location and adjacent land use. For the purposes of this EIS, arterial crossing spacing is reviewed within Type 1 and Type 2 PMAs, with each arterial categorized as either meeting or not meeting its relevant performance target.

11.2.2 Bicycle Network Performance

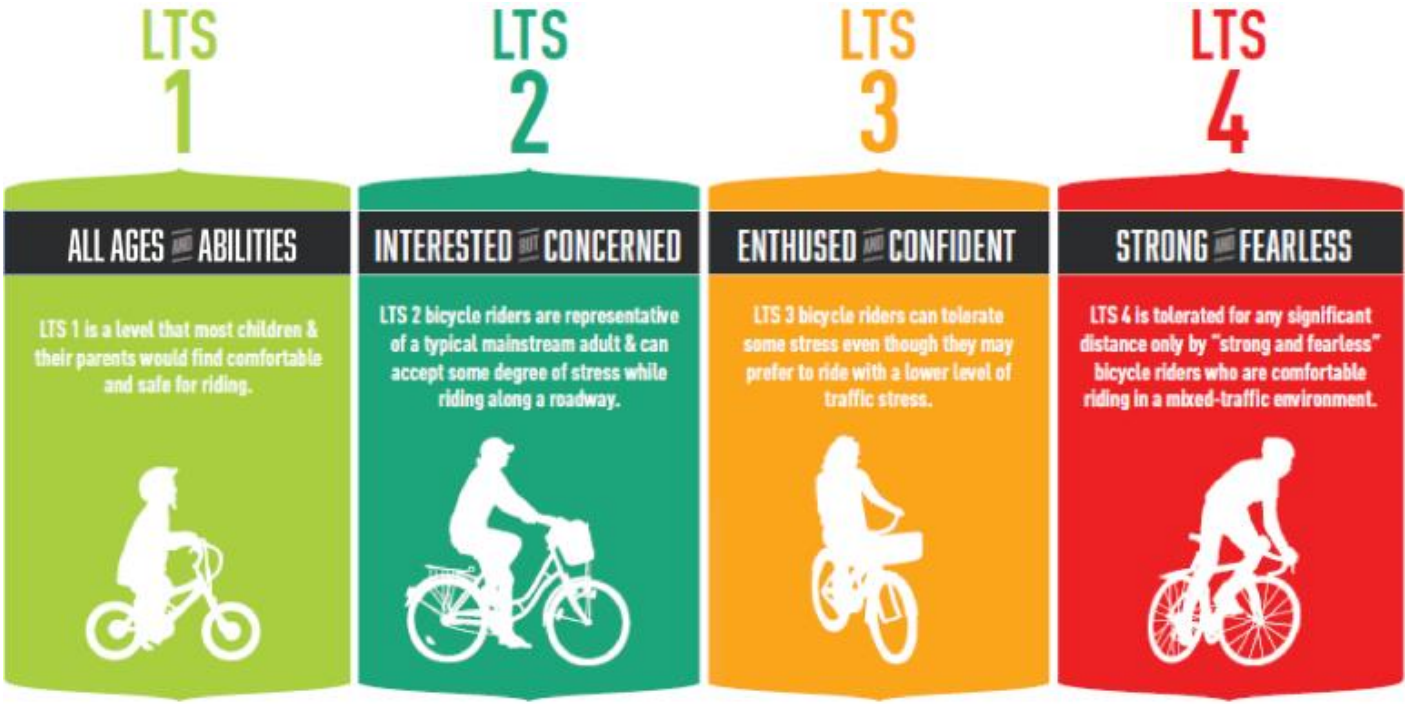
Bicycle network performance is measured using a concept known as level of traffic stress (LTS), which describes the bicycle rider's experience related to the type of bicycle facility and the speed limit and volume of traffic on the adjacent street.

Figure 11-3 describes the intended LTS metrics for bicycle network corridors, which are described as follows:

- **LTS 1: Priority Bicycle Corridors within Type 1 and Type 2 Performance Management Areas.** A high level of bicycle mobility for all ages and abilities is expected within areas where the city has the vision, intent, and policy direction to promote a medium to high-density, mixed use urban environment. LTS 1 is the default on all multipurpose paths/physically separated bikeways.
- **LTS 2: Priority Bicycle Corridors within the Type 3 Performance Management Area.** A moderate level of bicycle mobility would allow comfortable bicycling connections between

Activity Centers and on recognized regional routes such as the Lake Washington Loop.

- **LTS 3: Other Bicycle Network Corridors.** This intended LTS applies on the bicycle network on arterial streets but not part of a Priority Bicycle Corridor. This network provides connections within neighborhoods, between Activity Centers and to stops along the Frequent Transit Network (FTN).



SOURCE: City of Bellevue 2023

FIGURE 11-3 **Bicycle Level of Traffic Stress**

LTS is defined based on the type of bicycle facility provided, the posted speed limit, and the average daily traffic volume, as shown in **Table 11-1**.

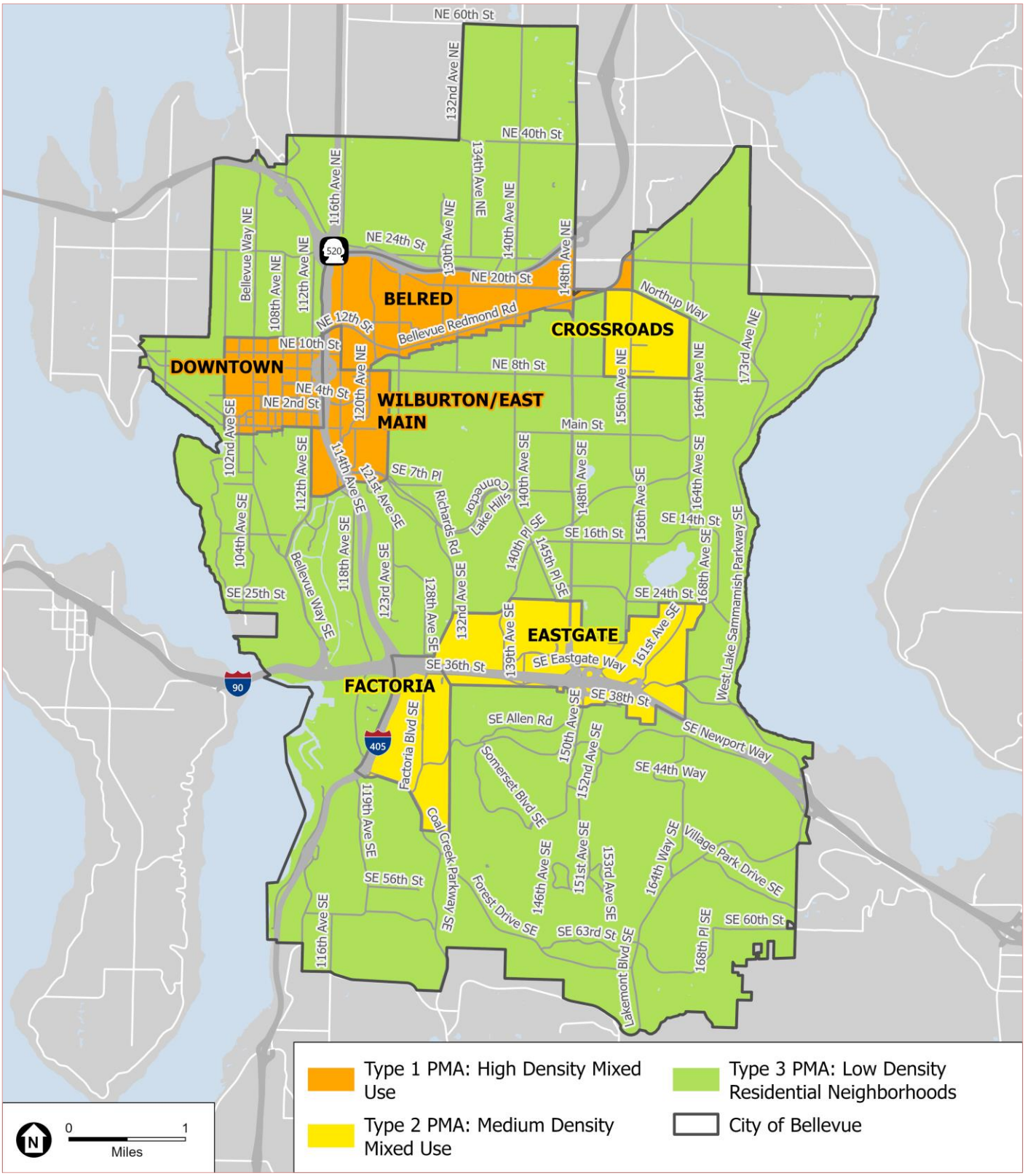
TABLE 11-1 **Bicycle Level of Traffic Stress**

Roadway Characteristics		Bicycle Facility Components: Guideline to Achieve Intended Level of Service/Level of Traffic Stress					
Speed Limit	Arterial Traffic Volume	No Marking	Sharrow Lane Marking	Striped Bike Lane	Buffered Bike Lane (horizontal)	Protected Bike Lane (vertical)	Physically Separated Bikeway
</=25	<3k	1	1	1	1	1	1
	3–7k	3	3	2	1	1	1
	>/=7k	3	3	2	2	1	1
30	<10k	3	3	2	2	1	1
	10–25k	4	4	3	3	2	1
	>/=25k	4	4	4	3	3	1
35	<25k	4	4	3	3	3	1
	>/=25k	4	4	4	3	3	1
>35	Any	4	4	4	4	3	1

SOURCE: City of Bellevue 2023

Figure 11-4 shows the intended LTS performance for the bicycle network. It also identifies the Bicycle Priority Corridors, which are a network of 11 north-south and east-west routes that serve as regional connections and provide links to key destinations.

Bicycle network performance is measured using three categories: bicycle facility meets the intended LTS, bicycle facility that does not meet the intended LTS, or a bicycle facility gap. The completeness of the network is expressed as a percentage.



SOURCE: City of Bellevue 2023

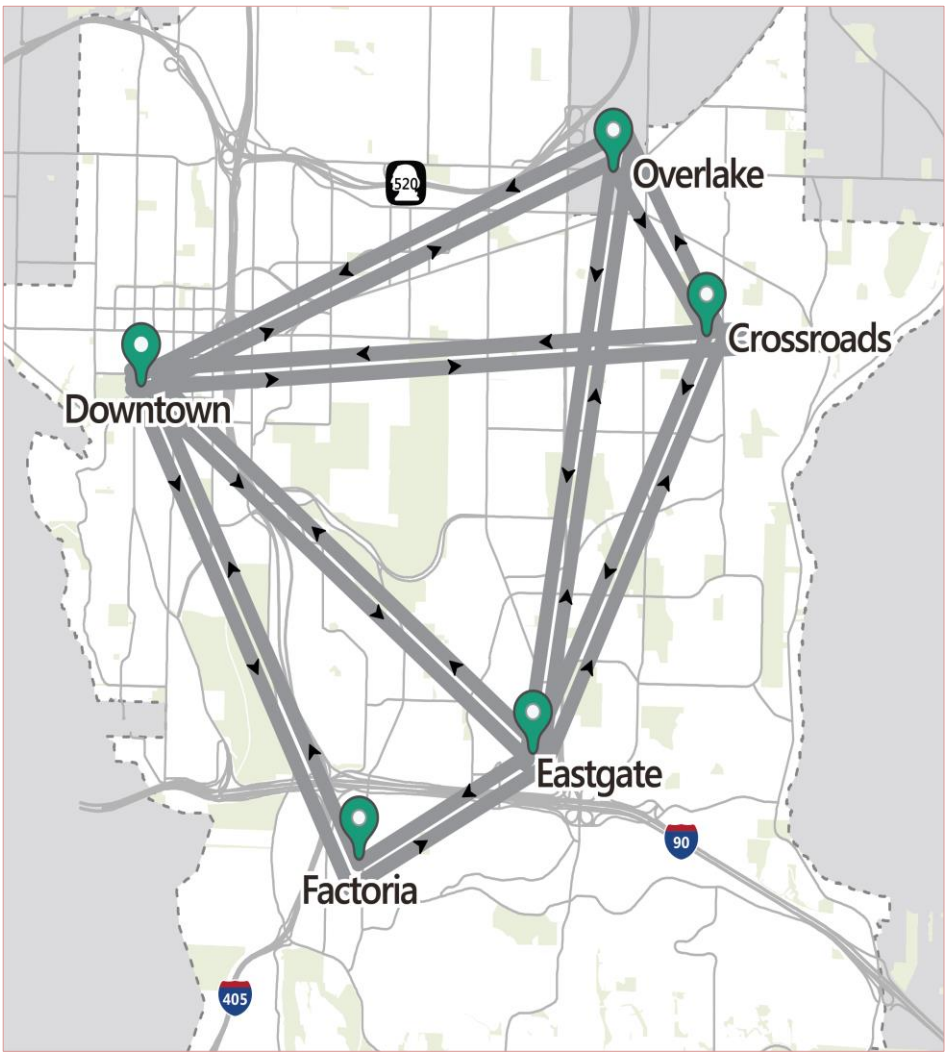
FIGURE 11-4 **Bicycle Network LTS Vision**

11.2.3 Transit Network Performance

Two performance metrics are used to measure the attractiveness and comfort of the transit network: transit travel time ratio and transit stop/station amenities.

TRANSIT TRAVEL TIME RATIO

The transit travel time ratio measures the competitiveness of transit relative to private motor vehicles by comparing the relative travel times during the peak commute hour. The ratios are calculated for trips between five Activity Centers: Downtown, Overlake, Crossroads, Eastgate, and Factoria. The Activity Center pairs are shown in **Figure 11-5**.



SOURCE: City of Bellevue 2023

FIGURE 11-5 **Transit Travel Time Ratio Activity Center Pairs**

For each designated Activity Center pair, scheduled transit travel times for the routes traveling between the Activity Centers are compared against private vehicle travel time. For existing conditions, travel times along Primary Vehicle Corridors were collected using Iteris and supplemented with Bellevue and other observed data sources covering a September 2019 timeframe. For the future year condition, forecasted transit travel times and vehicle travel times are used to estimate the transit travel time ratio. The MIP sets a performance target of 2.0; in other words, the transit trip takes no more than twice as long as the trip made by private vehicle.

TRANSIT STOP/STATION AMENITIES

The MIP identifies five amenities that it aims to provide at each transit stop or station along the FTN: weather protection, seating, paved bus door passenger zone, wayfinding, and bicycle parking. This metric reports the percentage of FTN stops/stations that have all five amenities.

11.2.4 Vehicle Network Performance

The MIP uses two performance metrics to track the efficiency and operations of the vehicle network: Primary Vehicle Corridor travel speed and System Intersection volume to capacity ratio.

PRIMARY VEHICLE CORRIDOR TRAVEL SPEED

Primary Vehicle Corridor travel speed is measured during the PM peak hour (typically the single busiest hour of the day). A Primary Vehicle Corridor is a subset of arterial corridors, which have the characteristics of being an arterial that carries 10,000 or more vehicles per day and is at least ½ mile in length. The MIP identifies the "Typical Urban Travel Speed" as 40 percent of the posted speed limit, which considers intersection delay (because vehicles rarely travel at free-flow speed along a corridor).

Performance targets are defined for each PMA relative to the Typical Urban Travel Speed, as shown in **Table 11-2**. Travel speed is expected to be lower on arterials within the Type 1 and Type 2 PMAs as there are more intersections, driveways, and modes of travel. For arterials within the Type 3 PMA, a target of 0.9 is set as driving is typically the primary mode of transportation on those corridors.

TABLE 11-2 **Primary Vehicle Corridor Travel Speed Target**

Performance Management Area	Performance Target
Type 1 PMA (High Density Mixed Use)	≥0.5 Typical Urban Travel Speed for Primary Vehicle Corridors
Type 2 PMA (Medium Density Mixed Use)	≥0.75 Typical Urban Travel Speed for Primary Vehicle Corridors
Type 3 PMA (Residential)	≥0.9 Typical Urban Travel Speed for Primary Vehicle Corridors

Peak 15-minute corridor travel times were collected in September 2019 using Iteris and supplemented with Bellevue and other observed data sources. The travel time data were then compared to the posted speed limit to determine the Primary Vehicle Corridor travel speed ratio.

SYSTEM INTERSECTION VOLUME-TO-CAPACITY RATIO

System Intersection volume-to-capacity (V/C) ratio is an operational indicator that compares the potential maximum number of vehicles that can be accommodated at an intersection to the actual number of vehicles observed traveling through the intersection. As the V/C ratio approaches 1.0, the number of vehicles traveling through the intersection is close to reaching the capacity of the intersection.

V/C ratio is calculated at 134 System Intersections throughout the city using the critical volume method as described in the latest Highway Capacity Manual. A System Intersection is defined as a signalized or roundabout intersection with two arterials or freeway ramps, and at least one arterial is a Primary Vehicle Corridor.

V/C ratio performance targets vary depending on the location of the System Intersection in one of three PMAs. **Table 11-3** provides a summary of the targets.

TABLE 11-3 **System Intersection V/C Performance Target**

Performance Management Area	Performance Target
Type 1 PMA (High Density Mixed Use)	1.0 V/C at System Intersections
Type 2 PMA (Medium Density Mixed Use)	0.9 V/C at System Intersections
Type 3 PMA (Residential)	0.85 V/C at System Intersections

SOURCE: City of Bellevue 2023

11.2.5 State Facilities

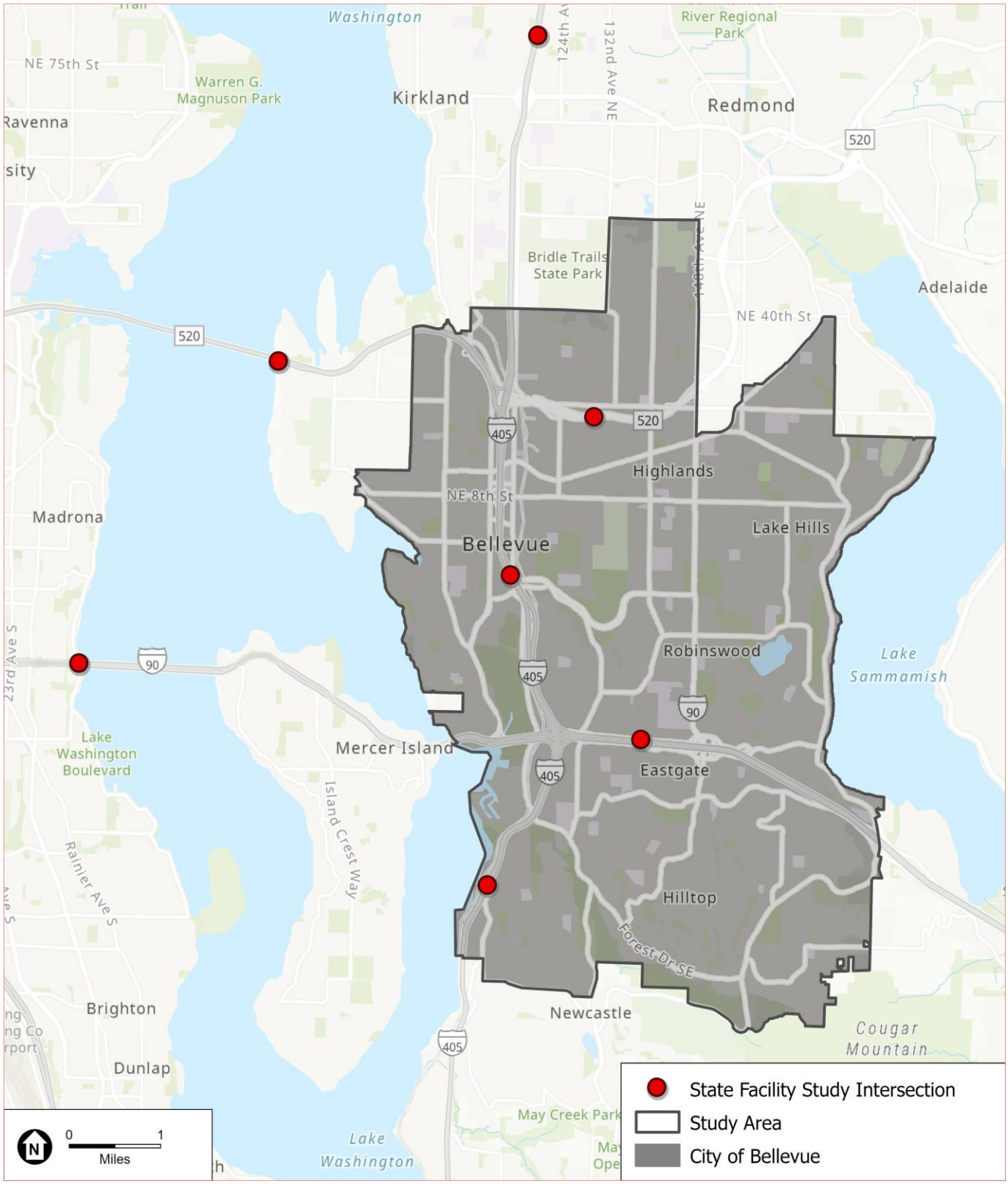
In addition to tracking the performance of the locally owned transportation network, cities must consider how state facilities are affected by local growth. Facilities owned by the Washington State Department of Transportation (WSDOT) are evaluated using a segment-based volume-to-capacity concept. For this EIS, capacities are defined using maximum service volume assumptions developed by the Florida Department of Transportation based on Highway Capacity Manual methodologies. The maximum service volumes, the highest volume a roadway can carry while still maintaining its level of service (LOS) standard, for this analysis are based on roadway characteristics including number of lanes, presence of auxiliary lanes and presence of ramp metering. Consistent with the approach to locally owned roadways, 2019 volumes are used to represent existing conditions. Annual average weekday traffic (AADT) volumes for that year were compiled from WSDOT's Traffic Count Database System. The state facility study locations are presented in **Figure 11-6**.

11.2.6 Mode Share

Mode share refers to the proportion of trips that are taken by each mode of travel: walking, bicycling, drive alone (SOV), carpool (HOV), and transit. This EIS includes the projected mode share for trips originating from or destined to Bellevue for each alternative to indicate how travel behavior is projected to change over the next two decades. The forecasts are broken out by Bellevue workers and Bellevue residents.

11.2.7 Vehicle Miles Traveled (VMT) per Capita

Vehicle Miles Traveled (VMT) is the sum of all miles traveled by vehicles in the city over the course of a particular period. For the purposes of this EIS, VMT is aggregated at the daily level and then divided by the total number of Bellevue residents and workers (sometimes called the service population). Therefore, VMT per capita is an estimate of the average number of vehicle miles traveled by each Bellevue resident and/or worker. This metric speaks to how travel behavior may shift with different land use concentrations and mixes as it captures changes in mode choice as well as vehicle trip length.



SOURCE: Fehr & Peers 2023

FIGURE 11-6 **State Facility Study Locations**

11.3 Affected Environment

This section describes the existing transportation conditions in the City of Bellevue for all modes including pedestrians, bicycles, transit, vehicles, and freight movement as well as safety and parking. Information is provided on a citywide basis and includes an in-depth analysis of the Wilburton study area.

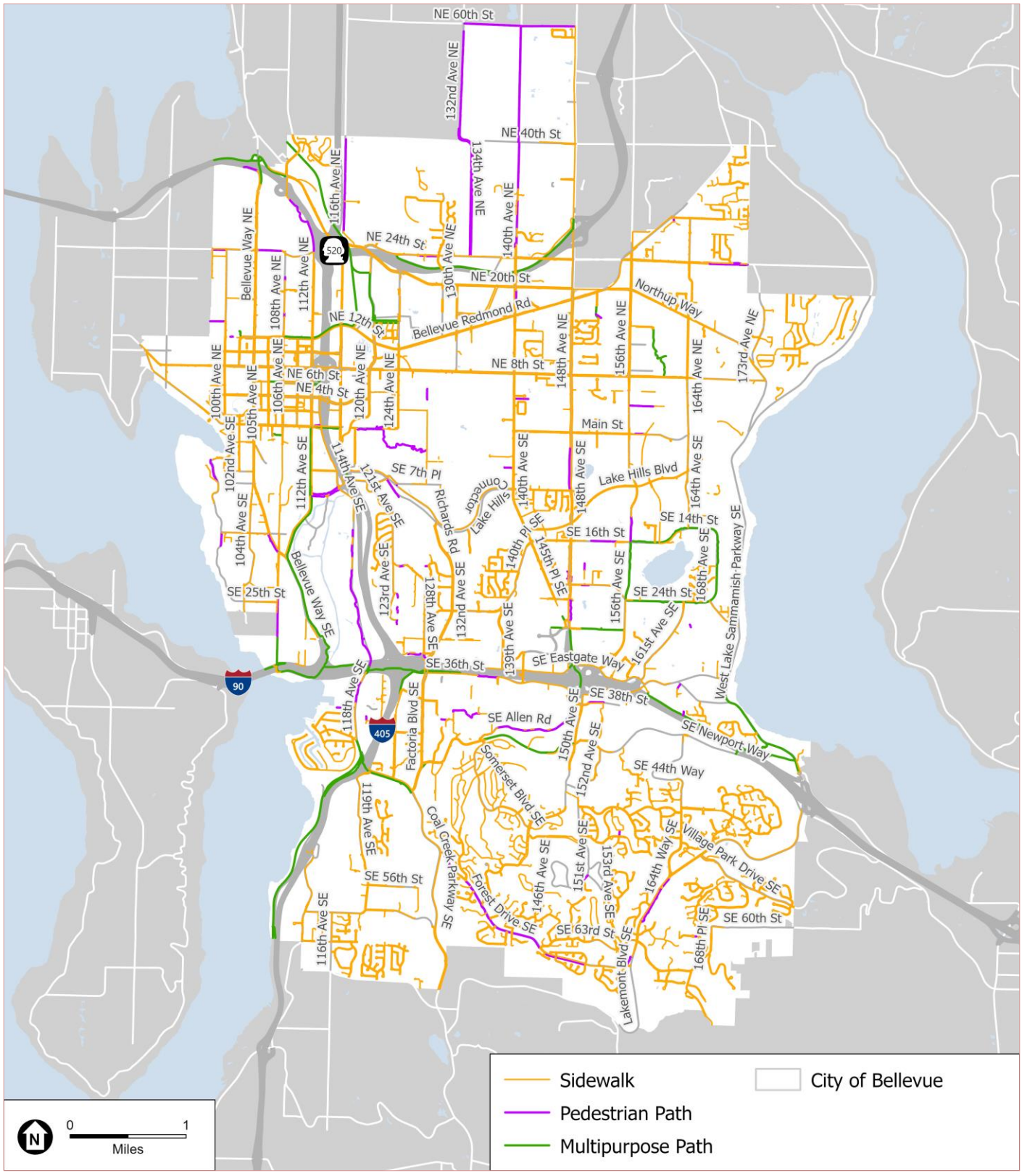
11.3.1 Pedestrian Network Performance

The pedestrian network in Bellevue consists of sidewalks, street crossings, trails and multipurpose paths, and shared shoulders. **Figure 11-7** shows the existing network of pedestrian facilities, both on arterials and on neighborhood streets.

The pedestrian network is continually upgraded through a variety of methods including capital programs and as private sector developments make frontage improvements. The Neighborhood Sidewalk Program and other capital programs help address pedestrian facility needs and priorities in neighborhoods by providing a framework and criteria to evaluate and prioritize candidate projects, and funding for construction.

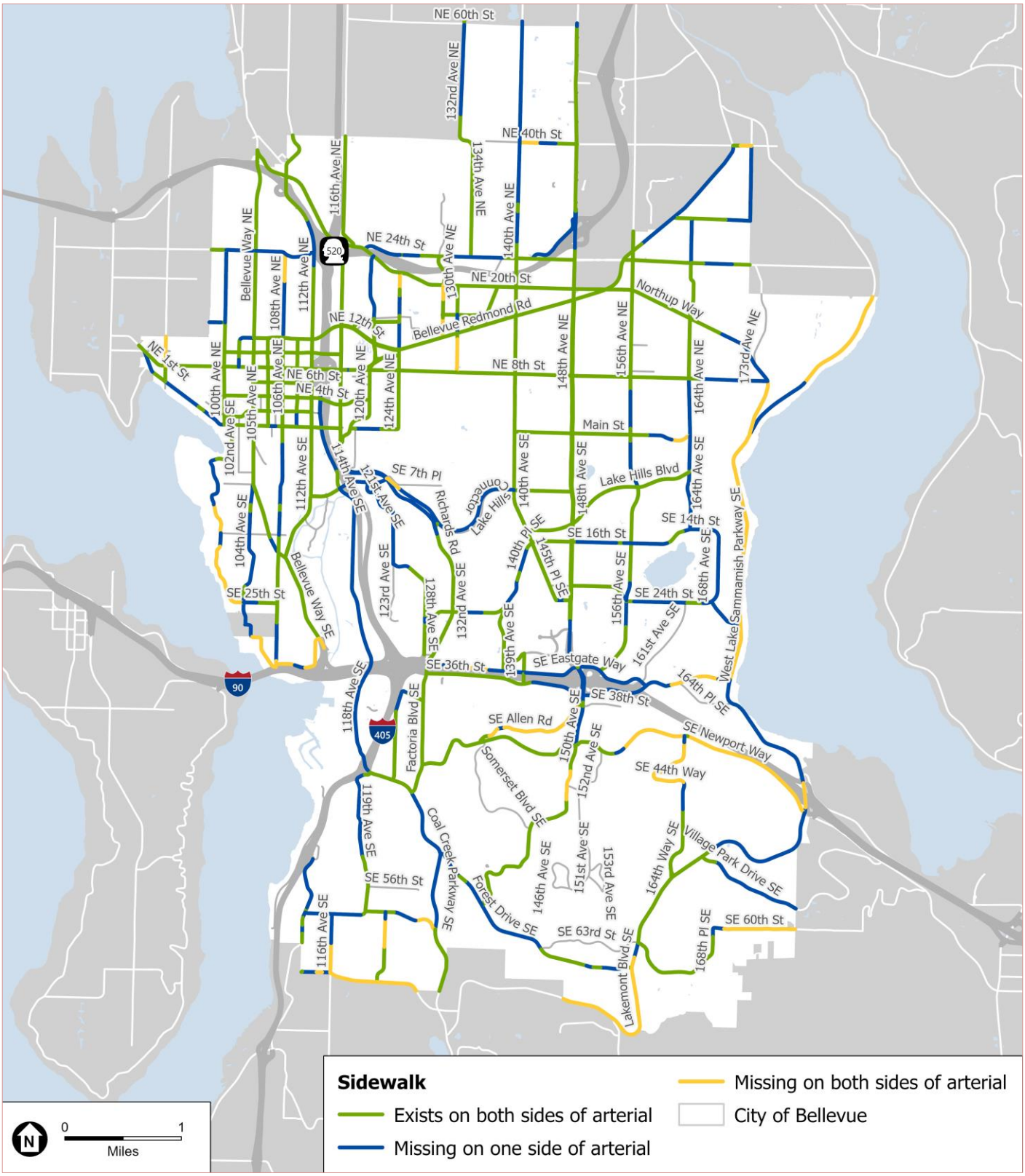
Figure 11-8 and **Table 11-4** summarize the pedestrian network performance using the metrics defined in the MIP, which focuses only on the pedestrian network along the city's arterial streets (a subset of the entire pedestrian network shown in Figure 11-7). Currently, 56 percent of the arterial network has sidewalks on both sides of the street, 32 percent of arterials are missing a sidewalk on one side of the street, and 12 percent of arterials have sidewalk gaps.

The Bellevue MIP sets the goal of achieving 100 percent pedestrian network completeness, which is currently only complete in Crossroads. The pedestrian network is most complete in Type 1 High Density Mixed Use PMAs, which include Downtown, BelRed, and Wilburton-East Main; Downtown and Wilburton-East Main have no sidewalk gaps, although additional work is needed to add sidewalks to both sides of some roadways. Among all PMAs, Eastgate has the lowest proportion of sidewalks complete on both sides. However, the Type 3 Residential PMA also has less than half of the arterial network with sidewalks on both sides and has sidewalk gaps on 16 percent of the arterial network.



SOURCE: Bellevue 2023

FIGURE 11-7 **Existing Pedestrian Facilities**



SOURCE: City of Bellevue 2023

FIGURE 11-8 **Existing Pedestrian Network Performance**

TABLE 11-4 **Existing Pedestrian Network Performance Target Results**

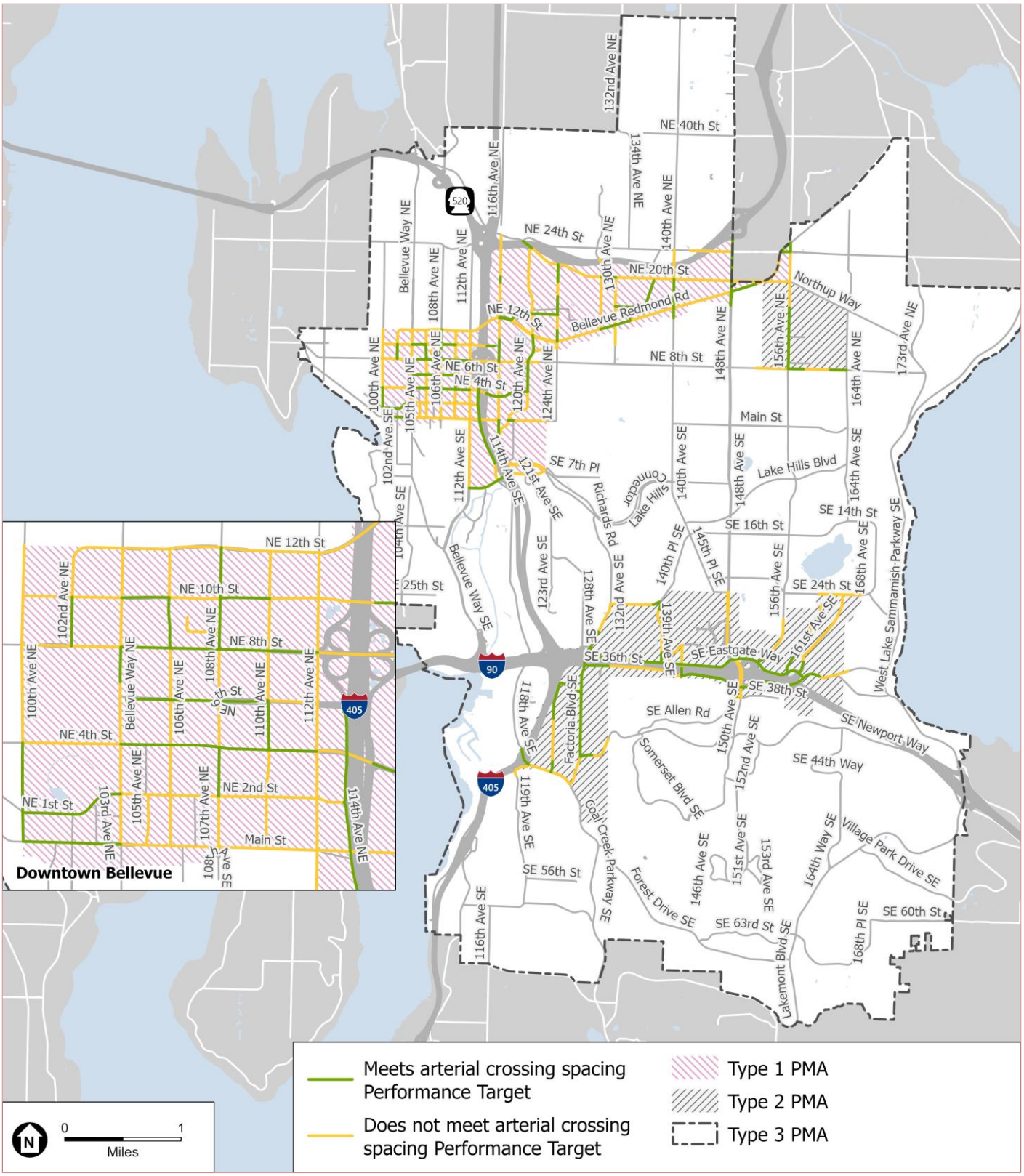
Citywide		Sidewalks on Both Sides	Sidewalk on One Side	Sidewalk Gaps
Miles		77	44	17
Proportion of Total		56%	32%	12%
Performance Management Area		**Sidewalks on Both Sides**	**Sidewalk on One Side**	**Sidewalk Gaps**
Type 1 PMA – High Density Mixed Use	Downtown	95%	5%	0%
	BelRed	86%	8%	6%
	Wilburton-East Main	75%	25%	0%
Type 2 PMA – Medium Density Mixed Use	Crossroads	100%	0%	0%
	Eastgate	29%	63%	8%
	Factoria	70%	28%	2%
Type 3 PMA – Residential		47%	37%	16%

SOURCE: Fehr & Peers 2023

Figure 11-9 presents pedestrian arterial crossing spacing performance within Type 1 and Type 2 PMAs. Recommended minimum spacing between designated arterial crossings varies from 300 feet to 800 feet depending on the location and the nearby land use. Most corridors throughout those areas require additional pedestrian crossings to meet the arterial crossing spacing targets.

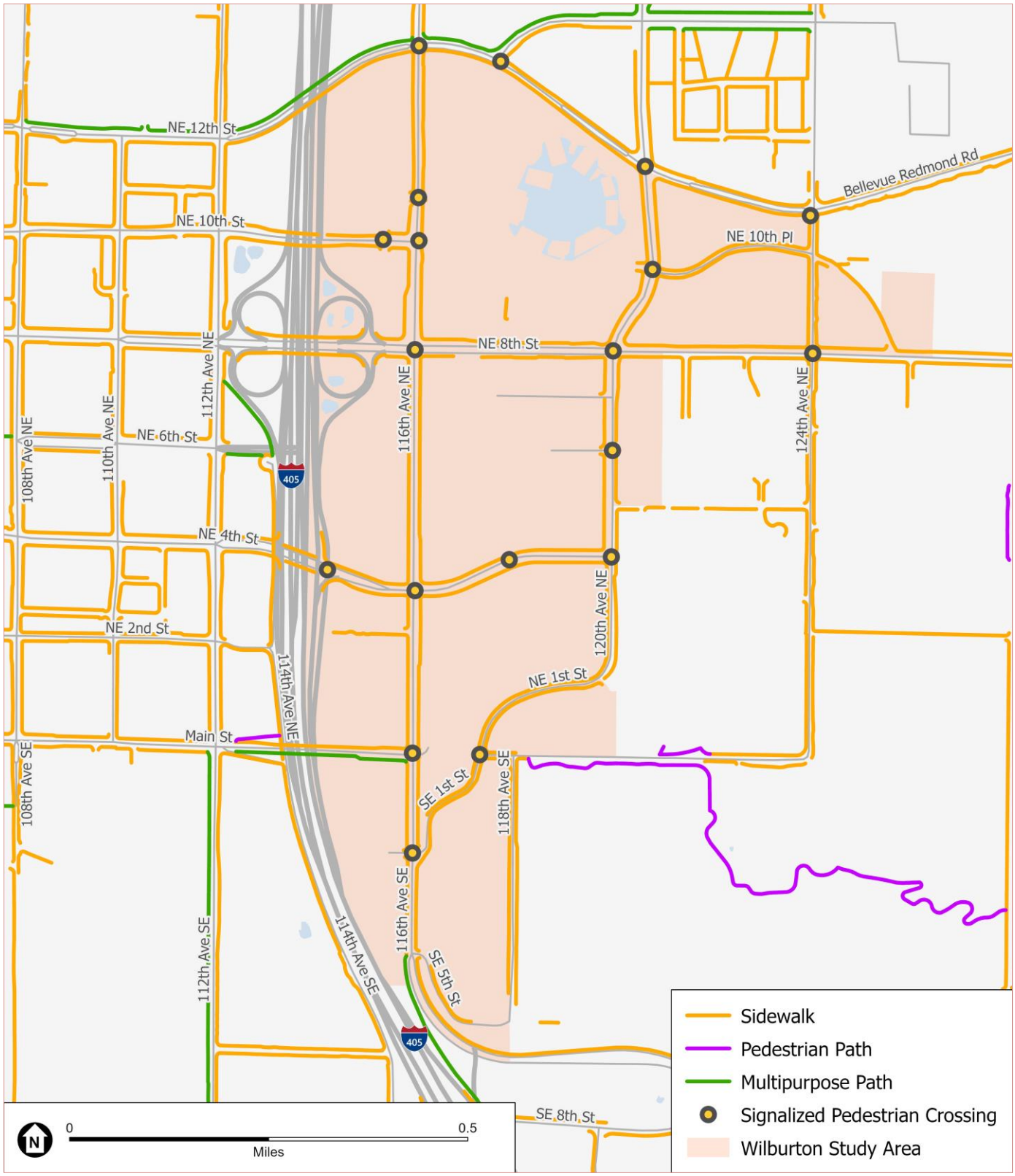
PEDESTRIAN NETWORK IN THE WILBURTON STUDY AREA

Pedestrians can access the Wilburton study area from all directions, although connections are limited. Existing pedestrian facilities are mapped in **Figure 11-10**. From the west, pedestrians can cross I-405 at NE 12th Street, NE 10th Street, NE 8th Street, NE 4th Street, and Main Street. The crossing at NE 8th Street is particularly difficult for pedestrians due to the cloverleaf ramps to and from I-405 that must be crossed without the aid of traffic signals. From the east, pedestrians can access the Wilburton study area via Bel-Red Road/NE 12th Street, NE 8th Street, NE 5th Street, and Main Street.



SOURCE: Bellevue 2023

FIGURE 11-9 **Existing Pedestrian Arterial Crossing Spacing Performance**



SOURCE: Bellevue 2023

FIGURE 11-10 **Existing Pedestrian Facilities in the Wilburton Study Area Vicinity**

From the north, the Wilburton study area is primarily accessed via 116th Avenue NE, 120th Avenue NE, and 124th Avenue NE. The northern side of NE 12th Street is a multipurpose path that provides east-west pedestrian access throughout the Wilburton study area. The new Main Street bridge over I-405 mirrors the NE 12th Street bridge, with a multipurpose path on the south side and a sidewalk on the north side. Pedestrians can access the Wilburton study area via the Lake Hills Connector, which turns into 116th Avenue NE at about SE 5th Street, and local roads east of 118th Avenue SE and south of Main Street.

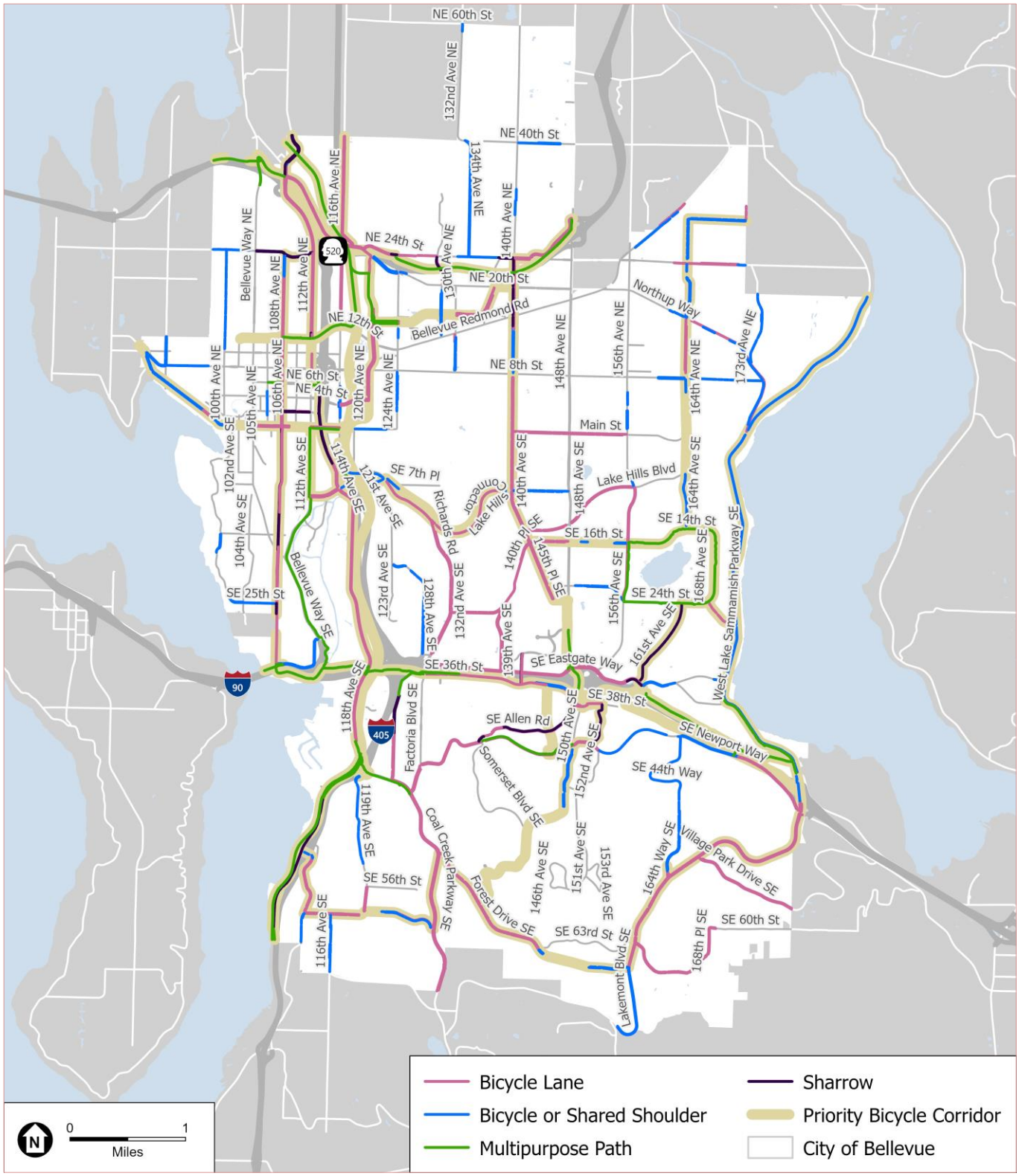
The Wilburton study area is also central to the Lake to Lake Trail and Greenway which connects nine parks across Bellevue including Wilburton Hill Park. The Lake to Lake Trail and Greenway stretches from Weowna Park on Lake Sammamish to Enatai Beach Park and Clyde Beach Park on Lake Washington.

As shown in Table 11-4, 75 percent of the arterial network in the Wilburton-East Main PMA has sidewalks on both sides of the road and the remaining arterials have a sidewalk on one side. There are currently no sidewalk gaps on the arterial network in the Wilburton-East Main PMA.

11.3.2 Bicycle Network Performance

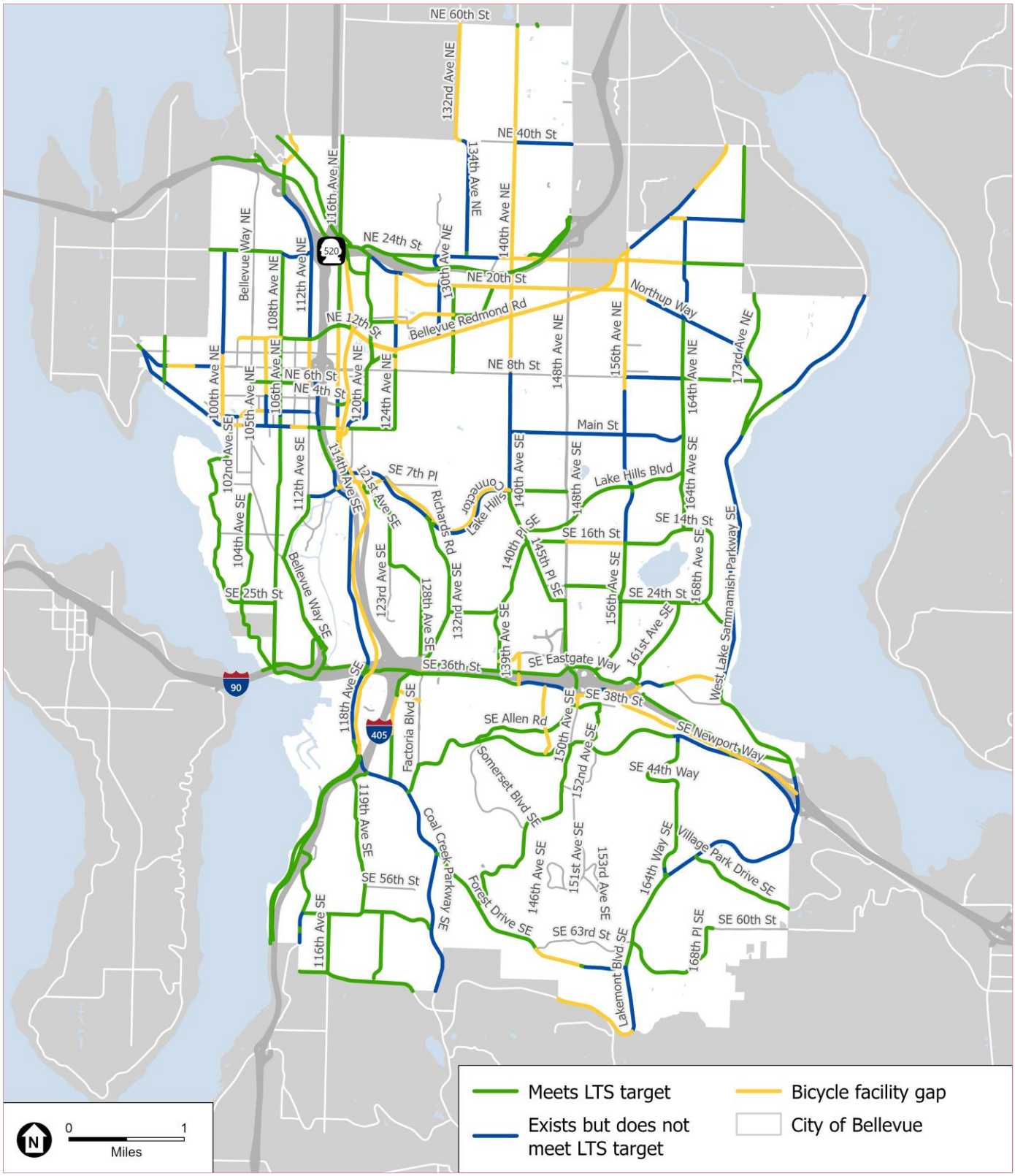
Bellevue's bicycle network is defined in the Pedestrian and Bicycle Transportation Plan and facility types are refined and the intended performance targets are described in the MIP. Bicycle facility types include bicycle lanes, trails, multipurpose paths, and streets with sharrows. Bicyclists may also use shared shoulders for travel, but such facilities do not count toward LTS or network completeness within the MIP framework. **Figure 11-11** displays the existing bicycle facilities in Bellevue. **Figure 11-12** and **Table 11-5** display the bicycle network performance using the metrics defined in the MIP. Citywide, slightly more than half of the bicycle network achieves the intended LTS, with the remaining portion evenly split between having an existing facility that does not meet the intended LTS and those with no facilities.

The Eastgate, Factoria, and Type 3 Residential PMAs all have more than half of their bicycle networks complete with facilities that meet the intended LTS and less than 20 percent of their network with facility gaps. The highest percentage of facility gaps occurs in BelRed.



SOURCE: City of Bellevue 2023

FIGURE 11-11 **Existing Bicycle Network Facilities**



SOURCE: City of Bellevue 2023

FIGURE 11-12 **Existing Bicycle Network Performance**

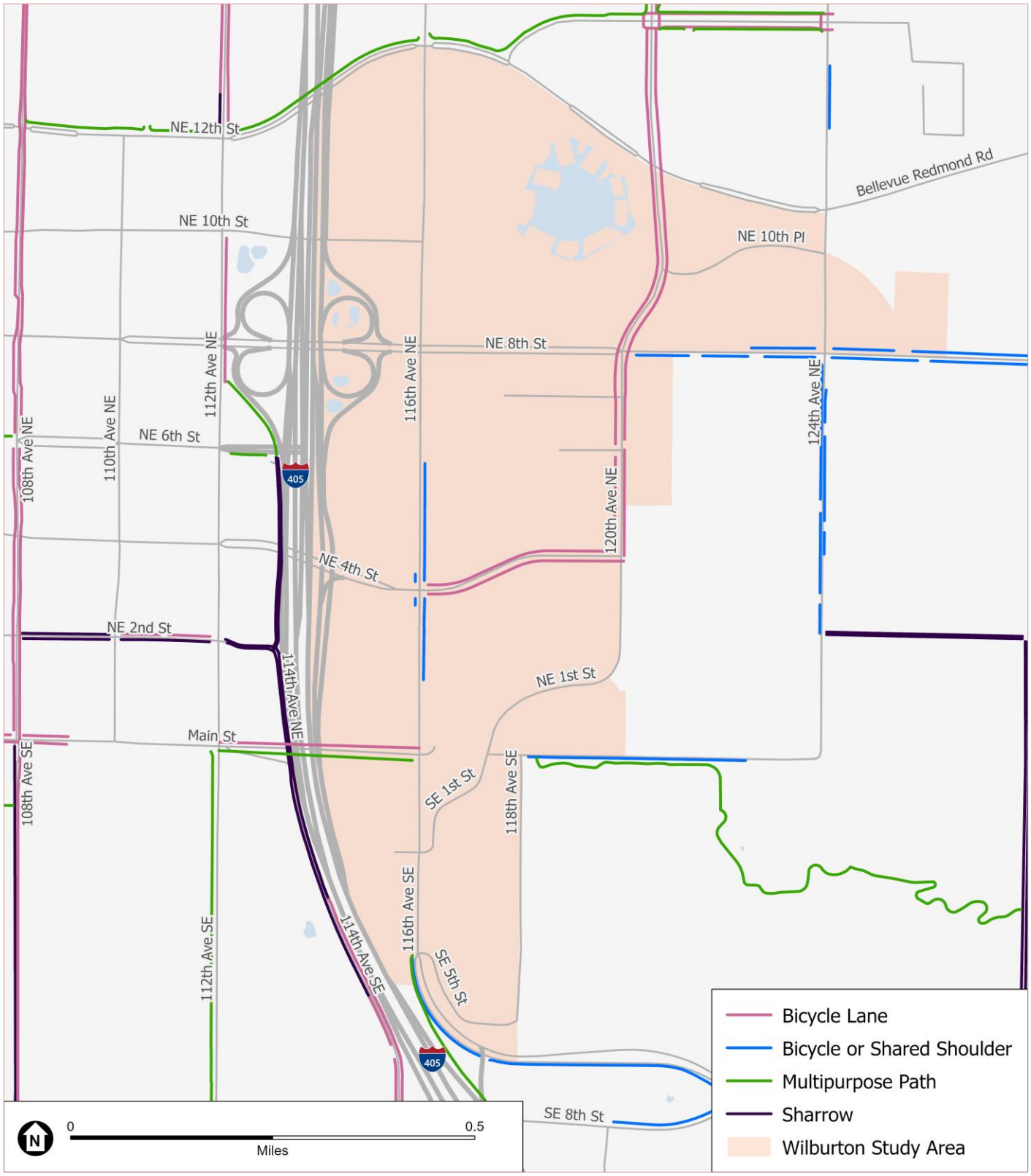
TABLE 11-5 **Existing Bicycle Network Performance Target Results**

Citywide		Facility Meets LTS	Facility Does Not Meet LTS	Facility Gaps
Miles		72	33	33
Proportion of Total		52%	24%	24%
Performance Management Area		**Facility Meets LTS**	**Facility Does Not Meet LTS**	**Facility Gaps**
Type 1 High Density Mixed Use	Downtown	27%	36%	37%
	BelRed	37%	8%	55%
	Wilburton-East Main	47%	14%	38%
Type 2 Medium Density Mixed Use	Crossroads	1%	59%	40%
	Eastgate	60%	24%	16%
	Factoria	58%	27%	15%
Type 3 Residential		57%	25%	18%

SOURCE: Fehr & Peers 2023

BICYCLE NETWORK IN THE WILBURTON STUDY AREA

Bicycle infrastructure is limited within the Wilburton study area. As shown in **Figure 11-13**, bicycle lanes are provided on 120th Avenue NE between NE 4th Street and Spring Boulevard, as well as on NE 4th Street between 116th Avenue NE and 120th Avenue NE. A multipurpose path on the north side of the NE 12th Street/Spring Boulevard corridor connects 108th Avenue NE and 120th Avenue NE at the north perimeter of the study area, and a new multipurpose path on the south side of the Main Street bridge over I-405 and a bike lane on the north side of the bridge connects 112th Avenue NE to 116th Avenue NE on the south perimeter of the Wilburton study area. Bicycle lanes on both sides of 116th Avenue NE north of NE 12th Street provide a connection between the study area and the State Route (SR) 520 Trail. A multipurpose path connects 116th Avenue SE with SE 8th Street and from there to the I-90 Trail.



SOURCE: City of Bellevue 2023

FIGURE 11-13 **Existing Bicycle Network Facilities in the Wilburton Study Area Vicinity**

11.3.3 Transit Network Performance

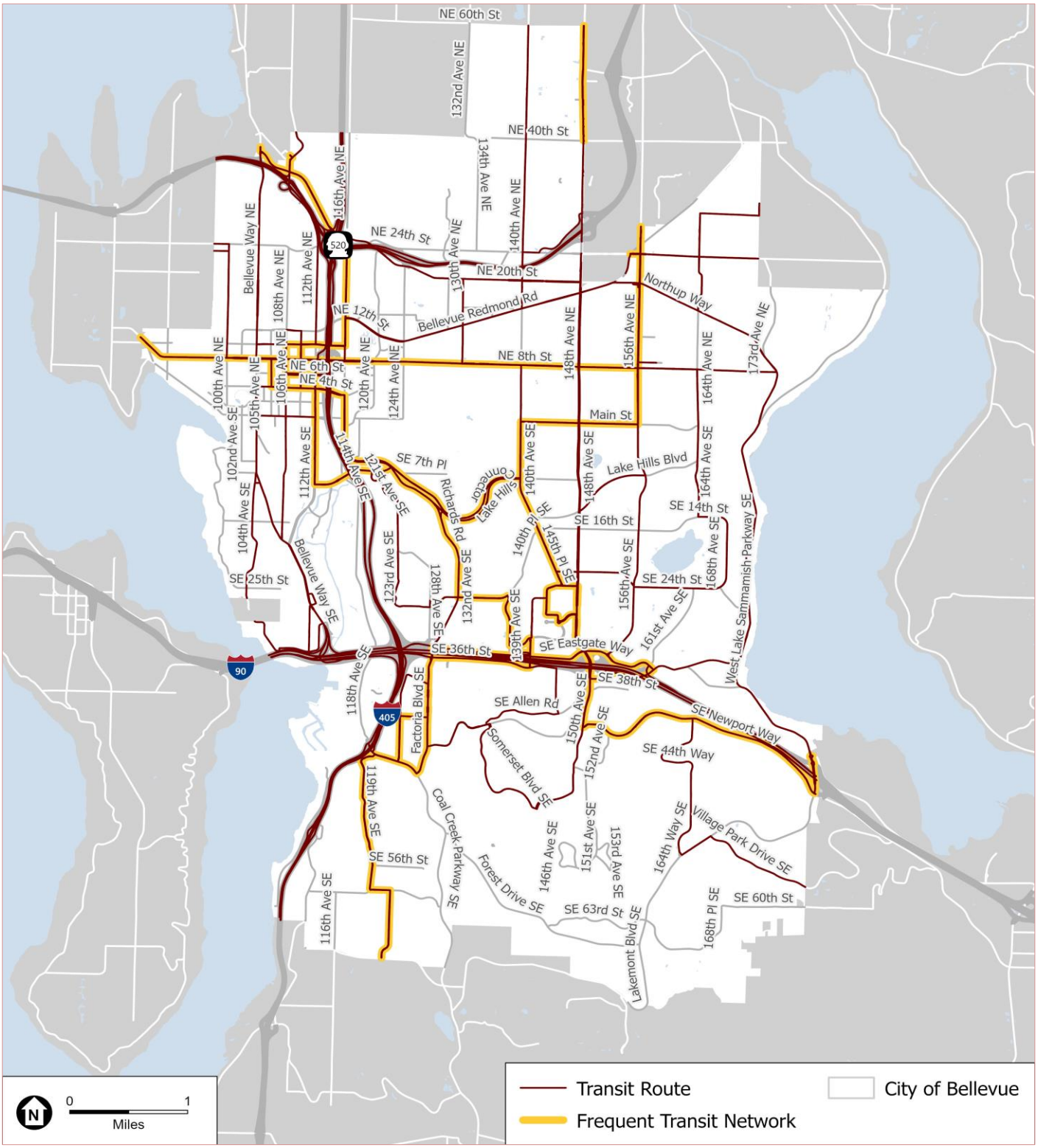
The City of Bellevue is served by an extensive network of transit routes operated by King County Metro and Sound Transit.

Existing transit routes are mapped in **Figure 11-14**. The City of Bellevue has developed a Transit Master Plan, which identifies FTN corridors for prioritized service enhancements and capital projects to improve transit speed and reliability. This network represents a long-term vision of interconnected bus routes throughout the city. Once East Link light rail opens, that would also become part of the FTN.

King County Metro operates a network of fixed-route services, including the RapidRide B Line, which provides service every 10 minutes during peak hours between the Redmond Transit Center and Bellevue Transit Center. Sound Transit operates several regional routes in Bellevue, including routes 550 (Bellevue - Seattle), 554 (Issaquah – Seattle), and 556 (Issaquah – University District).

Table 11-6 summarizes the existing King County Metro and Sound Transit routes. Transit investment continues to be a regional priority. Over the next few years, several additional frequent routes will serve residents and employees, including East Link light rail and Stride S1 and S2 bus rapid transit lines along I-405. With the opening of East Link, some bus routes will change. For example, Route 550 is currently an FTN route, but may not be after East Link opens. therefore, for this analysis, that route is not considered as part of the FTN shown in Figure 11-14 and **Figure 11-15**.

Transit network performance (expressed in terms of a travel time ratio) is presented in **Figure 11-16** and **Table 11-7**. Five of 16 transit trip pairings between Activity Centers meet the transit travel time performance target, including: Downtown to Crossroads, Downtown to Eastgate, Downtown to Overlake, and Factoria to and from Eastgate. The other Activity Center pairs exceed the 2.0 performance target meaning a transit trip would take more than twice as long as a trip by private vehicle. The transit travel time ratios that do not meet the performance target are **shown in bold**.



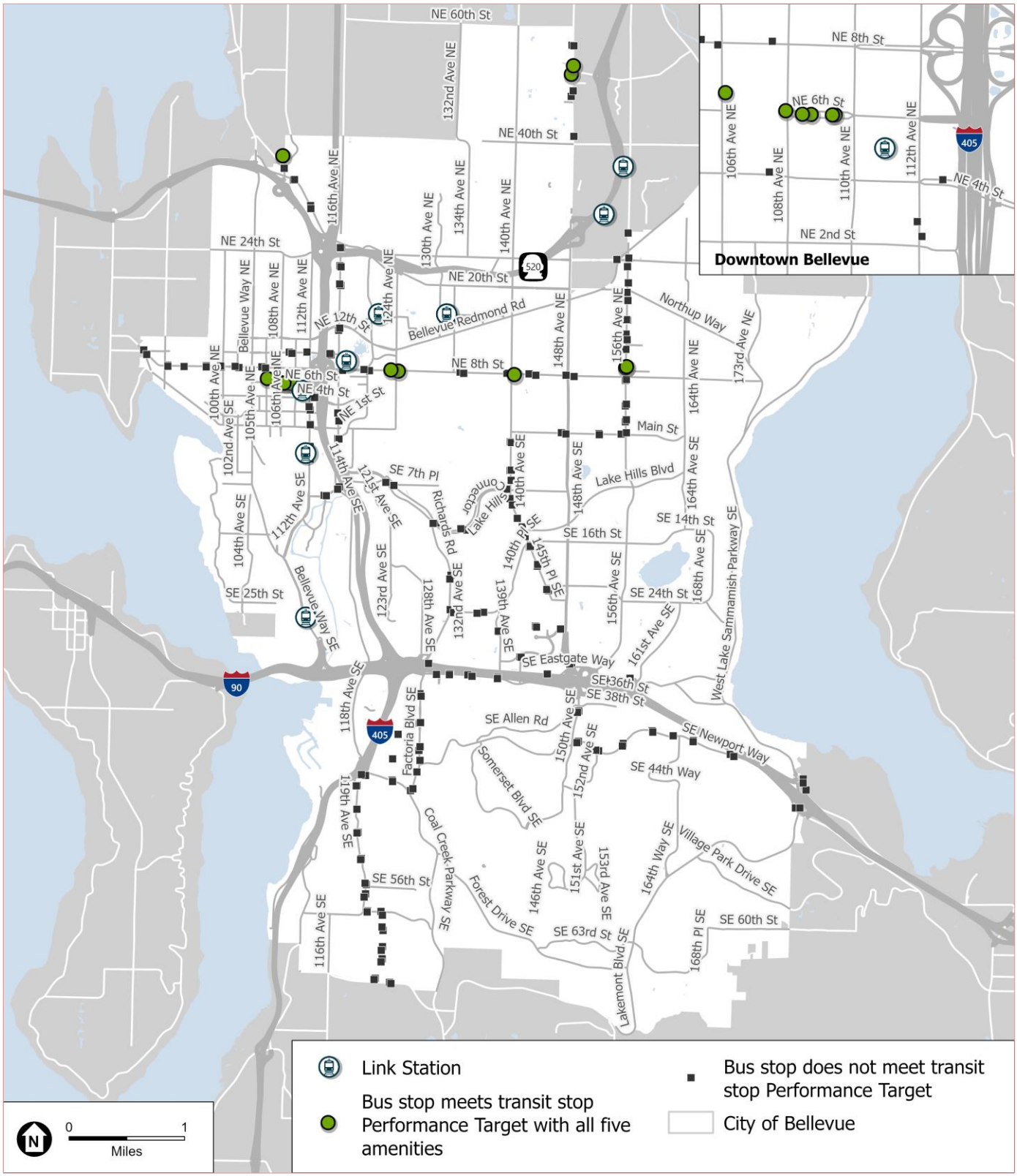
SOURCE: City of Bellevue 2023

FIGURE 11-14 **Existing Transit Routes, 2021**

TABLE 11-6 **Existing (2022) Transit Frequencies**

Route	Route Description	AM Peak Frequency	PM Peak Frequency	Midday Frequency
114	Lake Kathleen to Downtown Seattle	35	30	N/A
167	Renton to University District	35	30	N/A
212	Eastgate P&R to Downtown Seattle	20	20	N/A
217	Downtown Seattle to North Issaquah	25	25	N/A
218	Issaquah to Downtown Seattle	20	50	N/A
221	Education Hill to Eastgate P&R	30	30	30
226	Bellevue, Factoria, Eastgate P&R	30	30	30
232	Bellevue to Duvall (and partial 342)	30	30	N/A
237	Woodinville to Bellevue	30	50	N/A
240	Bellevue to Renton	20	20	20
241	Bellevue to Eastgate	30	30	30
245	Kirkland to Factoria	15	15	15
246	Clyde Hill to Eastgate P&R	60	60	60
249	Overlake to Bellevue	35	35	60
250	Avondale to Bellevue	15	15	15
269	Issaquah to Overlake	30	30	30
271	Issaquah to University District	10	10	15
342	Shoreline P&R to Renton	35	35	N/A
532	Everett to Bellevue	15	20	N/A
535	Lynnwood to Bellevue	30	30	30
550	Bellevue to Seattle	10	10	15
554	Issaquah to Seattle	20	20	20
556	Issaquah to University District	30	30	N/A
560	Westwood Village to Bellevue	30	30	30
566	Auburn to Redmond	25	30	30
981	Serves Lakeside School to Totem Lake (School Route)	N/A	N/A	N/A
989	Serves University Preparatory Academy to Haller Lake (School Route)	N/A	N/A	N/A
B	Redmond to Bellevue	10	10	30

SOURCE: King County Metro 2023; Sound Transit 2023



SOURCE: City of Bellevue 2023

FIGURE 11-15 **Existing FTN Transit Stop Performance, 2021**

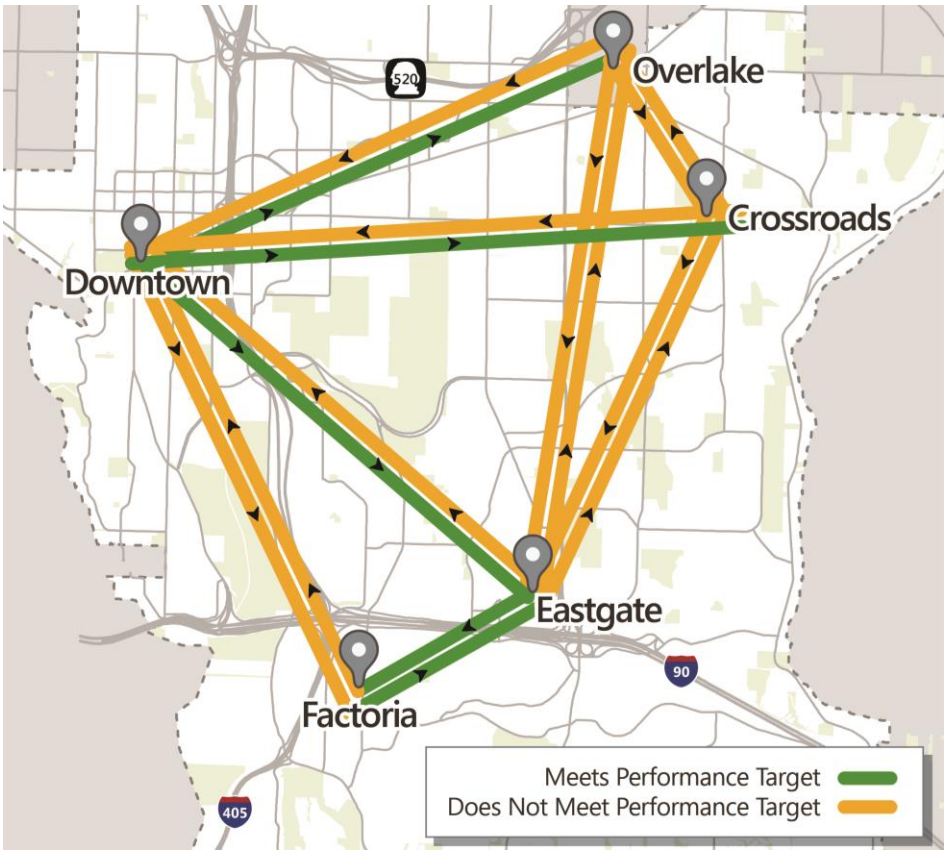


FIGURE 11-16 **Existing Transit Network Performance**

TABLE 11-7 **Existing Transit Travel Time Ratio (Target is 2.0)**

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown	—	1.65	1.81	**2.82**	1.78
Crossroads	**2.14**	—	**2.13**	—	**2.11**
Eastgate	**2.63**	**2.54**	—	1.50	**2.58**
Factoria	**3.32**	—	1.84	—	—
Overlake	**2.35**	**2.11**	**2.20**	—	—

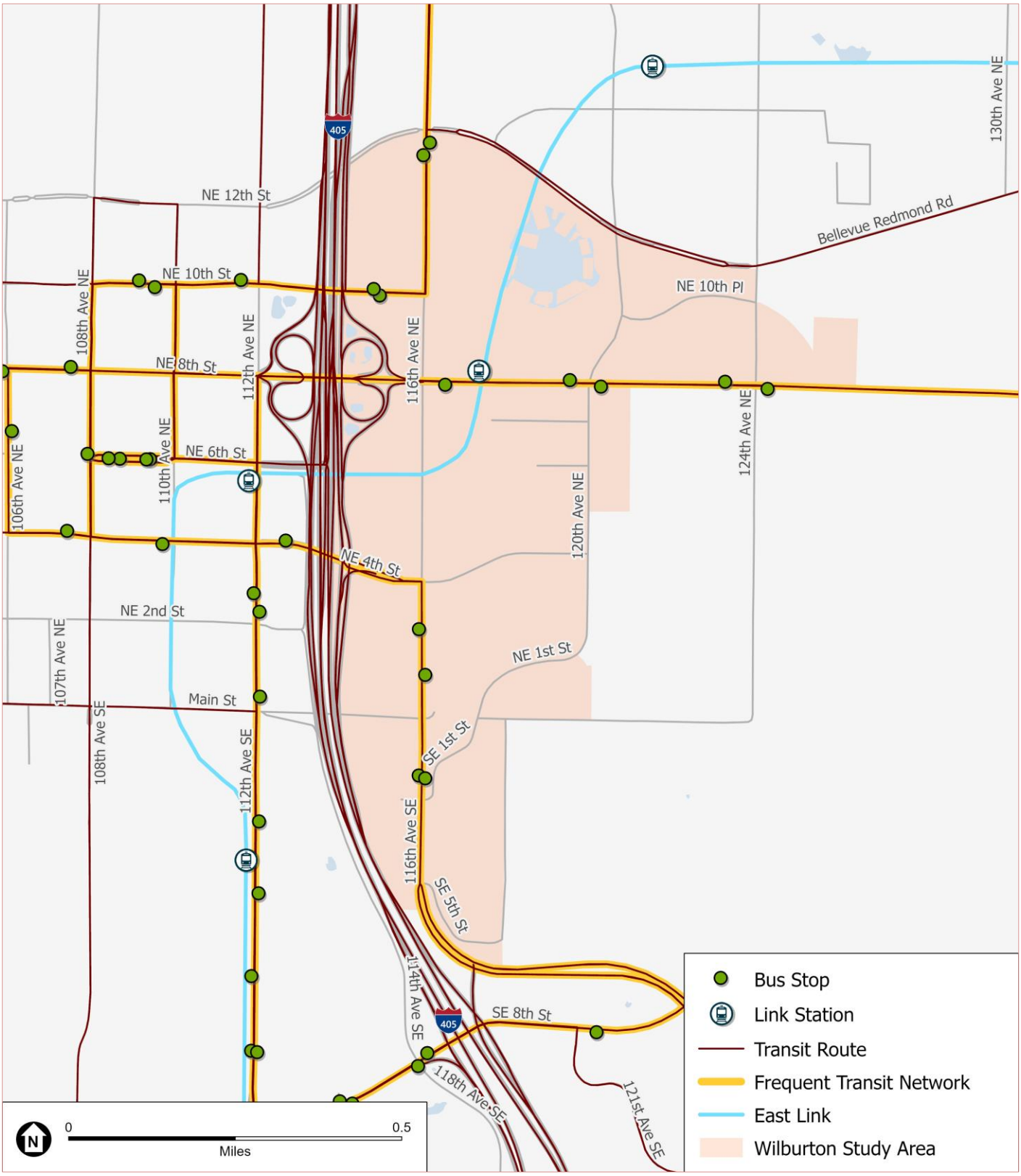
SOURCE: City of Bellevue 2023

Existing FTN transit stop performance (expressed as the amenities present) is presented in Figure 11-15. Note that East Link stations are not evaluated for transit stop performance though they are expected to provide the passenger amenities defined in the MIP relevant to rail service (weather protection, seating, wayfinding, and bicycle parking). Of the 227 transit stops along the FTN, approximately 6 percent meet the transit stop performance target with all five amenities. Many other stops have multiple transit amenities, but not all five. Bellevue will continue to work with the transit agencies to upgrade amenities at transit stops and RapidRide stations.

TRANSIT NETWORK IN THE WILBURTON STUDY AREA

The Wilburton study area is served by several transit routes, including the 226, 234, 235, 271, and RapidRide B, with service that runs primarily along NE 8th Street and 116th Avenue NE within the neighborhood.

Existing transit service in the Wilburton study area is shown in **Figure 11-17**. This includes frequent transit along the NE 10th Street, NE 8th Street, NE 4th Street, and 116th Avenue NE corridors. Only one transit stop pair in the Wilburton study area has all five transit stop amenities: at the intersection of NE 8th Street and 124th Avenue NE. The Wilburton study area will soon be served by East Link with a station just north of NE 8th Street and east of 116th Avenue NE. In addition, several other stations would be within a short walking distance of the Wilburton study area: Downtown (NE 6th Street and 112th Avenue NE), East Main (112th Avenue SE south of Main Street), and Spring District/120th (north of Spring Boulevard east of 120th Avenue NE). The light rail stations are shown for reference, although East Link service has not yet begun.



SOURCE: City of Bellevue 2023

FIGURE 11-17 **Existing Transit Facilities in the Wilburton Study Area Vicinity**

11.3.4 Vehicle Network Performance

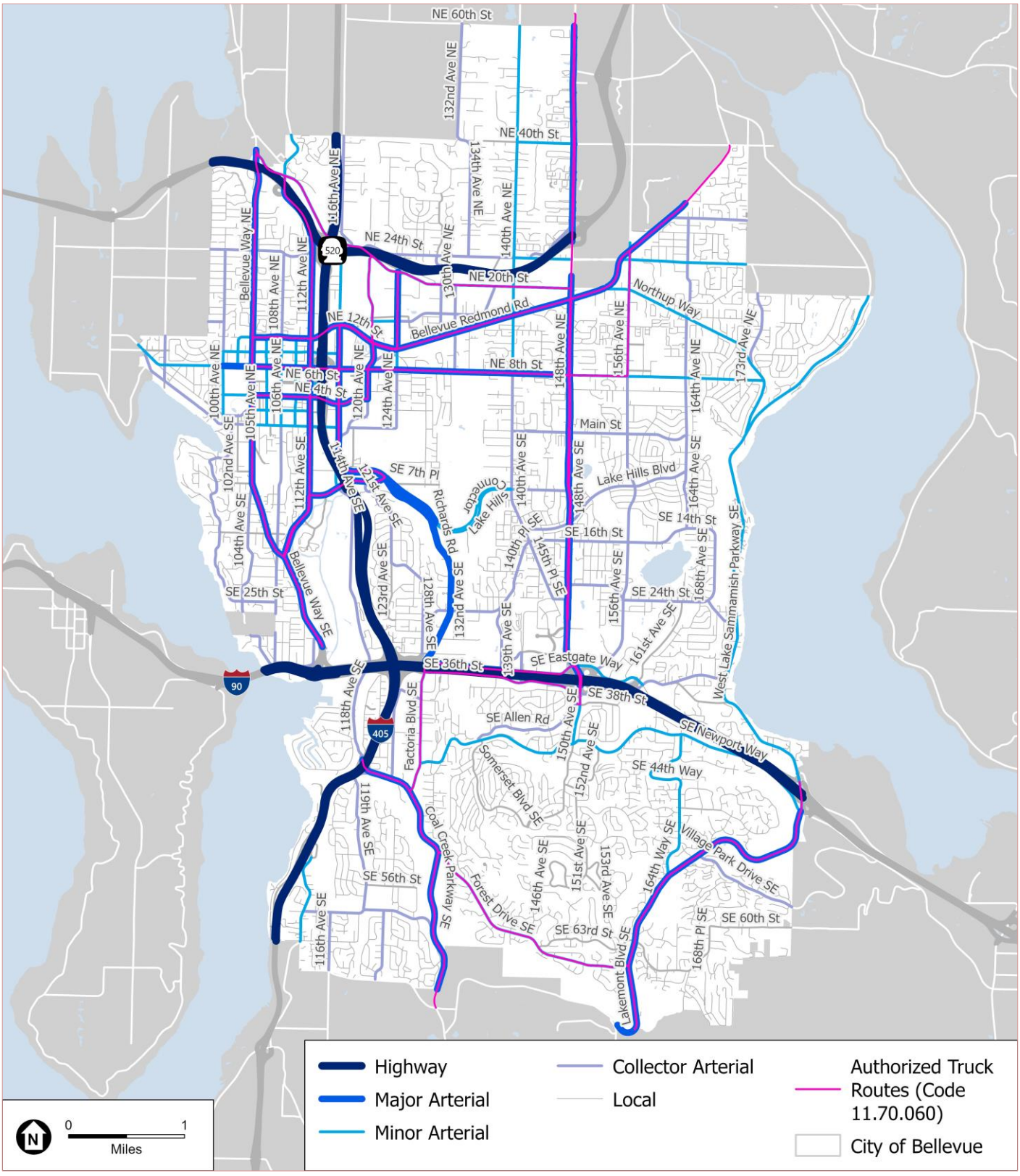
Figure 11-18 summarizes the functional classifications of arterial streets in Bellevue, comprised of highways, major arterials, minor arterials, collector arterials, local roadways, and authorized truck routes (as identified in Bellevue City Code 11.70.060).

In addition to streets managed by Bellevue, three major highways run through the city: I-405, I-90, and SR 520. I-405 is the main north–south highway through Bellevue, providing regional connections to neighboring communities such as Newcastle, Kirkland, Totem Lake, Bothell, and beyond. SR 520 and I-90 are east–west freeways located on the north and south sides of the city respectively and connect communities on the east side of Lake Washington to Seattle.

The Bellevue Transportation Department has designated a network of authorized truck routes to facilitate the movement of goods to and through the city. Where possible, all truck traffic is restricted to the state highway system or along one of the 20 authorized routes**.** The designation of these routes allows the Bellevue Transportation Department to better plan for the appropriate street design, traffic management and pavement rehabilitation.

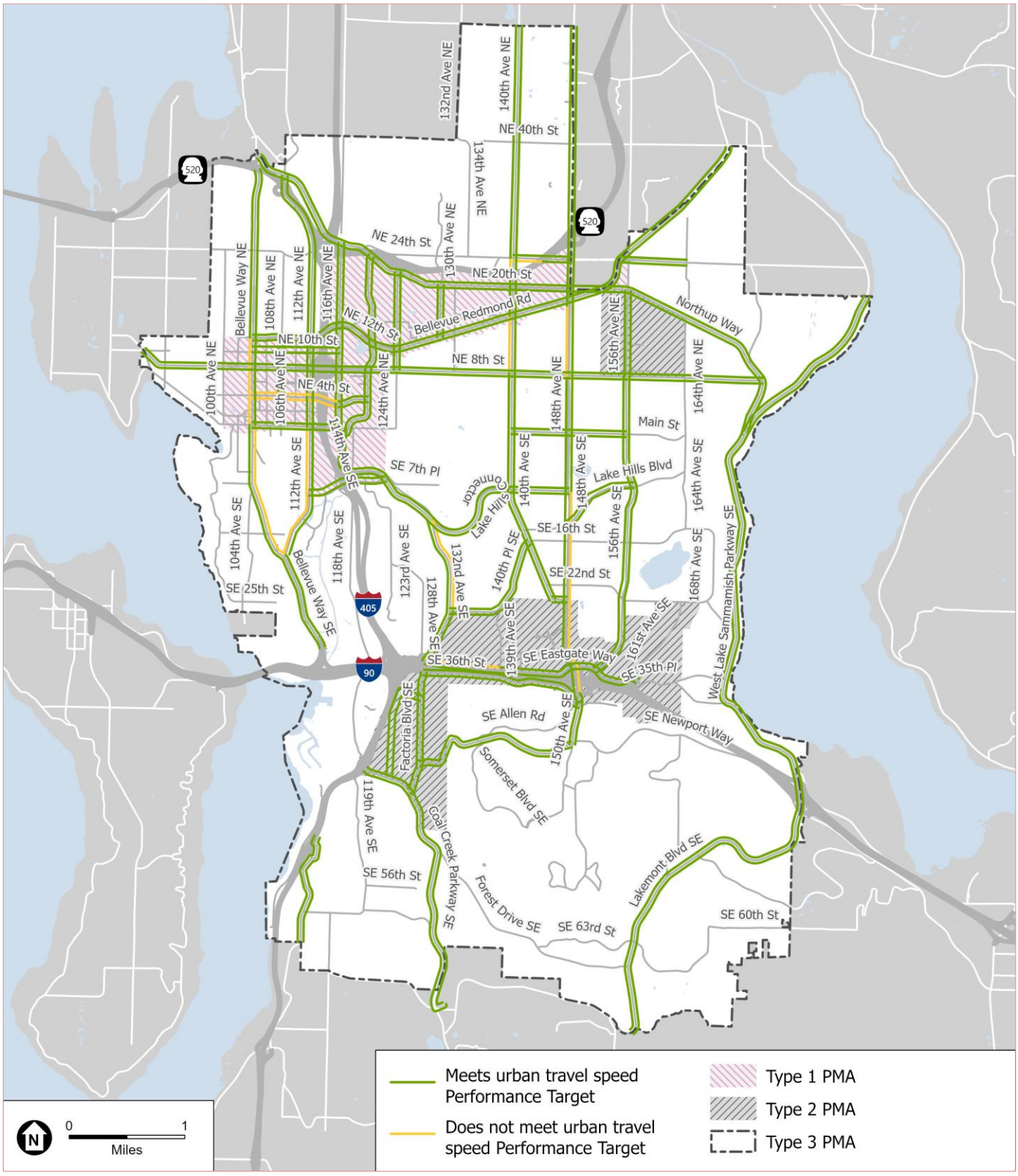
Figure 11-19 summarizes Primary Vehicle Corridor performance. Most primary vehicle corridors meet their performance targets; those that do not meet the target are typically in or connect to Type 1 or Type 2 PMAs.

Table 11-8 summarizes the proportion of the 134 total System Intersections that currently meet their performance target by PMA. Nine in ten intersections in Type 1 and Type 2 PMAs currently meet their target. The proportion of System Intersections that meet their performance target in the Type 3 PMA is lower at 78 percent. There are a number of intersections along NE Spring Blvd (following the Link light rail station construction) that do not have data and will be addressed as the intersections become operational. System Intersection performance is mapped in **Figure 11-20**.



SOURCE: City of Bellevue 2023

FIGURE 11-18 **Arterial Functional Classification and Truck Routes**



SOURCE: City of Bellevue 2023

FIGURE 11-19 **Existing Primary Vehicle Corridor Performance**

TABLE 11-8 **Existing Vehicle Network Performance – System Intersections**

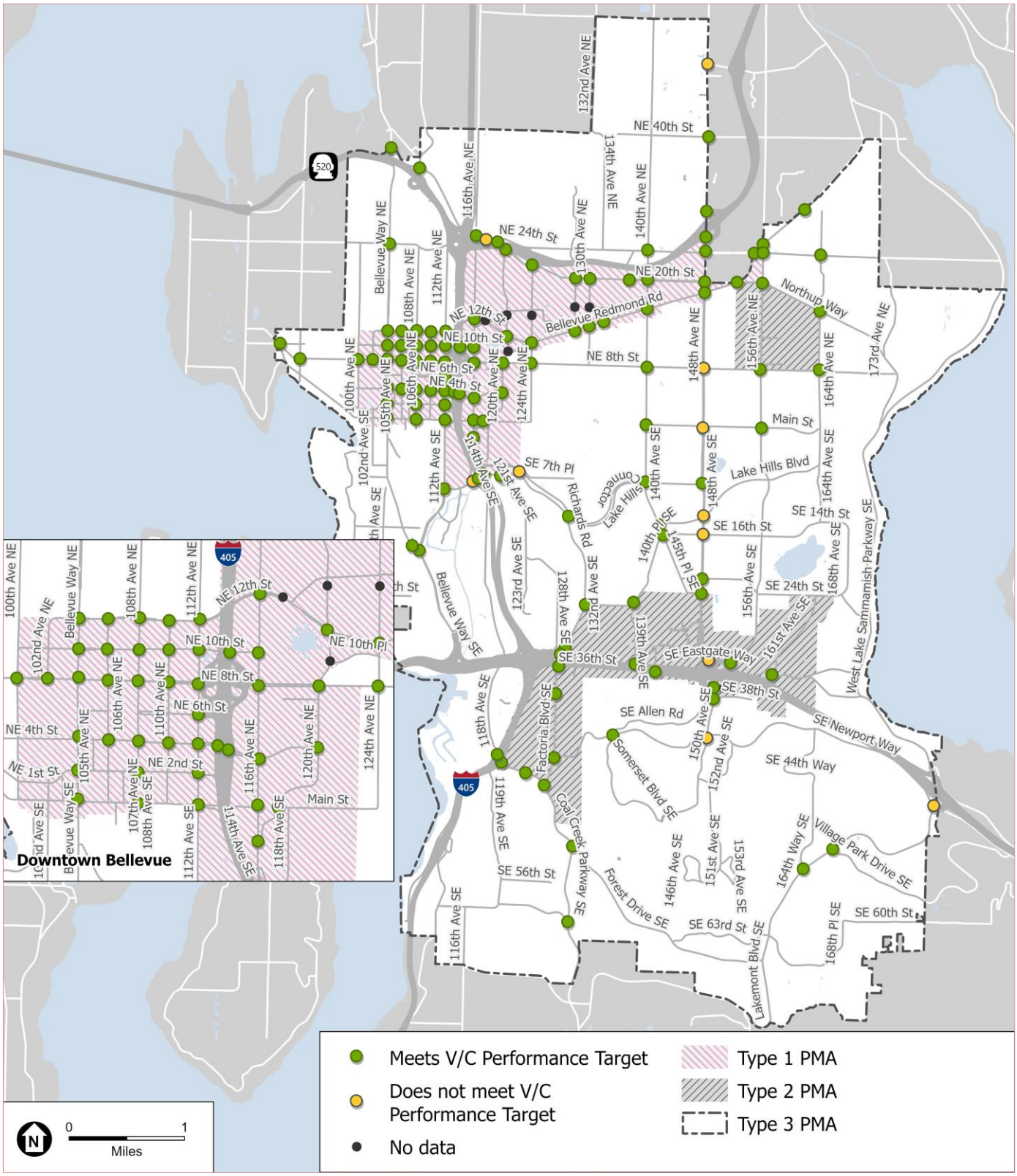
Performance Management Area	Performance Target	% of Intersections That Meet Target	% of Intersections That Do Not Meet Target	% of Intersections with No Data
Type 1 PMA	1.00	89%	3%	8%
Type 2 PMA	0.90	92%	4%	4%
Type 3 PMA	0.85	78%	22%	0%
Total System intersections		***87%***	***8%***	***5%***

SOURCE: City of Bellevue 2023

VEHICLE NETWORK IN THE WILBURTON STUDY AREA

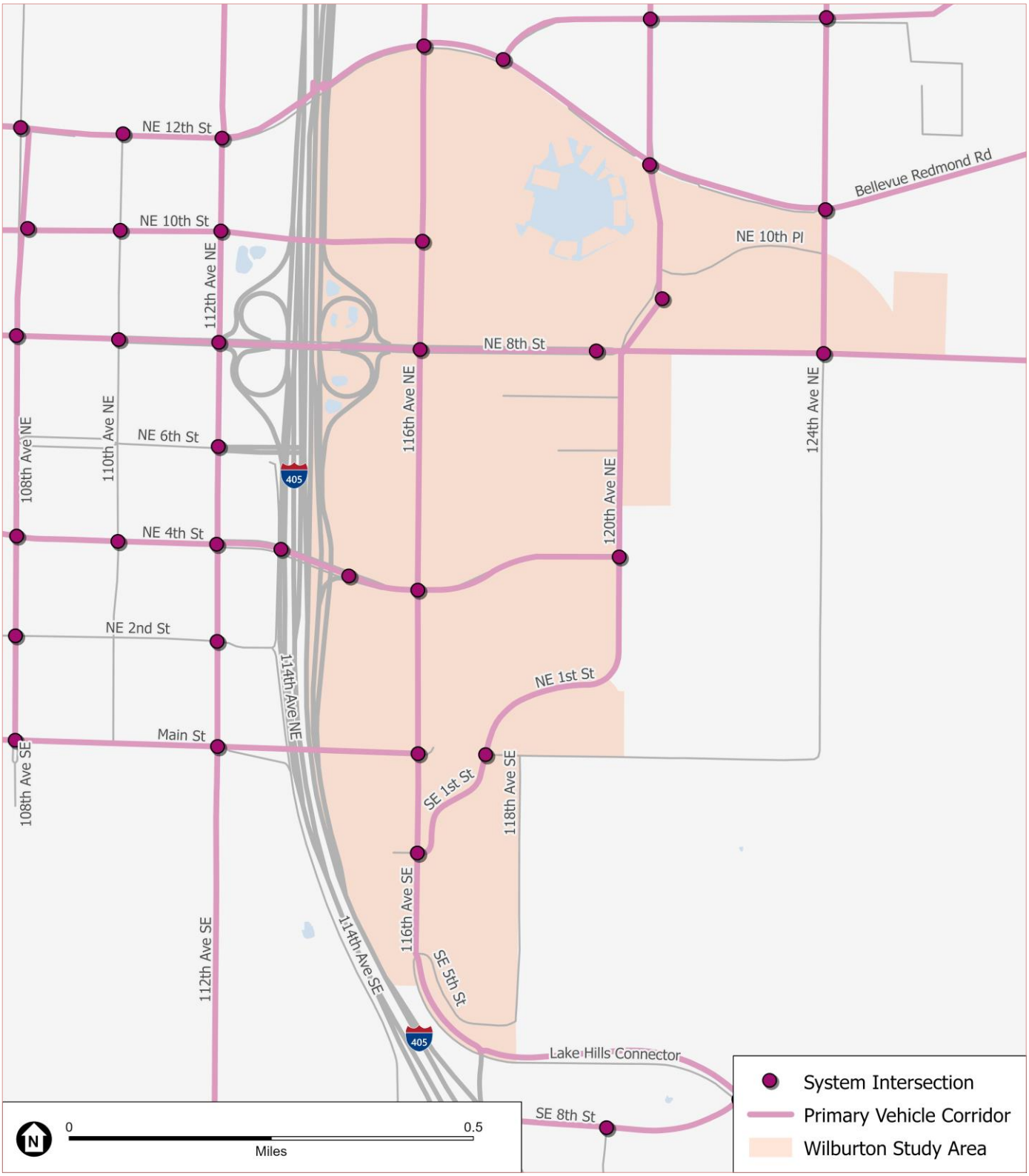
The local street network in the Wilburton study area, as shown in **Figure 11-21**, is made up of two-way streets that serve all travel modes. Arterial streets generally have a speed limit of 30 miles per hour (MPH), although 120th Avenue NE south of NE 8th Street and NE 1st Street have a speed limit of 25 MPH. All arterial intersections are signalized. Approximately half of the signals in the Wilburton study area are coordinated to improve traffic operations.

Currently all System Intersections in the Wilburton study area meet their performance target. Most Primary Vehicle Corridors in and connected to the Wilburton study area currently meet their performance target; the exception is NE 4th Street which connects to the Wilburton study area to Downtown across I-405.



SOURCE: City of Bellevue 2023

FIGURE 11-20 **Existing System Intersection Performance**



SOURCE: City of Bellevue 2023

FIGURE 11-21 **Existing Vehicle Network in the Wilburton Study Area Vicinity**

11.3.5 State Facilities

WSDOT owns and operates several state facilities through Bellevue. I-405 runs north-south through the city and SR 520 and I-90 run east-west through the city including bridges across Lake Washington to Seattle. WSDOT sets the LOS standard for I-405, SR 520, and I-90 through Bellevue at LOS D. The maximum service volume that allows those locations to operate at LOS D was calculated and compared to the existing AADT. **Table 11-9** shows that in the existing condition, two study segments along I-405 experience volumes that cause them to not meet the LOS D threshold: between SR 520 and I-90, and south of I-90.

TABLE 11-9 **Existing State Facility Performance**

Study Location	WSDOT LOS Standard	Existing AADT	Existing Volume-to-LOS D Maximum Service Volume Ratio
I-405 north of SR 520	D	211,000	0.99
I-405 between SR 520 and I-90	D	205,000	1.07
I-405 south of I-90	D	150,000	1.16
SR 520 west of I-405	D	74,000	0.57
SR 520 east of I-405	D	105,000	0.83
I-90 west of I-405	D	148,000	0.86
I-90 east of I-405	D	152,000	0.71

SOURCE: City of Bellevue 2023; Fehr & Peers 2023

11.3.6 Safety

Bellevue is committed to eliminating traffic deaths and serious injury collisions on city streets by 2030. In 2020, the City Council approved the Vision Zero Strategic Plan and the underlying Safe Systems approach by taking necessary steps to prevent future crashes. The Vision Zero Strategic Plan analyzes collision data from 2010 to 2019. Key takeaways from this analysis include:

- Between 2010 and 2019, the annual number of collisions in Bellevue decreased by 13 percent but the number of people killed or seriously injured (KSI) increased by 50 percent.
- KSI collisions occur among all road users but people walking and bicycling are much more likely to be victims in KSI collisions compared to people in cars.

- In Bellevue, 83 percent of KSI collisions occurred on 8 percent of the city's street network.

For this EIS, the latest collision data from WSDOT for the years 2017 through 2021 were analyzed. Key takeaways include:

- 17 percent of all pedestrian collisions resulted in a fatality or serious injury.
- There were six fatal collisions.
- The top five behaviors that contributed to KSI collisions were:
  - Driver distraction/inattention (21 percent)
  - Speeding (17 percent)
  - Following too closely (16 percent)
  - Failure to yield/did not grant right-of-way (14 percent)
- 31 percent of collisions occurred in wet road conditions

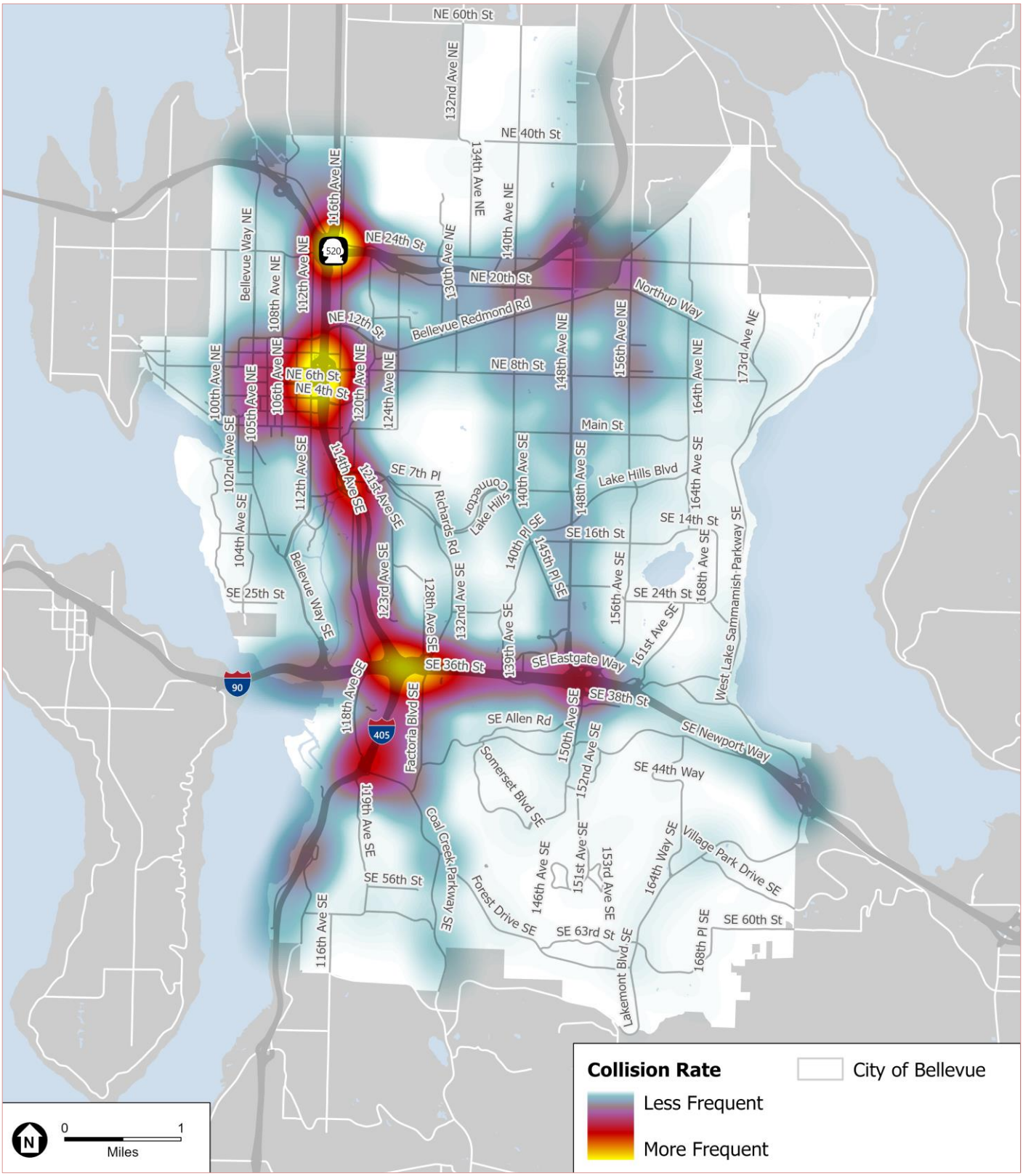
The collisions from 2017 to 2021 are represented in a heat map in **Figure 11-22**. As shown, collisions within the city most frequently occur on state facilities where traffic volumes are highest. In particular, collision hotspots occur at interchanges of I-405. Among city streets, Downtown and the area where Crossroads and BelRed meet experiences the most collisions.

11.3.7 On-Street Parking

Most arterials within Bellevue lack on-street parking. Within Downtown, Spring District, and BelRed, some arterials provide a small number of on-street parking spaces. **Figure 11-23** maps the available on-street public parking in Bellevue.

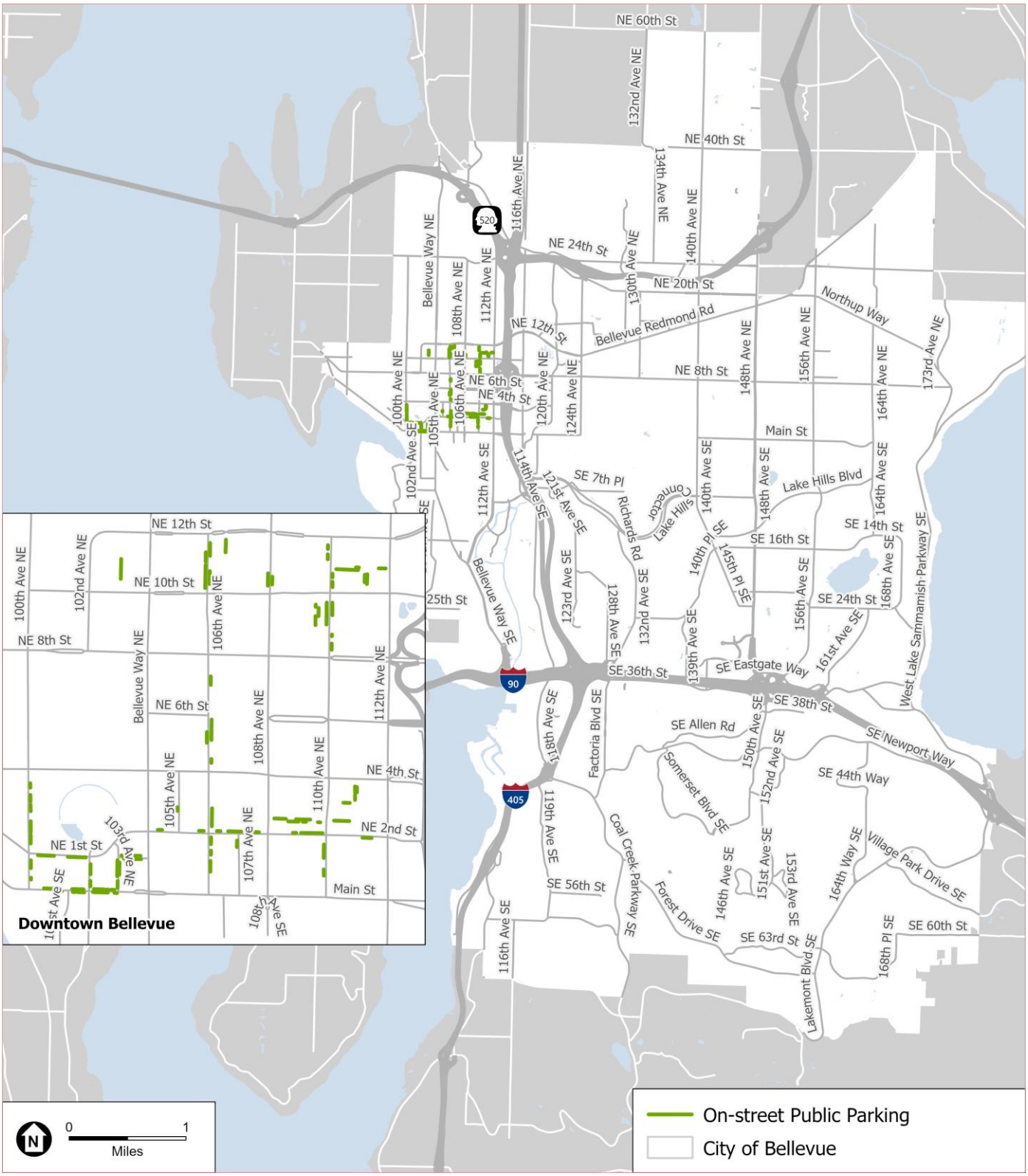
In June 2022, Bellevue performed a parking study during the morning (7:00 a.m. – 12:00 p.m.), mid-day (12:00 p.m. – 5:00 p.m.), and evening (5:00 p.m. – 9:00 p.m.) periods along all corridors with on-street parking. Most stretches of on-street parking spaces were observed to be 30 to 70 percent occupied.

Several areas experience high demand for parking, including Old Bellevue, Southwest Downtown, and Southeast Downtown, where more than 75 percent of the parking spaces are occupied during the evening hours. Over 85 percent of available on-street parking spaces are occupied during the morning hours in the Spring District and BelRed.



SOURCE: City of Bellevue 2023

FIGURE 11-22 **Collision Heat Map, 2017–2021**



SOURCE: City of Bellevue 2023

FIGURE 11-23 **Existing On-Street Parking**

11.4 Regulatory Context

This section describes plans and policies relevant to management of Bellevue's transportation system.

11.4.1 Relevant Plans and Policies

GROWTH MANAGEMENT ACT

The Growth Management Act (GMA), passed by the Washington State Legislature in 1990, requires jurisdictions to include a Transportation Element in their Comprehensive Plans. The Transportation Element must define a LOS standard to be used for long-term planning purposes to evaluate locally owned arterials and transit routes. The GMA also requires transportation concurrency, a regulatory process to ensure that development be permitted only if transportation improvements are implemented concurrent with development such that LOS meets the adopted standard.

BELLEVUE MIP

In 2022, the City Council adopted the Bellevue MIP, a new performance measurement and prioritization system that aligns transportation investments with the city's vision for growth, providing a platform for Bellevue to meet the multimodal future envisioned in this Comprehensive Plan Update. The MIP is used in conjunction with the city's codes, standards, regulations, the Multimodal Concurrency Code, Transportation Design Manual requirements, Transportation Facilities Plan, and Transportation Impact Fee Program to ensure that the performance and capacity of the city's transportation system accommodate expected growth.

An important element of the MIP is its approach to transportation concurrency. The MIP expands the former "vehicle level-of-service" standard—based solely on vehicle capacity at specified intersections—to include other transportation modes. This new multimodal approach considers additional modes of travel—such as transit, bicycling and walking—along with vehicles, to determine transportation concurrency.

Multimodal concurrency is meant to ensure the "supply" of mobility provided for all modes of transportation infrastructure is adequate to support the forecast "demand" for mobility spurred by new development. The multimodal approach provides a more equitable, sustainable way to identify, prioritize, and fund transportation system projects.

BELLEVUE VISION ZERO

Bellevue's Vision Zero initiative aims to eliminate traffic deaths and serious injury collisions on city streets by 2030 by adopting a Systems Approach to studying collisions. Founded on the belief that death and serious injuries on city streets are preventable, not accidents, the Safe Systems approach considers the design, infrastructure, and systemic issues behind crashes.

EASTRAIL

Eastrail is a planned 42-mile regional trail corridor connecting Renton, Bellevue, Kirkland, Woodinville, Redmond, and Snohomish. The trail will link commercial districts, neighborhoods, employment, and transit along with major individual trails crossing the region. It runs through the heart of the Wilburton study area connecting residents and businesses with the wider Eastside.

SOUND TRANSIT PLANS

The Sound Transit 2 East Link Extension is a 14-mile extension that will provide Link light rail service between Downtown Seattle and the Overlake Transit Center. Six new stations will be constructed within Bellevue, including South Bellevue, East Main, Downtown, Wilburton, Spring District/120th, and Bel-Red/130th.

Sound Transit 3 includes two new bus rapid transit (BRT) lines along I-405 that meet at the Bellevue Transit Center. The Stride S1 line will travel between Lynnwood and Bellevue and the Stride S2 line will travel between Burien and Bellevue. With the addition of Link light rail and Stride BRT, the Bellevue Transit Center will be a major transit hub for the Puget Sound region.

I-405 CORRIDOR PROGRAM

I-405 is the focus of numerous ambitious planning projects. The state created a master plan to evaluate and coordinate more than 150 projects to reduce delay and improve multimodal trips along the length of the interstate. Major projects include adding express toll lanes in both directions, supporting regional transit services through new and improved interchanges, increasing park-and-ride (P&R) capacity, and creating eight new pedestrian and bicycle crossings over I-405.

11.5 Potential Impacts

This section describes the four planning alternatives that were evaluated: No Action and Action Alternatives 1, 2, and 3. It also describes the thresholds of significance used to determine impacts with each alternative, the methodology used to evaluate the future year analyses, and the resulting potential impacts for each scenario.

11.5.1 Planning Alternatives Evaluated

All growth numbers cited below are relative to 2019 land uses. While the horizon year for the analysis is 2044, this EIS analyzes growth to "build-out" capacity. In other words, under all alternatives this EIS takes a conservative approach with respect to "build-out" as it is not expected that this level of growth would all occur by 2044.

- **Alternative 0 (No Action)**[1] – This alternative would continue Bellevue's current land use growth plans which concentrate growth in the Downtown, BelRed, and East Main areas. The No Action Alternative has capacity for 41,000 additional housing units and space for an additional 124,000 jobs. This analysis assumes that the existing capacity is built out. Under the No Action Alternative, transportation investments as identified in the Transportation Facilities Plan (2022–2033) are assumed to be in place; this includes the NE 6th Street extension between I-405 and 116th Avenue NE in the Wilburton study area.
- **Alternative 1** – This alternative would focus growth beyond the urban core in all Bellevue's Mixed Use Centers. Alternative 1 has build-out capacity for 59,000 additional housing units and space for an additional 179,000 jobs. This includes 9,200 housing units and 44,800 jobs in the Wilburton study area. This analysis assumes that the capacity is built out. In addition to the transportation investments assumed under the No Action Alternative, Alternative 1 also assumes new multimodal connections in the Wilburton study area.
- **Alternative 2** – This alternative would focus growth into Bellevue's Mixed Use Centers as well as other areas with good access to transit (meaning bus service with 15-minute frequencies or better during the daytime and early evening). Alternative 2 has build-out capacity for 77,000 additional housing

[1] Housing and job capacity used in this EIS analysis is higher under the No Action Alternative than the capacity that was reported in King County's 2021 Urban Growth Capacity Report. See Chapter 2 and Chapter 4 Plans and Policies for a discussion of why these numbers are different.

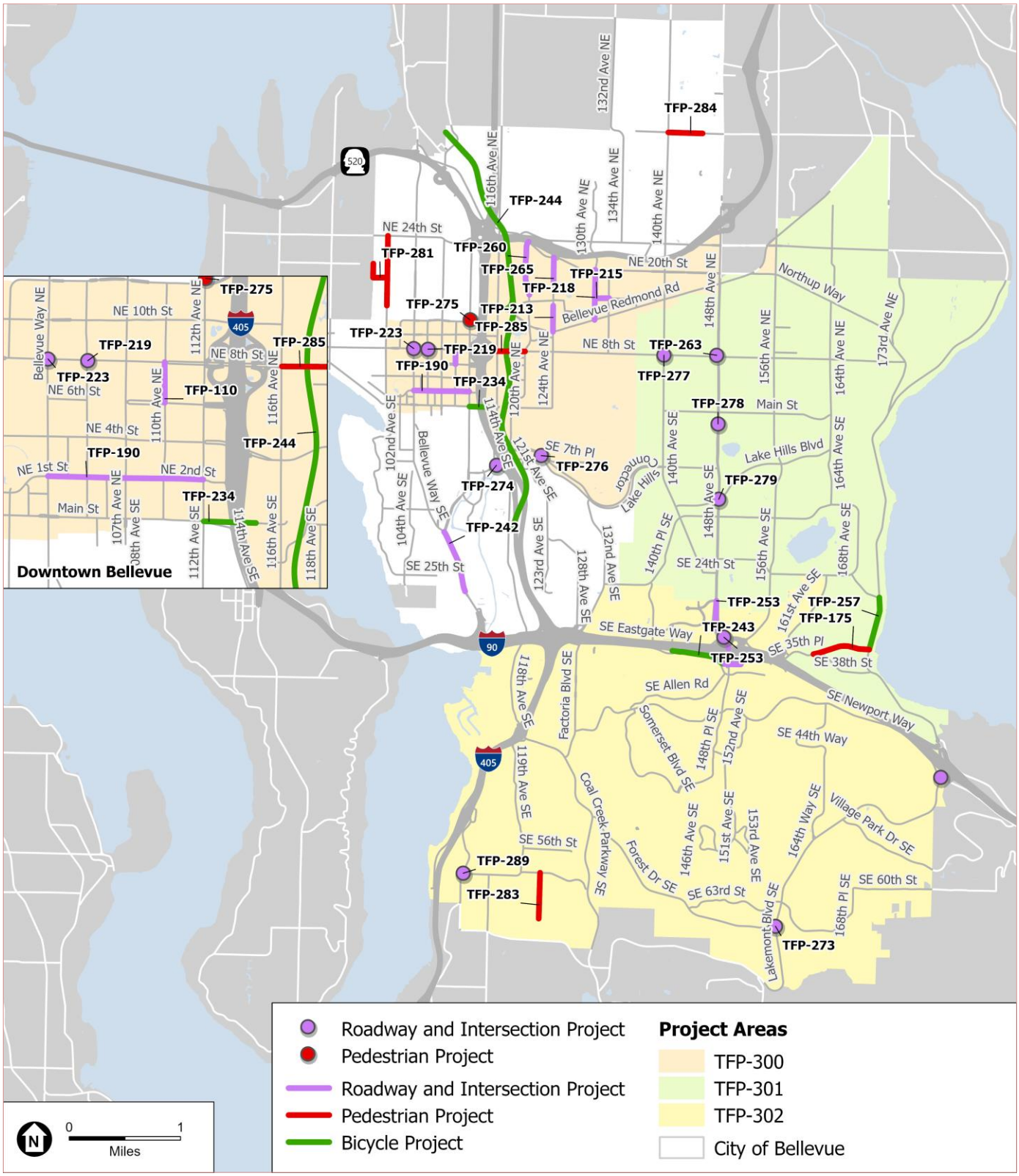
units and space for an additional 177,000 jobs. This includes 14,200 housing units and 38,100 jobs in the Wilburton study area. This analysis assumes that the capacity is built out. In addition to the transportation investments assumed under the No Action Alternative, Alternative 2 also assumes new multimodal connections in the Wilburton study area.

- **Alternative 3** – This alternative further expands land use growth to include Mixed Use Centers, areas with good access to transit, and areas close to Neighborhood Centers. Alternative 3 assumes the highest levels of growth with build-out capacity for 95,000 additional housing units and space for an additional 200,000 jobs. This includes 14,300 housing units and 44,500 jobs in the Wilburton study area. This analysis assumes that the capacity is built out. As with Alternatives 1 and 2, Alternative 3 includes the No Action Alternative transportation investments and new multimodal connections in the Wilburton study area. Alternative 3 is studied with two transportation networks with respect to the NE 6th Street extension: one scenario with the extension only to 116th Avenue NE, and one scenario with the extension to 120th Avenue NE with at-grade intersections at 116th Avenue NE and at the Eastrail crossing.

TRANSPORTATION NETWORK ASSUMPTIONS

As described above, the alternatives assume a set of new transportation investments as adopted in the 2022–2033 Transportation Facilities Plan (TFP). These projects are mapped in **Figure 11-24** and the full TFP project list is included in Appendix C. The TFP is updated every two to three years, so updated versions will be adopted and additional transportation network projects may be implemented in advance of the 2044 horizon year. Specific projects are unknown at this time and so for the purposes of this EIS analysis, the financially constrained 2022–2033 TFP is used as the assumption for reasonably foreseeable transportation projects.

The modeling also assumes an extension of NE 6th Street for HOV, transit, and non-motorized modes of travel across I-405 to 116th Avenue NE under the No Action Alternative and Alternatives 1, 2, and 3. Under Alternative 3A, the NE 6th Street extension would go to 120th Avenue NE. The new southbound on-ramp to I-405 from Lake Hills Connector (a concept developed as part of the South Downtown I-405 Access Study) is also assumed in all future year alternatives.



SOURCE: City of Bellevue 2023

FIGURE 11-24 **2022–2033 Transportation Facilities Planned Projects**

By the 2044 horizon year, the Frequent Transit Network will include the East Link light rail extension as well as the South Kirkland to Issaquah extension (which would serve the Wilburton, Downtown, and East Main stations opening with East Link as well as new stations at Richards Road and Eastgate). Other transit agency projects such as King County Metro RapidRide and bus route restructuring to complement the light rail extensions will also be in place though details of that restructuring are not yet finalized. **Figure 11-25** shows the future Frequent Transit Network based on the METRO CONNECTS 2050 long-range plan and Sound Transit's planned system expansion.

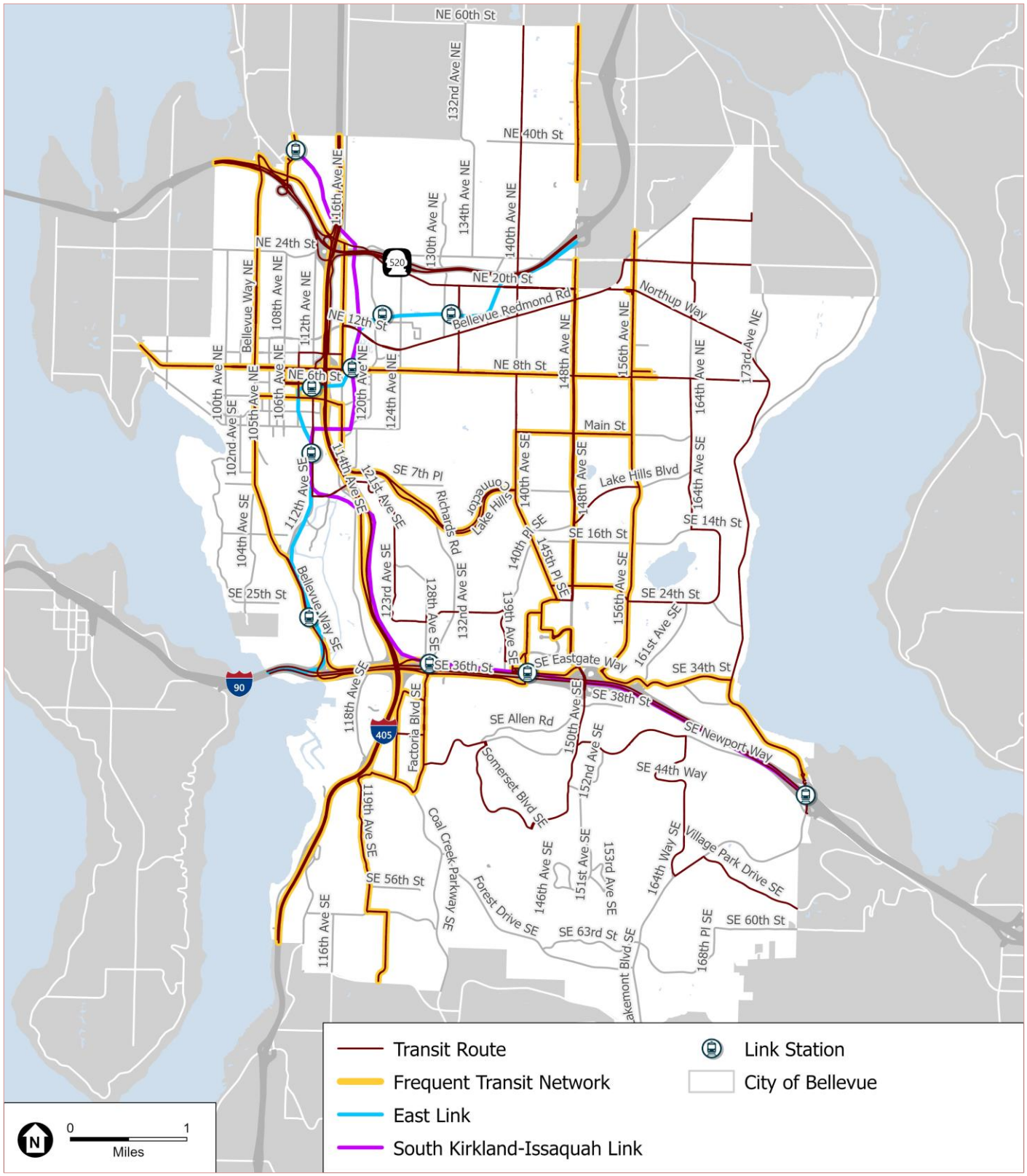
TRAVEL DEMAND FORECASTING MODEL

Bellevue maintains a regional travel demand model called BKRCast which is based on the Puget Sound Regional Council (PSRC) SoundCast model but with additional local detail in the Bellevue-Kirkland-Redmond area. BKRCast is used to predict how travel behavior will change based on land use and transportation network inputs. The model is a tool best used to compare the relative differences among alternatives rather than a precise prediction of future travel behavior. In other words, the model indicates which alternatives are likely to be more impactful than others, though the exact locations and magnitude of future impacts cannot be forecasted with certainty, particularly in this programmatic EIS where specific development projects are unknown.

The model is an activity-based model which means it simulates individual travel patterns over the course of a day based on travel survey data, demographic information, land use inputs, and travel options. The model has been calibrated and validated for use in Bellevue.

Key features of the model include:

- **Analysis Years:** The BKRCast model has a base year of 2019 and a horizon year of 2044. Note that the build-out of the growth alternatives would occur beyond this 20-year planning horizon.
- **Land Use**: Land use forecasts (representing full build-out) were developed for each of the alternatives using a geographic unit called a Traffic Analysis Zone. The model also includes land use assumptions for the rest of the region based on PSRC growth targets.



SOURCE: City of Bellevue 2023

FIGURE 11-25 **Future Frequent Transit Network**

- **Network Representation**: All major corridors and state facilities are represented in the BKRCast allowing volume and travel time forecasts for the Primary Vehicle Corridors and System Intersections defined in the MIP.
- **Transit:** The base year model assumes transit service currently in place while the 2044 model assumes reasonably foreseeable projects such as continued expansion of the Link light rail system and other transit agency projects such as King County Metro RapidRide.
- **Travel Costs:** Consistent with PSRC guidance, BKRCast assumes that regional congestion pricing will be in place.
- **Travel Demand:** The model predicts travel demand for the following modes of travel: drive alone, single occupancy vehicle, high occupancy vehicle, truck, transit, bicycle, and walk. Travel demand is estimated for four time periods: AM peak, midday, PM peak, and night. This EIS analysis focuses on the PM peak hour, which has the highest number of people traveling.

11.5.2 Thresholds of Significance

The Action Alternatives are assessed against the No Action condition to evaluate the magnitude of potential impacts. To determine whether an impact is considered significant, this EIS first defines the impact in the context of the No Action Alternative and then uses the following thresholds which were developed based on the performance metrics and targets established in the MIP.

An impact is generally defined and measured in the context of the No Action Alternative if the No Action Alternative would result in any of the following:

- Reduction in the degree of system completeness (as defined by the MIP performance targets) for any of the following:
  - Arterial sidewalks
  - Spacing of arterial crossings
  - Bicycle network corridors
  - Frequent Transit Network stop amenities
- Transit travel time ratio of greater than 2.0 for Activity Center pairs identified in the MIP.
- System Intersection V/C ratio that does not meet the performance target identified per PMA in the MIP.

- Primary Vehicle Corridor travel speed that does not meet the performance target identified per PMA in the MIP.
- State facility in Bellevue that does not meet its WSDOT LOS standard.

A variety of factors that may influence future parking and safety effects under the No Action Alternative are discussed qualitatively.

An impact is defined as significant if an Action Alternative (Alternatives 1, 2, and 3) would result in any of the following:

- Degradation in the degree of system completeness (as defined by the MIP performance targets) relative to the No Action Alternative for any of the following:
  - Arterial sidewalks
  - Spacing of arterial crossings
  - Bicycle network corridors
  - Frequent Transit Network stop amenities
- An increase in the transit travel time ratio beyond 2.0 for Activity Center pairs that met the MIP performance target under No Action; an increase in the travel time ratio by 0.1 or more for any Activity Center pair that did not meet the MIP performance target under No Action.
- An increase in a System Intersection V/C beyond the performance target identified in the MIP; for an intersection that already does not meet the performance target, an increase in the V/C ratio by 0.05 or more over No Action.
- A reduction in the Primary Vehicle Corridor speed below the performance target identified in the MIP; for a corridor that already does not meet the performance target, a reduction in the travel speed/Typical Urban Travel Speed ratio by 0.05 or more below No Action.
- A state facility in Bellevue not meeting its WSDOT LOS standard for a facility that met the LOS standard under No Action; an increase in state facility V/C ratio of 0.01 or more for a state facility that did not meet the LOS standard under No Action.
- VMT per capita increase of at least 1 percent over the No Action Alternative.

Potential parking and safety impacts relative to the No Action Alternative are discussed qualitatively and consider the following factors:

- Whether an Action Alternative would result in parking demand that exceeds supply by a noticeable magnitude relative to the No Action Alternative.
- Whether an Action Alternative would increase the likelihood of additional severe or fatal crashes within the City of Bellevue compared to the No Action Alternative (considerations include the pace of safety infrastructure investment, the relative change in modal conflicts, and vehicle speeds).

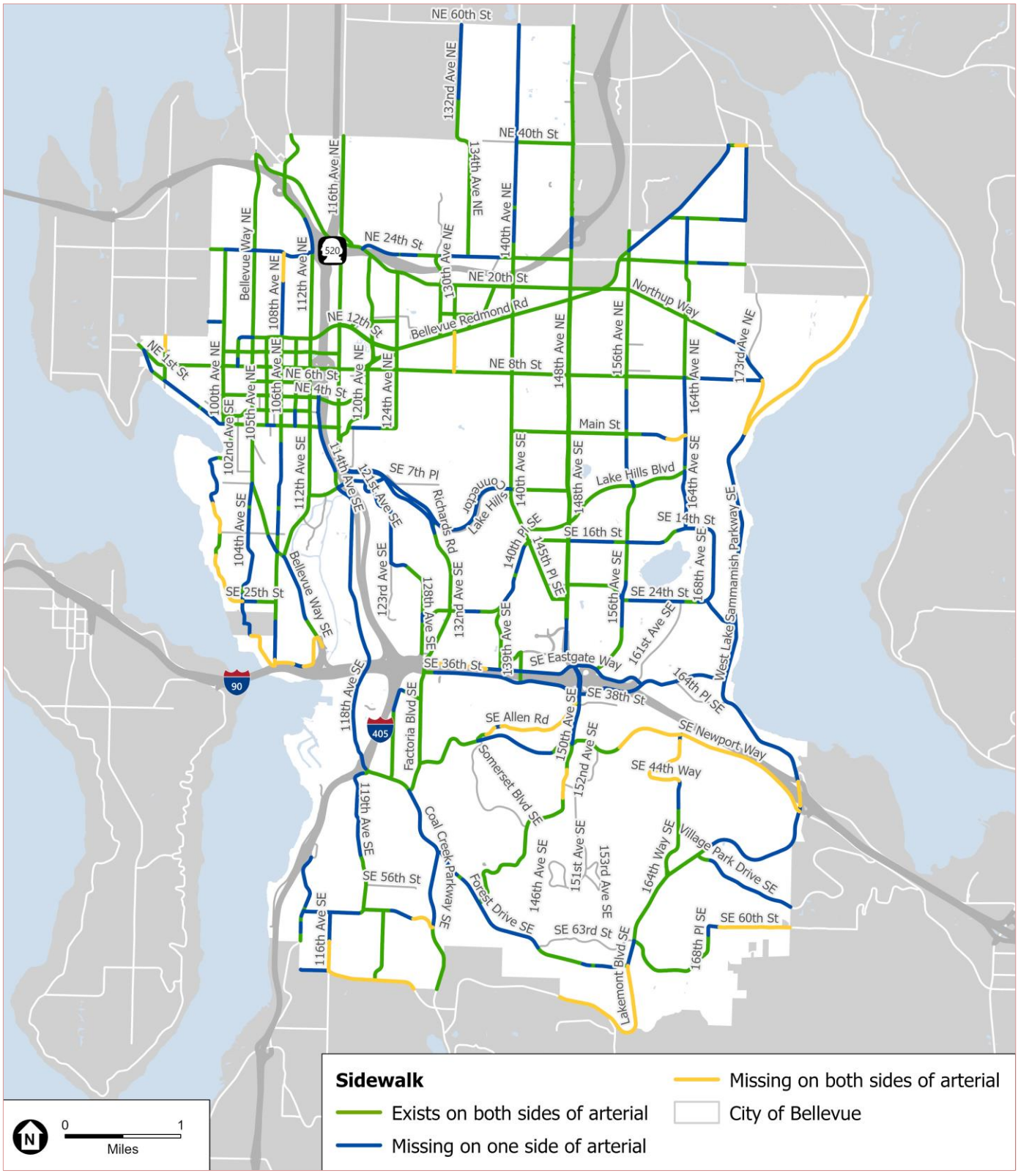
11.5.3 Impacts Common to All Alternatives

The following section summarizes the performance evaluation completed for projected future conditions. These are the conditions of the transportation system that would be affected in a similar way by all alternatives. By evaluating expected future conditions, city staff, the Bellevue Transportation Commission, and the community can better understand the implications of how land use growth and planned transportation investments will affect travel patterns and the performance of the transportation system.

PEDESTRIAN NETWORK – SYSTEM COMPLETENESS

Bellevue's pedestrian network is made up of sidewalks along arterials and neighborhood streets as well as trails. For the purposes of this EIS (and consistent with the MIP), pedestrian network performance is quantitatively analyzed for a subset of that network along the arterial roadway system. Bellevue intends to achieve an arterial pedestrian network completeness performance target of 100 percent in the future, with complete and connected sidewalks on both sides of every arterial.

Based on the projects planned to be implemented through the most recently adopted Transportation Facilities Plan, **Figure 11-26** displays the future pedestrian arterial network and locations where gaps would remain. In addition to the projects defined in the TFP, other sidewalk and mid-block crossing projects along with private sector projects will contribute to system completeness. In other words, the analysis described here represents the minimum level of new facilities expected to be constructed by the horizon year of this EIS.



SOURCE: City of Bellevue 2023

FIGURE 11-26 **Pedestrian Network Performance – All Alternatives**

As shown in **Table 11-10**, Bellevue's planned projects would continue to progress toward completing the pedestrian network. The improvements noted here reflect only the projects planned for in the TFP and do not account for privately funded frontage improvements, such as sidewalks, that are required with development. This includes adding sidewalks along 5 miles of the arterial network that are currently classified as gaps. The improvements would bring the portion of the arterial pedestrian network with a sidewalk on both sides from 56 to 59 percent, increase the proportion with a sidewalk one side from 32 to 33 percent, and decrease the proportion of the arterial network with no sidewalk from 12 to 8 percent.

TABLE 11-10 **Pedestrian Network Performance Target Results – All Alternatives**

Citywide		Sidewalk on Both Sides		Sidewalk on One Side		Sidewalk Gaps	
		Existing	Future	Existing	Future	Existing	Future
Miles		77	82	45	45	17	12
Proportion of Total		56%	59%	32%	33%	12%	8%
PMA		**Sidewalk on Both Sides**		**Sidewalk on One Side**		**Sidewalk Gaps**	
		Existing	Future	Existing	Future	Existing	Future
Type 1	Downtown	95%	95%	5%	5%	0%	0%
	BelRed	86%	98%	8%	1%	6%	1%
	Wilburton-East Main	56%	59%	41%	41%	3%	0%
Type 2	Crossroads	100%	100%	0%	0%	0%	0%
	Eastgate	29%	29%	63%	65%	8%	6%
	Factoria	70%	70%	28%	28%	3%	3%
Type 3 Residential		47%	50%	37%	39%	16%	12%

SOURCE: Fehr & Peers 2023

The biggest change in sidewalk completion would be in the BelRed PMA, which would have a sidewalk on both sides of 98 percent of the arterial network with implementation of the 2022–2033 TFP. The Wilburton-East Main PMA and the Type 3 Residential PMA would also see noticeable increases in the percentage of system completion. As is the case today, system completion in the Type 3 Residential PMA would lag behind the Type 1 and Type 2 PMAs.

Because the No Action Alternative would increase the degree of system completeness for arterial sidewalks, there is no significant impact. Likewise, the Action Alternatives are expected to not just maintain but increase the level of system completeness because the additional increment of growth would result in more locations with frontage improvements. Similar to sidewalk improvements, more arterial crossings are expected to be implemented over the course of the planning period. Therefore, none of the Action Alternatives are expected to result in any reduction of system completeness with regard to arterial crossing spacing. Therefore, no significant impacts on the pedestrian network are identified under any of the Action Alternatives.

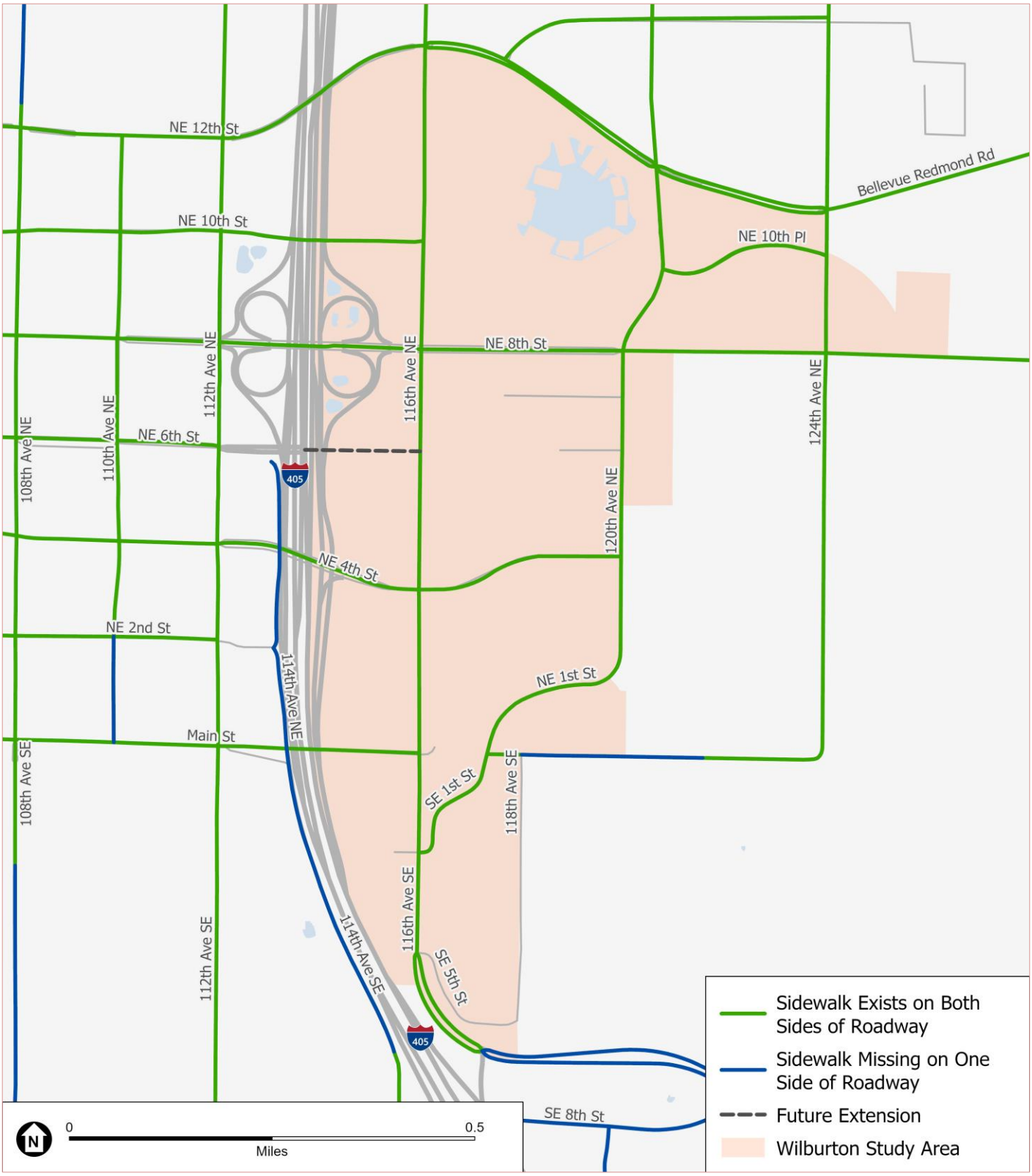
A geographic information system (GIS) analysis of the alternatives compares the proportion of households and jobs within ¼ mile of pedestrian facilities. This includes any pedestrian facilities, whether they were on the arterial network or local network. Findings indicated that 99.3 to 99.5 percent of households and 99.5 to 100 percent of jobs would be within ¼ mile of pedestrian facilities for all alternatives. In other words, the alternatives do not substantively vary in terms of concentrating residents and workers in close proximity to the pedestrian network.

Wilburton Study Area

With implementation of the 2022–2033 TFP, most of the arterial network in the Wilburton study area will have a sidewalk on both sides of the arterial network (note this is a different geography than the Wilburton-East Main PMA). As noted in the citywide discussion, there may be other sidewalk and mid-block crossing projects beyond those defined in the TFP along with private sector projects that will contribute to system completeness. Therefore, this analysis represents the minimum level of new facilities expected to be constructed by the horizon year of this EIS.

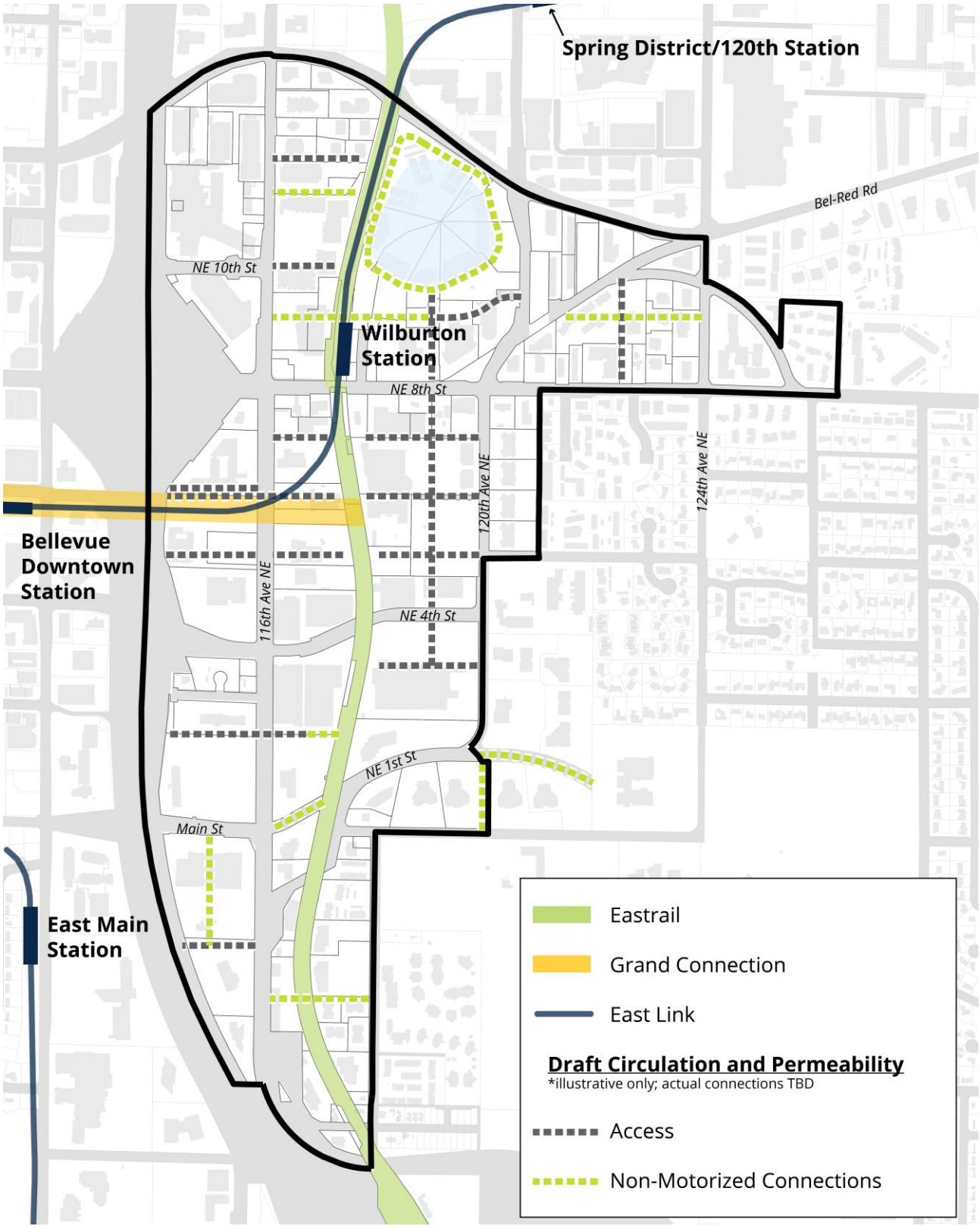
As seen in **Figure 11-27**, the only missing segment is on Main Street east of 118th Avenue SE where the roadway has sidewalk only on one side. Because the No Action Alternative would not reduce the system completeness for arterial sidewalks, there is no significant impact.

The Action Alternatives assume there would be additional multimodal connections in the Wilburton study area; a conceptual diagram showing potential connections is shown in **Figure 11-28**. Therefore, the pedestrian network may have additional connections beyond those provided under the No Action Alternative providing a



SOURCE: City of Bellevue 2023

FIGURE 11-27 **Pedestrian Network Performance in the Wilburton Study Area – All Alternatives**



SOURCE: City of Bellevue 2023

FIGURE 11-28 **Wilburton Study Area Draft Circulation and Permeability**

benefit to the area (though they would not count toward the MIP system completeness metric). Therefore, no adverse impact on the Wilburton study area pedestrian network is identified under the Action Alternatives.

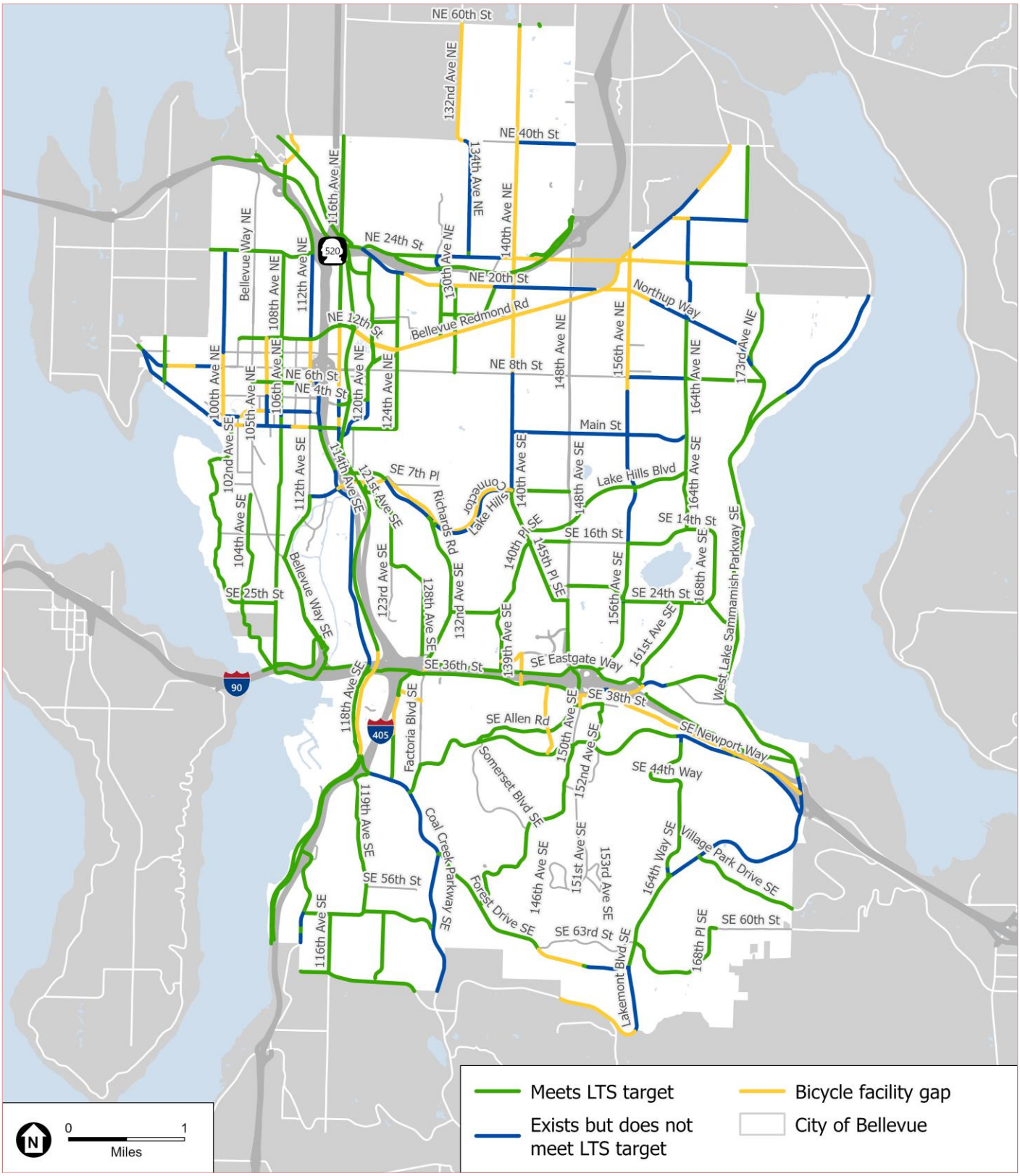
BICYCLE NETWORK – SYSTEM COMPLETENESS

Bellevue is targeting completion of bicycle facilities to meet the intended LTS of the bicycle network as defined in the MIP. Based on the projects planned to be implemented through the most recently adopted TFP, **Figure 11-29** displays the performance of the future bicycle network and locations where there would still be gaps in the network.[2] In addition to the projects defined in the TFP, other bicycle facility projects will contribute to system completeness. In other words, the analysis described here represents the minimum level of new facilities expected to be constructed by the horizon year of this EIS.

As shown in **Table 11-11**, the proportion of the bicycle network meeting the intended LTS target is projected to increase from 54 to 62 percent, the proportion of the network with a facility that does not meet the intended LTS target is projected to decrease from 25 to 21 percent, and the proportion of the network with a facility gap would decrease from 22 to 17 percent.

Because the No Action Alternative would increase the degree of system completeness for the bicycle network, there is no significant impact. Likewise, the Action Alternatives are expected to not just maintain but will likely increase the level of system completeness because the additional increment of growth would result in more locations with frontage improvements. Therefore, neither the No Action Alternative nor the Action Alternatives are expected to reduce the degree of system completeness of the bicycle network so no significant impacts are identified under any of the future year alternatives.

[2] The future year evaluation considers whether a change to the type of bicycle facility on a given roadway would change the LTS. It does not account for potential increases in traffic volumes (which would have a negative effect on LTS) as they would also be associated with decreases in travel speed (which would have a positive effect on LTS).



SOURCE: City of Bellevue 2023

FIGURE 11-29 **Bicycle Network Performance – All Alternatives**

TABLE 11-11 **Bicycle Network Performance Target Results – All Alternatives**

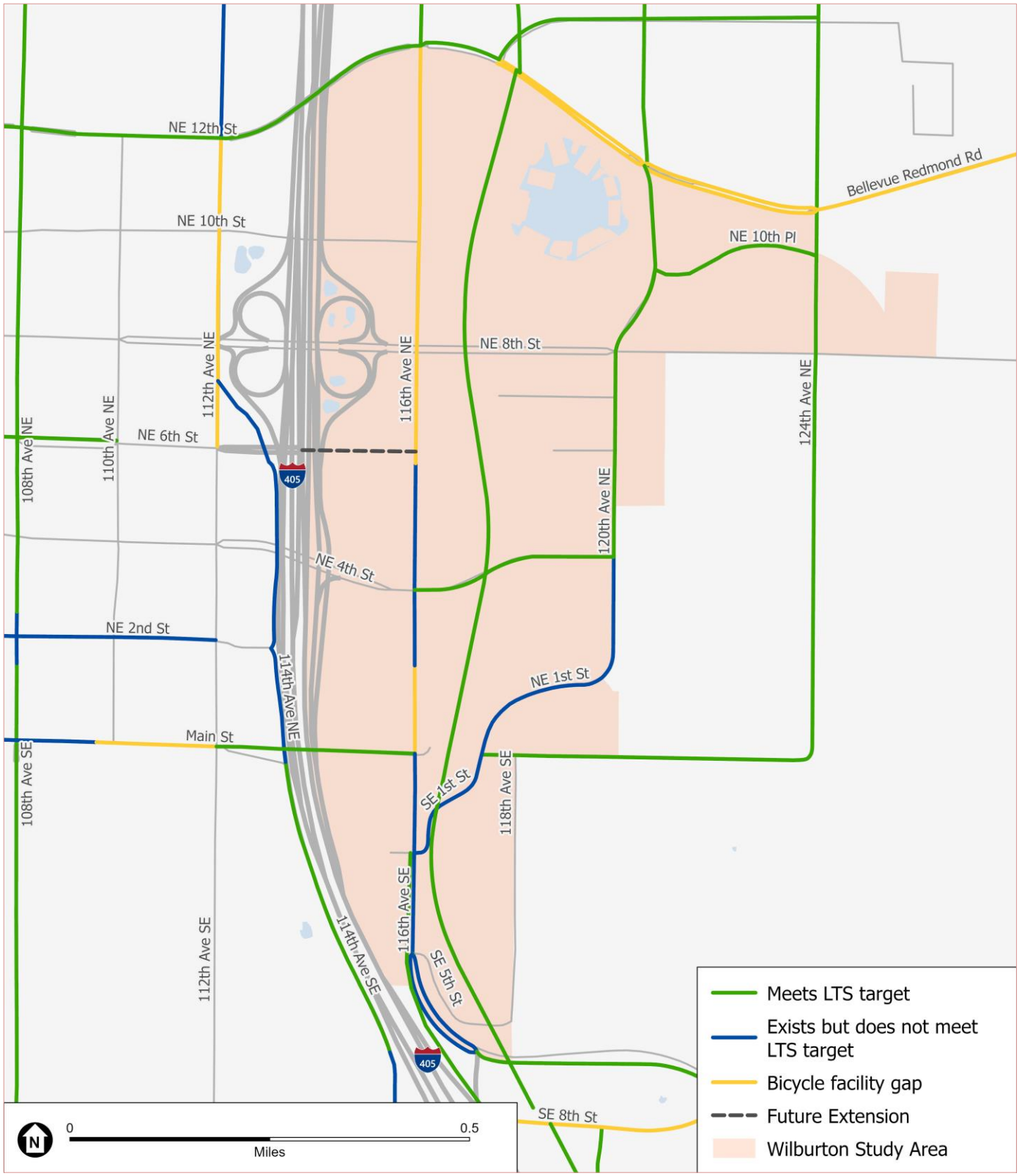
Citywide		Facility Meets LTS		Facility Does Not Meet LTS		Facility Gaps	
		Existing	Future	Existing	Future	Existing	Future
Miles		74	86	34	29	30	24
Proportion of Total		54%	62%	25%	21%	22%	17%
Performance Management Area		**Facility Meets LTS**		**Facility Does Not Meet LTS**		**Facility Gaps**	
		Existing	**Future**	**Existing**	**Future**	**Existing**	**Future**
Type 1 PMA	Downtown	28%	34%	32%	33%	39%	33%
	BelRed	37%	48%	8%	9%	56%	44%
	Wilburton-East Main	25%	47%	39%	37%	36%	17%
Type 2 PMA	Crossroads	25%	25%	35%	35%	40%	40%
	Eastgate	72%	81%	12%	5%	16%	14%
	Factoria	61%	64%	26%	23%	13%	13%
Type 3 Residential PMA		60%	67%	26%	22%	14%	12%

SOURCE: Fehr & Peers 2023

A GIS analysis of the alternatives was conducted to compare the proportion of households and jobs with ¼ mile of bicycle facilities. This included any type of bicycle facility regardless of whether it met its intended LTS. Findings indicated that 94 to 95 percent of households and 98.8 to 99.3 percent of jobs would be within ¼ mile of bicycle facilities for all alternatives. Therefore, there is little variation among the alternatives in terms of concentrating residents and workers in close proximity to the bicycle network.

Wilburton Study Area

In all alternatives, the bicycle network in the Wilburton study area would become more complete. **Figure 11-30** presents the future bicycle network, including the new segments that would meet the LTS target for the area. In particular, the Eastrail multipurpose path would be complete. Improvements are also planned along 116th Avenue NE and SE 1st Street. As the bicycle network would be improved under the No Action Alternative, there would be no adverse impact on the Wilburton study area bicycle network.



SOURCE: City of Bellevue 2023

FIGURE 11-30 **Bicycle Network Performance in the Wilburton Study Area – All Alternatives**

All three Action Alternatives include additional multimodal connections in the Wilburton study area. Therefore, the bicycle network may have additional connections beyond those provided under the No Action Alternative providing a benefit to the area. Therefore, there is no adverse impact on the Wilburton study area bicycle network under the Action Alternatives.

TRANSIT NETWORK – SYSTEM COMPLETENESS

Bellevue and its transit agency partners will continue to increase the number of transit stop amenities across the city regardless of which alternative is selected. Moreover, the East Link light rail will add new transit stations with the passenger amenities defined in the MIP. Because the No Action Alternative would increase the degree of system completeness for the transit network, there is no significant impact.

Likewise, the Action Alternatives would not just maintain but potentially increase the level of system completeness because the additional increment of growth would result in more locations with frontage improvements. Therefore, none of the Action Alternatives would result in any reduction of the degree of system completeness of transit stop amenities. Therefore, no significant impacts on the transit network are identified under any of the Action Alternatives.

SAFETY

By the 2044 horizon year of this EIS analysis, Bellevue will have been investing in transportation safety improvements for several decades through the lens of the Vision Zero Strategic Plan. Based on these investments, the design and operations of the transportation system is expected to be fundamentally safer than existing conditions.

However, even with a transportation system that is safer in design and operations, all alternatives accommodate more residents, employees, and visitors across the entire city and within the Wilburton study area. With more people, there is more opportunity for people to become involved in crashes. Higher shares of people walking and bicycling also puts people at greater risk of being injured or killed if they are involved in a crash. Therefore, the overall number of severe and fatal injury crashes could increase for all alternatives compared to existing conditions.

When assessing potential safety impacts of the Action Alternatives, the following threshold is applied:

- Whether an Action Alternative would increase the likelihood of additional severe or fatal crashes within the City of Bellevue compared to the No Action Alternative

While the total number of severe or fatal crashes could be higher with the Action Alternatives compared to the No Action Alternative (because they accommodate more residents and employees), there is no reason to assume that the likelihood of severe or fatal crashes would increase with the Action Alternatives. This is because the Action Alternatives provide opportunity for Bellevue to implement more safety improvements through a mix of frontage improvements built as part of new development, impact fee funded projects that include safety elements, and new safety-oriented capital projects funded through the city's larger tax base. Therefore, no significant safety impacts are expected as a result of any of the alternatives either citywide or for the Wilburton study area.

PARKING

As Bellevue grows under all the alternatives, new development will build off-street parking in accordance with the Land Use Code and the city will continue to manage on-street parking through its curbspace management programs. The city will use this combination of off-street, developer-provided parking and on-street management to strive for a balance between parking demand and supply for any of the alternatives.

As is the case today, changes in development patterns and the type of land uses occupying buildings could result in short-term instances where vehicles park in areas where they are not allowed or where they impact other modes or curb users. However, the existing methods that private parking lot owners and the city have to manage inappropriate parking will address parking impacts over time. Therefore, no significant parking impacts are expected as a result of any of the alternatives citywide or for the Wilburton study area.

11.5.4 Alternative 0 (No Action)

The No Action Alternative represents the transportation conditions that can be expected if no changes are made to currently adopted policies. Therefore, this alternative acts as the baseline against which potential impacts of the Action Alternatives are evaluated. This section summarizes analysis results and identifies potential transportation impacts that are expected under the No Action Alternative, as growth will continue even under currently adopted policies.

MODE SHARE

Mode share refers to the proportion of trips that are taken by each mode of travel: walking, bicycling, SOV, HOV, and transit. Mode share for trips originating from or destined to Bellevue is presented in **Table 11-12** and is broken out by Bellevue workers and Bellevue residents. The table compares existing and future year data to indicate how travel behavior is projected to change over the next two decades. In particular, the shares of trips made by walking and transit are expected to increase while the shares of people driving are expected to decrease. In particular, the transit mode share for workers is projected to more than triple from 9 to 32 percent with the addition of light rail and BRT travel options. Considering SOV and HOV trips together, the share of trips made by driving is expected to decrease by 25 percentage points for Bellevue workers and by 10 percentage points for Bellevue residents.

TABLE 11-12 **Mode Share – No Action Alternative**

	Bellevue Workers		Bellevue Residents	
Mode	Existing	No Action	Existing	No Action
Walk	6%	7%	14%	19%
Bicycle	0%	0%	1%	1%
SOV	60%	41%	33%	29%
HOV	25%	19%	46%	40%
Transit	9%	32%	7%	12%

SOURCE: City of Bellevue 2023

NOTE: Mode shares are rounded and may not sum to 100%.

VMT PER CAPITA

As shown in **Table 11-13**, the percentage of total VMT each day by Bellevue residents and workers is expected to increase by approximately 8 percent under No Action Alternative build-out, from 4.1 million to over 4.4 million. However, the VMT per capita would decrease from 28.5 average daily miles to 23.2 average daily miles. This reflects the changes discussed above in the *Mode Share* section. In other words, while the total VMT is expected to increase due to growth, the pace at which it increases will slow and the per capita daily VMT is expected to decrease as a larger number of trips are made by non-vehicle modes.

TABLE 11-13 **VMT and VMT per Capita – No Action Alternative**

	Existing	No Action
Daily VMT	4,099,000	4,443,000
Daily VMT per Capita	28.5	23.2

SOURCE: City of Bellevue 2023

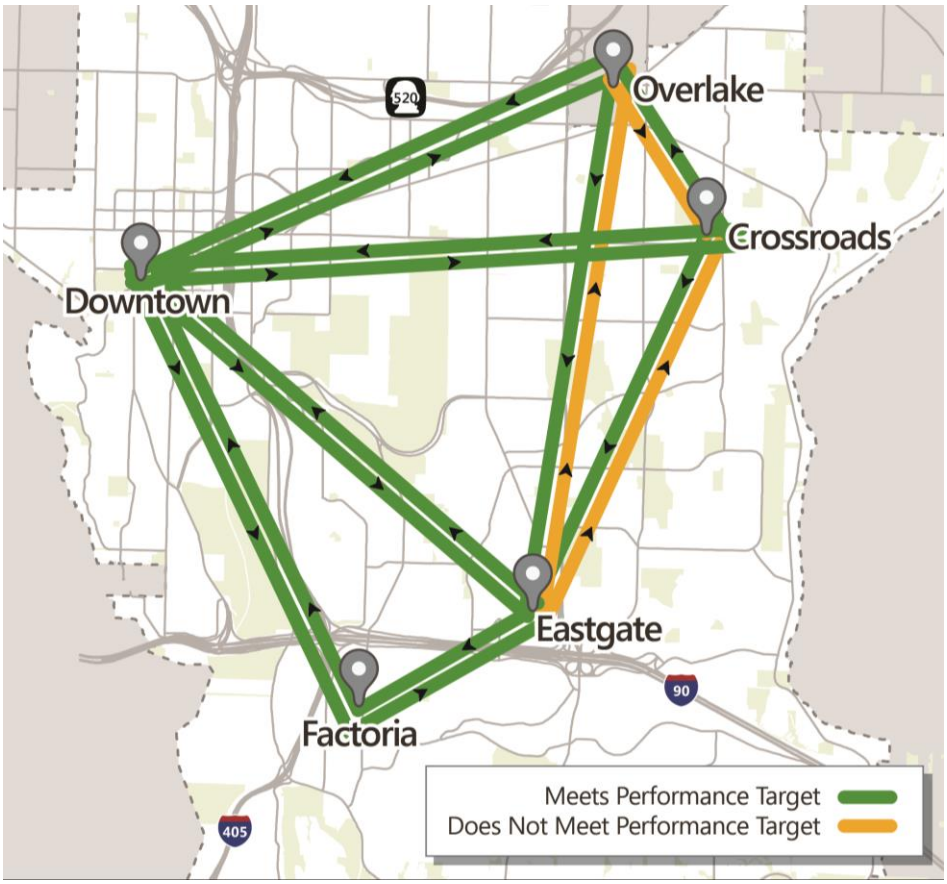
TRANSIT TRAVEL TIME

Using the forecasted Primary Vehicle Corridor travel speeds for vehicles as well as projected transit travel times, transit travel time ratios were calculated for each Activity Center pair. The performance target for transit travel time ratio is no more than 2.0. The results are shown in **Table 11-14** and mapped in **Figure 11-31**. The transit travel time ratios that would not meet the performance target are **shown in bold.**

TABLE 11-14 **Transit Travel Time Ratio – No Action Alternative**

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown	—	0.98	1.06	0.97	0.90
Crossroads	1.81	—	1.81	—	1.66
Eastgate	1.17	**2.15**	—	0.64	**2.29**
Factoria	1.18	—	0.55	—	—
Overlake	0.98	**2.09**	1.95	—	—

SOURCE: City of Bellevue 2023



SOURCE: City of Bellevue 2023

FIGURE 11-31 **Transit Network Performance – No Action Alternative**

Transit travel time ratios are expected to improve for all Activity Center pairs under No Action Alternative build-out, meaning that transit is expected to be a more time-competitive mode in the future. Several key factors are described below:

- **Link Light Rail Extensions:** The BKRCast model assumes the East Link extension is open as well as the planned South Kirkland-Issaquah extension which would include new stations at Eastgate and Richards Road and then connect to the East Main, Downtown, and Wilburton stations. Therefore, the transit travel times between Downtown, Overlake, Factoria, and Eastgate assume use of Link light rail resulting in substantial improvements to the transit travel time ratios. Some pairs' transit travel time ratios would be less than 1.0 indicating that a transit trip travel time is expected to be shorter than a private vehicle trip during the PM peak period.

- **NE 6th Street Extension:** The NE 6th Street extension across I-405 would allow buses to access the Bellevue Transit Center more efficiently by avoiding congestion along NE 8th Street. This results in a benefit to the transit travel time between Downtown and Crossroads.
- **Bellevue College Connection:** The transit travel time vs. auto travel time ratio between Eastgate and Crossroads would decrease with the more direct Bellevue College Connection, bringing the travel time ratio below the 2.0 performance target for the Crossroads to Eastgate trip.

However, even with these substantial improvements, there are three Activity Center pairs that would not meet the MIP identified transit travel time ratio threshold of 2.0, constituting an impact under the No Action Alternative:

- Eastgate to Crossroads
- Eastgate to Overlake
- Overlake to Crossroads

SYSTEM INTERSECTION VOLUME-TO-CAPACITY RATIO

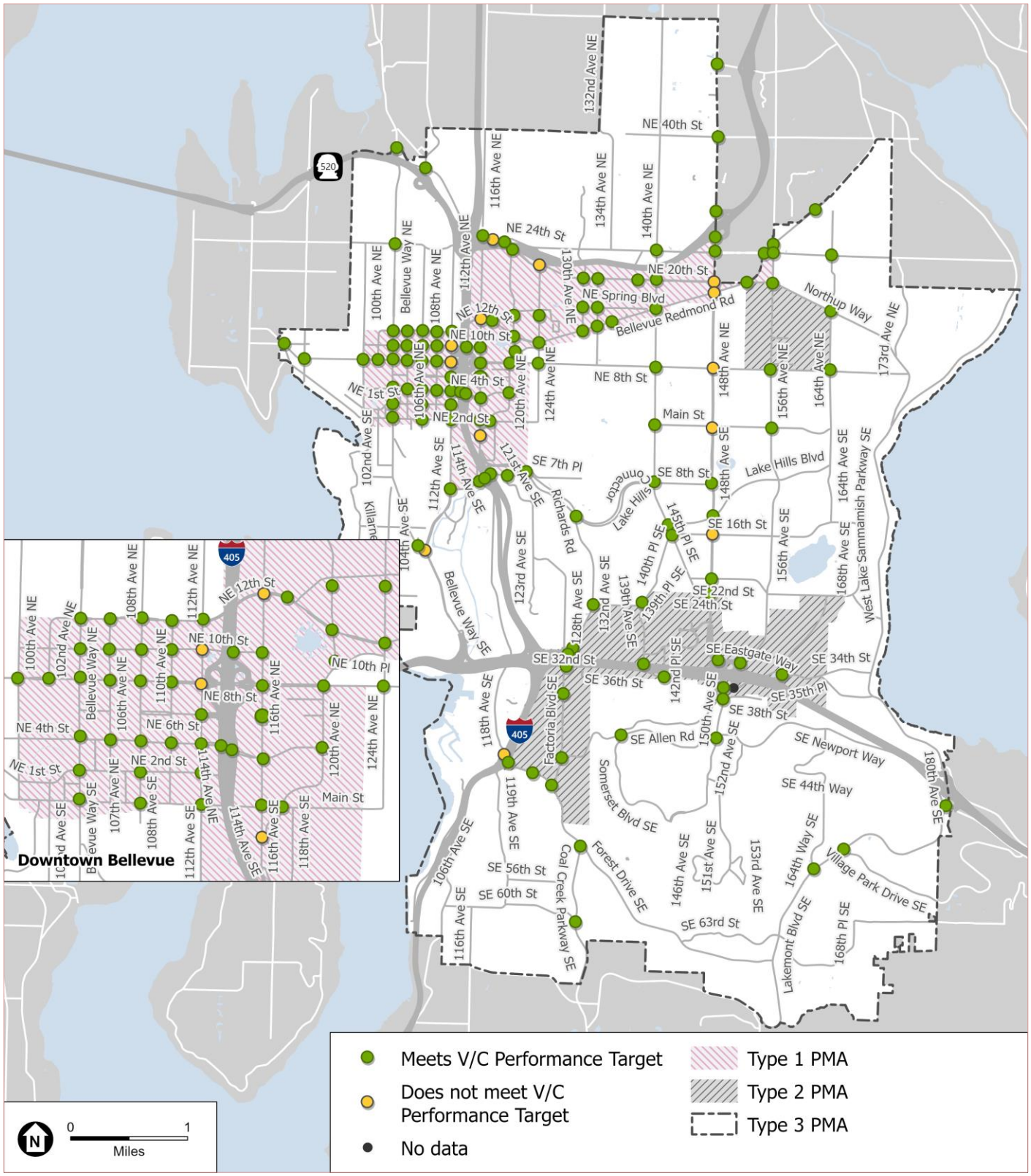
The BKRCast travel demand model was used to forecast volumes at each System Intersection under the No Action Alternative. A summary of results is shown in **Table 11-15** and mapped in **Figure 11-32**. The table includes all intersections that would not meet their performance target under the No Action Alternative along with the V/C ratios expected under existing conditions for comparison. A complete tabular summary is included in Appendix C.

Under the No Action Alternative: 67 of 74 (91 percent) of System Intersections in Type 1 PMAs are expected to meet their target (a decrease of five intersections from existing conditions), 23 of 24 (96 percent) of System Intersections in Type 2 PMAs are expected to meet their target (the same as existing conditions), and 31 of 36 (86 percent) of System Intersections in the Type 3 PMA are expected to meet their target (an increase of three intersections from existing conditions due to planned intersection improvements and the assumed systemwide congestion pricing). The 13 intersections that are not expected to meet their V/C performance target, constituting an impact under the No Action Alternative, are **shown in bold** in Table 11-15.

TABLE 11-15 **Vehicle Network Performance – System Intersections – No Action Alternative**

Performance Management Area	Performance Target	% of Intersections Meeting Target[a]	
		Existing	No Action
Type 1 PMA	1.00	97%	91%
Type 2 PMA	0.90	96%	96%
Type 3 PMA	0.85	78%	86%
Total System intersections		***92%***	***90%***
Performance Management Area and Performance Target	**Intersections Not Meeting Target under No Action Alternative**	**V/C Ratio**	
		Existing	**No Action**
Type 1 PMA (Performance Target = 1.00)	**112th Ave NE & NE 8th St**	1.00	**1.19**
	112th Ave NE & NE 10th St	0.72	**1.08**
	116th Ave NE & NE 12th St	0.80	**1.24**
	148th Ave NE & NE 20th St	0.93	**1.01**
	148th Ave NE & Bel-Red Rd	0.98	**1.10**
	124th Ave NE & Northup Wy	0.54	**1.18**
	116th Ave SE & SE 1st St	0.85	**1.13**
Type 2 PMA (Performance Target = 0.90)	**I-405 SB Ramps & Coal Creek Pkwy**	0.81	**1.14**
Type 3 PMA (Performance Target = 0.85)	**112th Ave SE & Bellevue Wy SE**	0.77	**0.98**
	148th Ave NE & NE 8th St	0.99	**0.94**
	148th Ave & Main St	0.95	**0.95**
	148th Ave SE & SE 16th St	0.88	**0.86**
	115th Pl NE & Northup Wy	0.95	**0.97**

SOURCE: City of Bellevue 2023



SOURCE: City of Bellevue 2023

FIGURE 11-32 **System Intersection Performance – No Action Alternative**

PRIMARY VEHICLE CORRIDOR TRAVEL SPEED

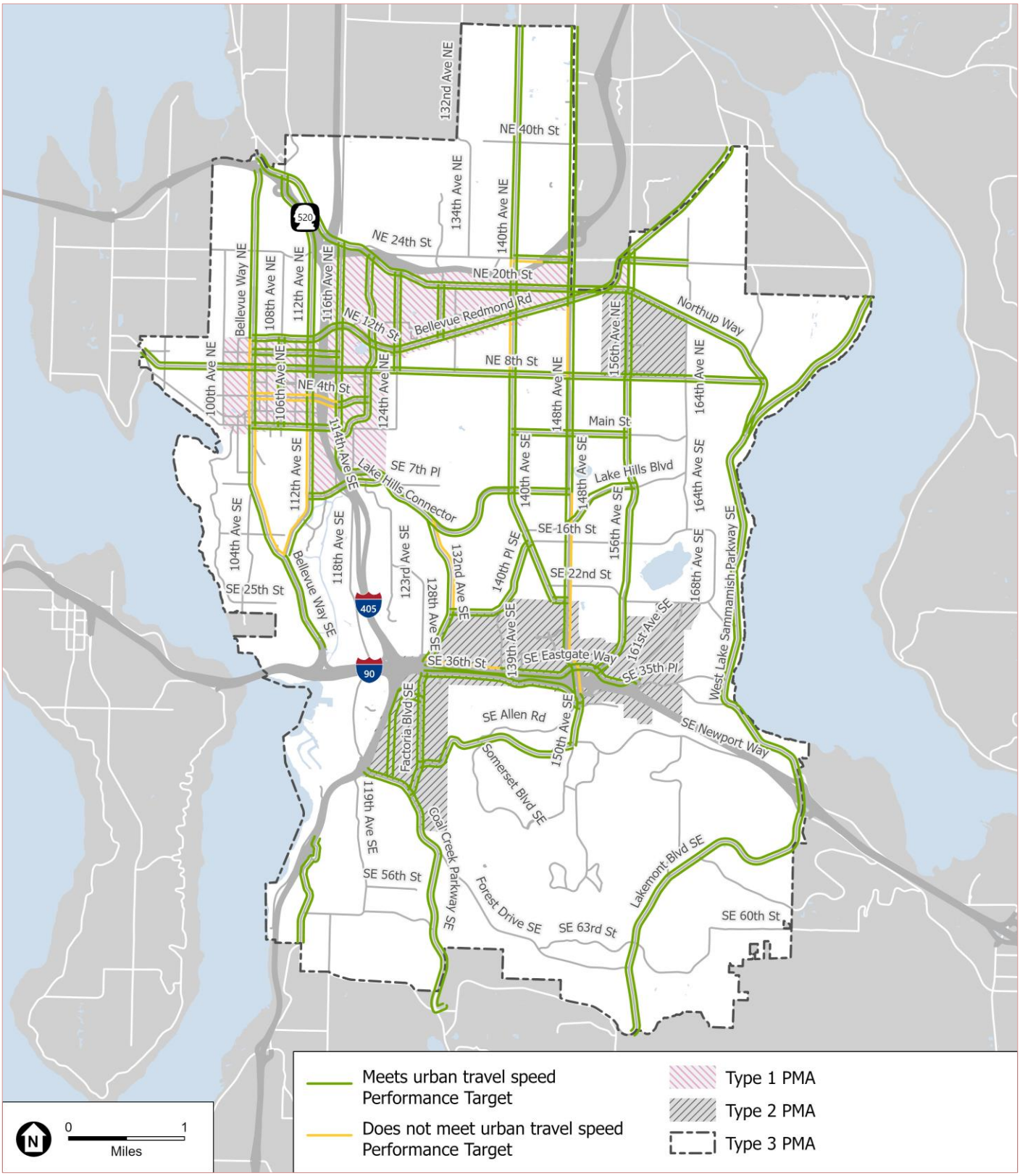
The BKRCast travel demand model was used to forecast vehicle corridor speeds along Primary Vehicle Corridors under the No Action Alternative. The locations that do not currently meet their performance targets would also not meet the targets under the No Action Alternative, constituting an impact. Fourteen of the 95 Primary Vehicle Corridors would be impacted under the No Action Alternative; these Primary Vehicle Corridors are listed in **Table 11-16**. Results are mapped in **Figure 11-33** and a full tabular summary is included in Appendix C.

TABLE 11-16 **Vehicle Network Performance – Primary Vehicle Corridor Speed – No Action Alternative**

Performance Management Area and Performance Target	Corridors Not Meeting Performance Target	Speed (miles per hour)	
		Existing	No Action
Type 1 PMA (Performance target ≥0.5 Typical Urban Travel Speed)	Bellevue Way – NE 12th St to Main St (SB/WB)	5	5
	112th Ave SE – Main St to SE 8th St (SB/WB)	7	6
	140th Ave NE – Bel-Red Rd to NE 14th St (SB/WB)	5	5
	NE 4th St – Bellevue Way to 116th Ave NE (NB/EB and SB/WB)	5	5
Type 2 PMA (Performance target ≥0.75 Typical Urban Travel Speed)	148th Ave – SE 24th St to SE 37th St (SB/WB)	6	7
	Eastgate Way – Richards Rd to 139th Ave SE (SB/WB)	10	10
Type 3 PMA (Performance target ≥0.9 Typical Urban Travel Speed)	Bellevue Way – Main St to 112th Ave SE (SB/WB)	11	10
	112th Ave SE – SE 8th St to Bellevue Wy (SB/WB)	7	6
	Richards Road – Lk Hills Connector to SE 26th St (SB/WB)	12	12
	140th Ave NE – NE 24th St to SR 520 (SB/WB)	10	10
	140th Ave NE – NE 14th St to NE 8th St (SB/WB)	5	5
	148th Ave – NE 15th Ct to NE 8th St (SB/WB)	12	12
	148th Ave – SE 8th St to SE 24th St (SB/WB)	9	9
	NE 24th St – 140th Ave NE to SR 520 (NB/EB)	11	13

SOURCE: City of Bellevue 2023

EB = east bound; NB = north bound; SB = southbound; WB = westbound.
NOTE: Spring Boulevard between NE 12th Street and NE 20th Street is a Primary Vehicle Corridor, but data are currently insufficient to project future volumes as it has only recently opened.



SOURCE: City of Bellevue 2023

FIGURE 11-33 **Primary Vehicle Corridor Speed – No Action Alternative**

STATE FACILITIES

The No Action Alternative would result in growth in vehicle volumes on freeway segments identified in Section 11.2.5, *State Facilities*. Overall, volumes at these study locations are expected to increase under No Action Alternative build-out, generally in the range of 5 to 15 percent. However, I-90 volumes would grow by a smaller amount, and potentially even decrease across the I-90 bridge, with the addition of East Link.

As shown in **Table 11-17**, the study locations along SR 520 and I-90 are expected to operate at LOS D or better under the No Action Alternative, but the three locations along I-405 are all expected to degrade further such that none of them meet the LOS D standard. The locations that would not meet their LOS standard are **shown in bold**. Of the three segments that would not meet the LOS D standard, two are already not meeting the threshold while the third is on the verge of not meeting LOS D in the existing conditions (0.99).

TABLE 11-17 **State Facility Performance –No Action Alternative**

	Existing		No Action Alternative	
Study Location	AADT	Volume-to-LOS D Maximum Service Volume Ratio	AADT	Volume-to-LOS D Maximum Service Volume Ratio
I-405 north of SR 520	211,000	0.99	228,000	**1.07**
I-405 between SR 520 and I-90	205,000	**1.07**	238,000	**1.24**
I-405 south of I-90	150,000	**1.16**	181,000	**1.39**
SR 520 west of I-405	74,000	0.57	78,000	0.60
SR 520 east of I-405	105,000	0.83	121,000	0.95
I-90 west of I-405	148,000	0.86	145,000	0.84
I-90 east of I-405	152,000	0.71	156,000	0.73

SOURCE: City of Bellevue 2023; Fehr & Peers 2023

An impact for the No Action Alternative is defined as any location not meeting the WSDOT LOS standard. Therefore, the three study locations along I-405 are expected to be impacted under the No Action Alternative: I-405 north of SR 520, I-405 between SR 520 and I-90, and I-405 south of I-90.

WILBURTON STUDY AREA

Primary Vehicle Corridor travel speed and System Intersection V/C ratio results within the Wilburton study area are shown in **Figure 11-34**. The V/C ratio results are summarized in **Table 11-18** and impacted locations are **shown in bold.** As shown in the table, with build-out of the modeled capacity, most System Intersections are expected to operate at higher V/C ratios relative to existing conditions. However, most locations would still meet the 1.0 performance target for a Type 1 PMA. Under the No Action Alternative, two intersections within the study area would not meet their V/C performance target, constituting an impact:

- 116th Avenue NE & NE 12th Street
- 116th Avenue SE & SE 1st Street

Although not located geographically within the Wilburton study area, two other nearby intersections that provide access between Downtown and Wilburton would not meet their performance target:

- 112th Avenue NE & NE 10th Street
- 112th Avenue NE & NE 8th Street

One corridor that connects Downtown and the Wilburton study area across I-405 would not meet its travel speed performance target under the No Action Alternative:

- NE 4th Street from 108th Avenue NE to 116th Avenue NE

These locations are all considered impacted under the No Action Alternative.

SOURCE: City of Bellevue 2023

FIGURE 11-34 **Primary Vehicle Corridor System Intersection and Speed Performance – No Action Alternative in the Wilburton Study Area Vicinity**

TABLE 11-18 **Wilburton Study Area Vehicle Network Performance – System Intersections – No Action Alternative**

Intersection	V/C Ratio	
	Existing	No Action
I-405 SB Ramps & NE 4th St	0.60	0.54
116th Ave NE & NE 12th St	0.80	**1.24**
120th Ave NE & NE 12th St	0.57	0.77
124th Ave NE & Bel-Red Rd	0.82	0.89
Spring Blvd & NE 12th St	0.42	0.49
120th Ave NE & Bel-Red Rd	0.39	0.40
116th Ave NE & NE 8th St	0.73	0.82
116th Ave & Main St	0.65	0.79
116th Ave SE & SE 1st St	0.85	**1.13**
116th Ave NE & NE 4th St	0.92	0.97
120th Ave NE & NE 8th St	0.62	0.70
116th Ave NE & NE 10th St	0.53	0.69
NE 1st St & Main St	0.49	0.60
120th Ave NE & NE 4th St	0.45	0.49
I-405 NB Ramps & NE 4th St	0.51	0.58
I-405 NB Ramps & NE 10th St	0.47	0.61
124th Ave NE & NE 8th St	0.53	0.74
116th Ave NE & NE 6th St	N/A	0.75

SOURCE: City of Bellevue 2023

NOTE: All System Intersections within the Wilburton study area have a 1.0 performance target except for 124th Avenue NE/NE 8th Street, which has a 0.85 performance target.

11.5.5 Alternative 1

This section summarizes the model results for Alternative 1 and the impacts expected based on the thresholds of significance stated in Section 11.5.2, *Thresholds of Significance*.

MODE SHARE

Table 11-19 summarizes the mode shares projected under Alternative 1 in comparison to the No Action Alternative. Mode shares are expected to be similar between the two alternatives, particularly the walk and bicycle modes. However, slight differences in mode share are expected among driving and transit with Alternative 1 expected to have a slightly higher share of workers' trips made by driving (64 percent compared to 60 percent) rather than transit (29 percent compared to 32 percent).

TABLE 11-19 **Mode Share – Alternative 1**

	Bellevue Workers		Bellevue Residents	
Mode	No Action	Alternative 1	No Action	Alternative 1
Walk	7%	8%	19%	20%
Bicycle	0%	0%	1%	1%
SOV	41%	44%	29%	29%
HOV	19%	20%	40%	37%
Transit	32%	29%	12%	12%

SOURCE: City of Bellevue 2023

NOTE: Mode shares are rounded and may not sum to 100%.

VMT PER CAPITA

Table 11-20 presents the total VMT and VMT per capita under Alternative 1 compared to the No Action Alternative. The BKRCast model projects that total daily VMT would increase to nearly 4.6 million, a 3 percent increase over the No Action Alternative. However, daily VMT per capita is expected to be approximately 7 percent lower at 21.6 miles per day.

TABLE 11-20 **VMT and VMT per Capita – Alternative 1**

	No Action Alternative	Alternative 2
Daily VMT	4,443,000	4,596,000
Daily VMT per Capita	23.2	21.6

SOURCE: City of Bellevue 2023

Based on the thresholds of significance defined for this EIS, an Action Alternative would result in a significant impact if the VMT per capita is projected to increase by at least 1 percent over the No Action Alternative. Because VMT per capita is expected to decrease relative to the No Action Alternative, no significant impact on VMT is expected under Alternative 1.

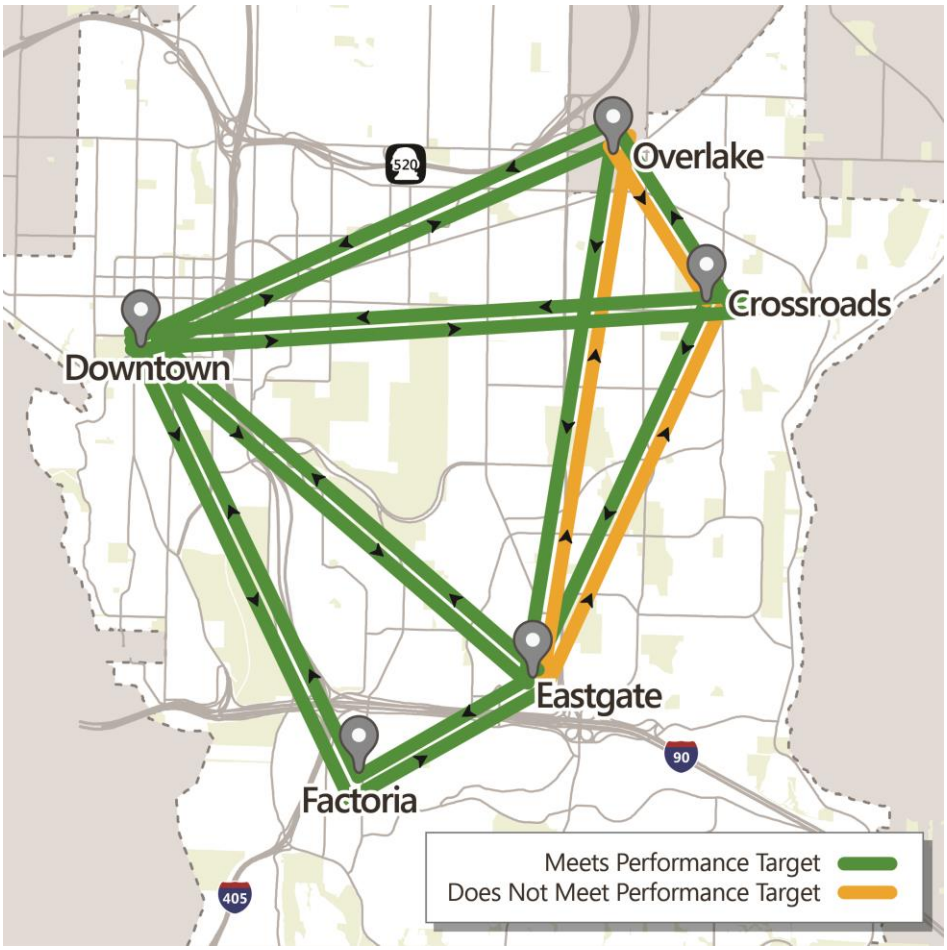
TRANSIT TRAVEL TIME

Table 11-21 and **Figure 11-35** summarize the projected transit travel time results under Alternative 1. The transit travel time ratios that would not meet the performance target are **shown in bold**. Under Alternative 1, transit travel time ratios are expected to stay the same or decrease relative to the No Action Alternative. This indicates that relative to the No Action Alternative, transit would be a more competitive option under Alternative 1 given increasing roadway congestion. Three Activity Center pairs are not expected to meet the MIP identified transit travel time ratio threshold of 2.0: Eastgate to Crossroads, Eastgate to Overlake, and Overlake to Crossroads.

TABLE 11-21 **Transit Travel Time Ratio – Alternative 1**

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown	—	0.99	0.95	0.85	0.88
Crossroads	1.78	—	1.77	—	1.66
Eastgate	1.17	**2.15**	—	0.64	**2.29**
Factoria	1.13	—	0.52	—	—
Overlake	0.95	**2.07**	1.93	—	—

SOURCE: City of Bellevue 2023



SOURCE: City of Bellevue 2023

FIGURE 11-35 **Transit Network Performance – Alternative 1**

Based on the threshold of significance defined for this EIS, an Action Alternative would result in a significant impact if it caused an increase in the transit travel time ratio beyond 2.0 for an Activity Center pair that met the MIP performance target under No Action or caused an increase in the travel time ratio by 0.1 or more for any Activity Center pair that did not meet the MIP performance target under No Action. Because the three Activity Center pairs noted above would already not meet the target under the No Action Alternative and would not meet the threshold of significance relative to the No Action Alternative, no significant impact on transit travel time is identified under Alternative 1.

SYSTEM INTERSECTION VOLUME-TO-CAPACITY RATIO

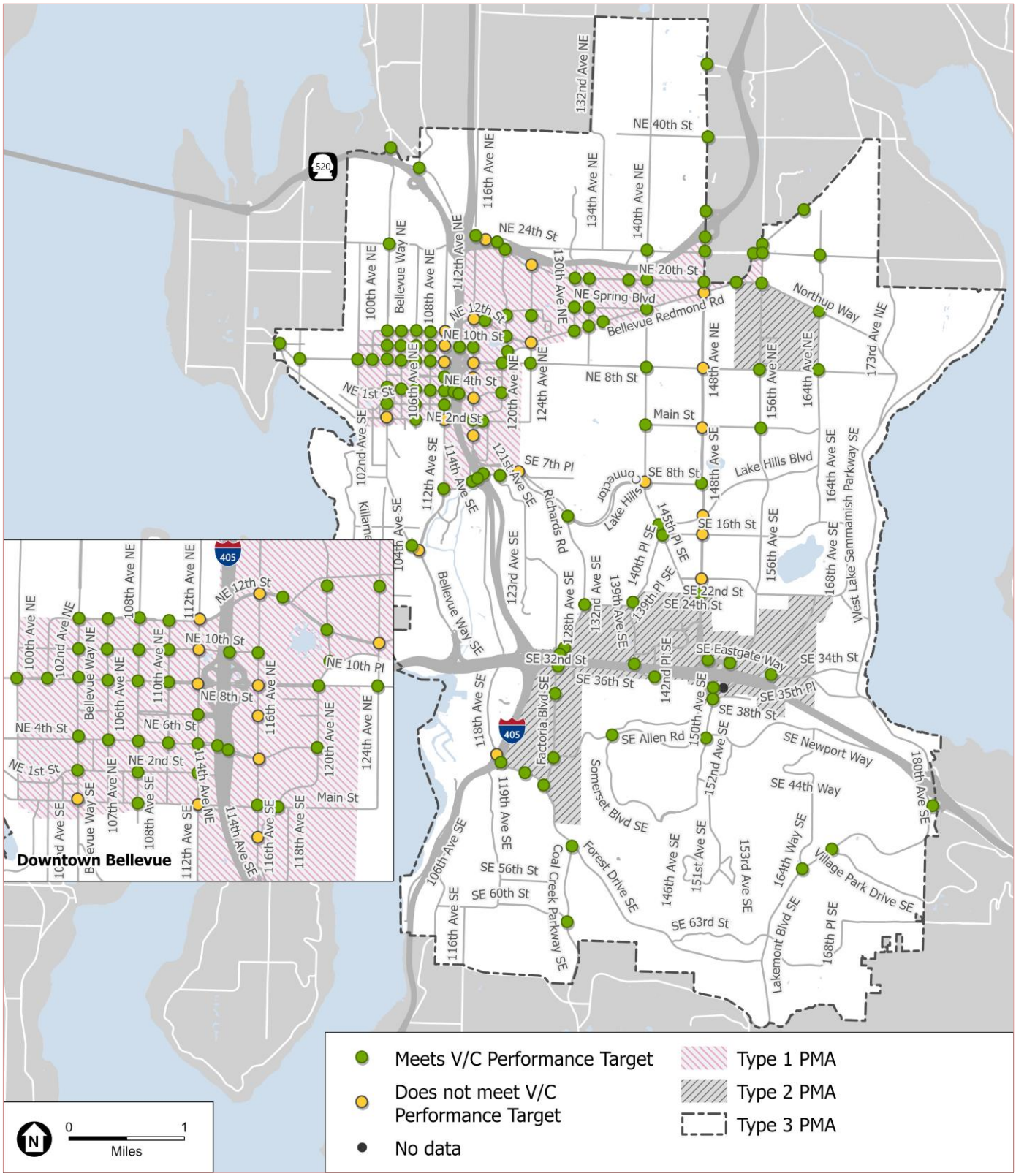
A summary of intersection V/C results for Alternative 1 is shown in **Table 11-22** and mapped in **Figure 11-36**. The table includes all intersections that would not meet their performance target under Alternative 1 along with the V/C ratios expected under the No Action Alternative for comparison. A complete tabular summary is included in Appendix C. Under Alternative 1, 112 of 134 System Intersections (84 percent) would meet their target, a decrease of nine intersections relative the No Action Alternative. Specifically, the number of System Intersections that would not meet their target would decrease to 61 of 74 (82 percent) in Type 1 PMAs and 28 of 36 (78 percent) in the Type 3 PMA. The number of System Intersections that would meet their target in Type 2 PMAs would remain the same between the No Action Alternative and Alternative 1 (23 of 24 System Intersections).

Based on the thresholds of significance defined for this EIS, an Action Alternative results in a significant impact if it causes a System Intersection that meets its performance target under the No Action Alternative to not meet its target or for an intersection that already does not meet the performance target under the No Action Alternative, an increase in the V/C ratio by 0.05 or more over No Action. Based on that criteria, 18 System Intersections would be significantly impacted under Alternative 1. Impacted System Intersections are **shown in bold** in Table 11-22.

TABLE 11-22 **Vehicle Network Performance – System Intersections – Alternative 1**

Performance Management Area	Performance Target	% of Intersections Meeting Target	
		No Action	Alternative 1
Type 1 PMA	1.00	91%	82%
Type 2 PMA	0.90	96%	96%
Type 3 PMA	0.85	86%	78%
Total System intersections		***90%***	***84%***
Performance Management Area and Performance Target	**Intersections That Would Not Meet Target under Alternative 1**	**V/C Ratio**	
		No Action	**Alternative 1**
Type 1 PMA (Performance Target = 1.00)	**Bellevue Wy & Main St**	0.97	**1.01**
	112th Ave NE & NE 12th St	0.99	**1.07**
	112th Ave NE & NE 8th St	1.19	**1.27**
	112th Ave & Main St	0.97	**1.07**
	112th Ave NE & NE 10th St	1.08	**1.23**
	116th Ave NE & NE 12th St	1.24	**1.57**
	124th Ave NE & Bel-Red Rd	0.89	**1.04**
	148th Ave NE & Bel-Red Rd	1.10	**1.15**
	124th Ave NE & Northup Wy	1.18	**1.32**
	116th Ave NE & NE 8th St	0.82	**1.12**
	116th Ave SE & SE 1st St	1.13	**1.20**
	116th Ave NE & NE 4th St	0.97	**1.27**
	Lk Hills Connector& SE 7th Pl	1.00	**1.12**
Type 2 PMA (Performance Target = 0.90)	**I-405 SB Ramps & Coal Creek Pkwy**	1.14	**1.20**
Type 3 PMA (Performance Target = 0.85)	**112th Ave SE & Bellevue Wy SE**	0.98	**1.05**
	140th Ave SE & SE 8th St	0.85	**0.87**
	148th Ave NE & NE 8th St	0.94	0.96
	148th Ave & Main St	0.95	0.99
	148th Ave SE & Lk Hills Blvd	0.85	**0.86**
	148th Ave SE & SE 16th St	0.86	0.88
	115th Pl NE & Northup Wy	0.97	0.97
	148th Ave SE & SE 22nd St	0.85	**0.91**

SOURCE: City of Bellevue 2023



SOURCE: City of Bellevue 2023

FIGURE 11-36 **System Intersection Performance – Alternative 1**

PRIMARY VEHICLE CORRIDOR TRAVEL SPEED

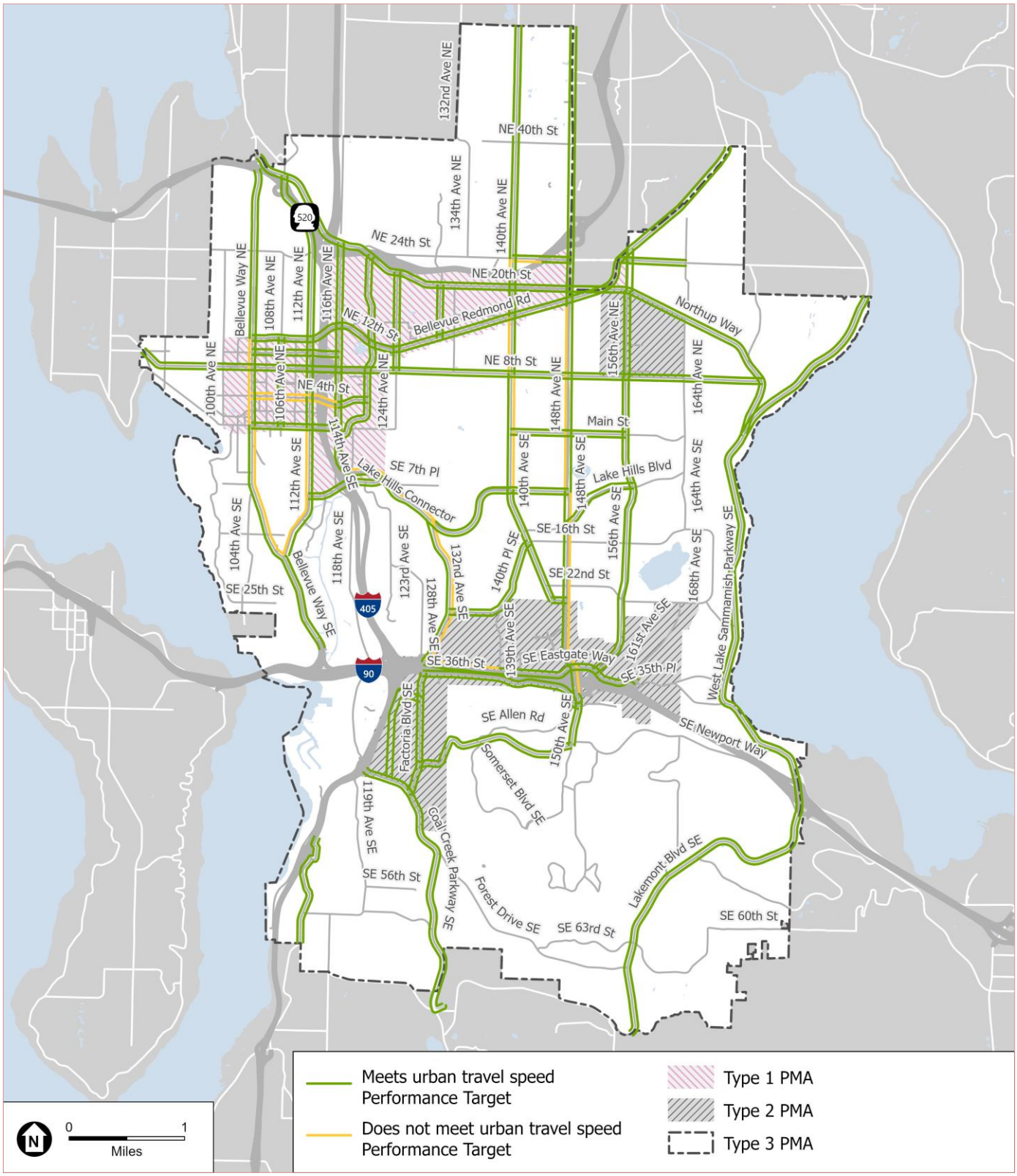
The BKRCast travel demand model was used to forecast vehicle corridor speeds along Primary Vehicles Corridors under Alternative 1. Results are shown in **Figure 11-37** and **Table 11-23**. The table lists the corridors that would not meet their performance target under Alternative 1 along with the speeds under both the No Action Alternative and Alternative 1 for comparison. A full tabular summary is included in Appendix C.

The 14 locations that would not meet their performance target under the No Action Alternative would also not meet the target under Alternative 1. In addition, four more corridors would also not meet their target under Alternative 1. Those include: 116th Avenue NE/Lake Hills Connector between SE 8th Street and Richards Road, Richards Road between SE 26th Street and I-90, 140th Avenue between NE 8th Street and SE 8th Street, and 148th Avenue between NE 8th Street and SE 8th Street. Therefore, in total, 18 of the 95 Primary Vehicle Corridors would not meet their performance target under Alternative 1.

Based on the threshold of significance defined in this EIS, an Action Alternative results in a significant impact if it would cause a Primary Vehicle Corridor that met its performance target under No Action to not meet its target or for a corridor that already does not meet the performance target, a reduction in the travel speed/Typical Urban Travel Speed ratio by 0.05 or more below No Action. Using this criteria, Alternative 1 would significantly impact two corridors (also **shown in bold** in Table 11-23):

- 112th Avenue SE from Main Street to SE 8th Street
- Richards Road from Lake Hills Connector to SE 26th Street

While neither location would meet the performance target in the No Action Alternative, the travel speed-to-Typical Urban Travel Speed ratio degrades by 0.05 or more in both instances. Therefore, travel speed on these corridors is considered significantly impacted under Alternative 1.



SOURCE: City of Bellevue 2023

FIGURE 11-37 **Primary Vehicle Corridor Speed – Alternative 1**

TABLE 11-23 **Vehicle Network Performance – Primary Vehicle Corridor Speed – Alternative 1**

Performance Management Area and Performance Target	Corridors That Would Not Meet Performance Target	Speed (miles per hour)	
		No Action	Alt 1
Type 1 PMA (Performance target ≥0.5 Typical Urban Travel Speed)	Bellevue Wy – NE 12th St to Main St	5	5
	112th Ave SE – Main St to SE 8th St (SB/WB)	6	**5**
	140th Ave NE – Bel-Red Rd to NE 14th St (SB/WB)	5	5
	NE 4th St – Bellevue Way to 116th Ave NE (NB/EB and SB/WB)	5	5
Type 2 PMA (Performance target ≥0.75 Typical Urban Travel Speed)	148th Ave – SE 24th St to SE 37th St (SB/WB)	7	7
	Eastgate Way – Richards Rd to 139th Ave SE (SB/WB)	10	10
	Richards Rd – SE 26th St to I-90 (SB/WB)	12	11
Type 3 PMA (Performance target ≥0.9 Typical Urban Travel Speed)	Bellevue Way – Main St to 112th Ave SE (SB/WB)	10	9
	112th Ave SE – SE 8th St to Bellevue Wy (SB/WB)	6	6
	116th Ave NE/Lk Hills Connector – SE 8th St to Richards Rd (SB/WB)	15	12
	Richards Rd – Lk Hills Connector to SE 26th St (SB/WB)	12	**10**
	140th Ave NE – NE 24th St to SR 520 (SB/WB)	10	10
	140th Ave NE – NE 14th St to NE 8th St (SB/WB)	5	5
	140th Ave – NE 8th St to SE 8th St (SB/WB)	11	10
	148th Ave – NE 15th Ct to NE 8th St (SB/WB)	12	11
	148th Ave – NE 8th St to SE 8th St (SB/WB)	14	13
	148th Ave – SE 8th St to SE 24th St (SB/WB)	9	8
	NE 24th St – 140th Ave NE to SR 520 (NB/EB)	13	12

SOURCE: City of Bellevue 2023

EB = east bound; NB = north bound; SB = southbound; WB = westbound.
NOTE: Spring Boulevard between NE 12th Street and NE 20th Street is a Primary Vehicle Corridor, but data are currently insufficient to project future volumes as it has only recently opened.

STATE FACILITIES

Table 11-24 summarizes projected daily volumes at each of the state facility study locations under Alternative 1. As is the case under the No Action Alternative, the three study locations along I-405 are expected to exceed the volumes needed to maintain a LOS D standard and would also operate slightly worse than under the No Action Alternative. The other four study locations would continue to meet the WSDOT standard although SR 520 east of I-405 would nearly reach the maximum LOS D service volume at 0.99.

TABLE 11-24 **State Facility Performance – Alternative 1**

	No Action Alternative		Alternative 1	
Study Location	AADT	Volume-to-LOS D Maximum Service Volume Ratio	AADT	Volume-to-LOS D Maximum Service Volume Ratio
I-405 north of SR 520	228,000	**1.07**	232,000	**1.09**
I-405 between SR 520 and I-90	238,000	**1.24**	240,000	**1.25**
I-405 south of I-90	181,000	**1.39**	184,000	**1.42**
SR 520 west of I-405	78,000	0.60	83,000	0.64
SR 520 east of I-405	121,000	0.95	126,000	0.99
I-90 west of I-405	145,000	0.84	147,000	0.85
I-90 east of I-405	156,000	0.73	157,000	0.74

SOURCE: Fehr & Peers 2023

The impact criteria defined for this EIS state that an Action Alternative results in a significant impact on a state facility if it would cause a study location meeting the WSDOT standard under the No Action Alternative to not meet the standard or cause an increase in state facility volume-to-capacity ratio of 0.01 or more for a location that did not meet the LOS standard under No Action.

Based on these criteria, the three study segments of I-405 would be significantly impacted by Alternative 1: I-405 north of SR 520, I-405 between SR 520 and I-90, and I-405 south of I-90.

WILBURTON STUDY AREA

Primary Vehicle Corridor travel speed and intersection V/C ratio results within the Wilburton study area are shown in **Figure 11-38**. V/C ratio results are summarized in **Table 11-25** and impacted locations are **shown in bold.** Relative to the No Action Alternative, three additional intersections are not expected to meet the V/C performance target in the Wilburton study area under Alternative 1. Along 116th Avenue NE, the intersections at NE 8th Street and NE 4th Street would not meet their performance target. On the northeast corner of the study area, 124th Avenue NE and Bel-Red Road would also not meet its performance target under Alternative 1. West of the Wilburton study area, Alternative 1 would also cause two additional System Intersections along 112th Avenue NE to not meet their target.

Five System Intersections would result in V/C ratios that constitute significant impacts:

- 116th Avenue NE & NE 12th Street
- 124th Avenue NE & Bel-Red Road
- 116th Avenue NE & NE 8th Street
- 116th Avenue NE & SE 1st Street
- 116th Avenue NE & NE 4th Street

One additional corridor that provides access to the study area from the south would not meet the travel speed performance target: 116th Avenue NE from SE 5th Street to the southern edge of the Wilburton study area.

SOURCE: City of Bellevue 2023

FIGURE 11-38 **Primary Vehicle Corridor System Intersection and Speed Performance – Alternative 1 in the Wilburton Study Area Vicinity**

TABLE 11-25 **Wilburton Study Area Vehicle Network Performance – System Intersections – Alternative 1**

Intersection	V/C Ratio	
	No Action	Alternative 1
I-405 SB Ramps & NE 4th St	0.54	0.57
116th Ave NE & NE 12th St	**1.24**	**1.57**
120th Ave NE & NE 12th St	0.77	0.80
124th Ave NE & Bel-Red Rd	0.89	**1.04**
Spring Blvd & NE 12th St	0.49	0.60
120th Ave NE & Bel-Red Rd	0.40	0.43
116th Ave NE & NE 8th St	0.82	**1.12**
116th Ave & Main St	0.79	0.87
116th Ave SE & SE 1st St	**1.13**	**1.20**
116th Ave NE & NE 4th St	0.97	**1.27**
120th Ave NE & NE 8th St	0.70	0.88
116th Ave NE & NE 10th St	0.69	0.76
NE 1st St & Main St	0.60	0.86
120th Ave NE & NE 4th St	0.49	0.52
I-405 NB Ramps & NE 4th St	0.58	0.64
I-405 NB Ramps & NE 10th St	0.61	0.78
124th Ave NE & NE 8th St	0.74	0.82
116th Ave NE & NE 6th St	0.75	1.06

SOURCE: City of Bellevue 2023

NOTE: All System Intersections within the Wilburton study area have a 1.0 performance target except for 124th Avenue NE/NE 8th Street, which has a 0.85 performance target.

11.5.6 Alternative 2

This section summarizes the model results for Alternative 2 and the impacts expected based on the thresholds of significance stated in Section 11.5.2, *Thresholds of Significance*.

MODE SHARE

Table 11-26 summarizes the mode shares projected under Alternative 2 in comparison to the No Action Alternative. Alternative 2 is expected to result in slightly higher walk and SOV shares than the No Action Alternative for both Bellevue workers and residents. Among Bellevue workers, HOV shares are expected to remain the same, but would have slightly lower transit shares (correlating with the magnitude of increase in SOV). Among Bellevue residents, the transit mode share is expected to be the same between the two alternatives with a lower HOV share reflecting the shift to higher walk and SOV shares.

TABLE 11-26 **Mode Share – Alternative 2**

	Bellevue Workers		Bellevue Residents	
Mode	No Action	Alternative 2	No Action	Alternative 2
Walk	7%	8%	19%	21%
Bicycle	0%	0%	1%	1%
SOV	41%	44%	29%	30%
HOV	19%	19%	40%	36%
Transit	32%	29%	12%	12%

SOURCE: City of Bellevue 2023

NOTE: Mode shares are rounded and may not sum to 100%.

VMT PER CAPITA

Table 11-27 presents the total VMT and VMT per capita under Alternative 2 compared to the No Action Alternative. The BKRCast model projects that total daily VMT would increase to over 4.6 million, a 5 percent increase over the No Action Alternative and slightly higher than Alternative 1. However, daily VMT per capita is expected to be approximately 3 miles, or 13 percent, lower than the No Action Alternative at 20.2 miles per day. Alternative 2 daily VMT per capita would also be lower than that projected for Alternative 1.

TABLE 11-27 **VMT and VMT per Capita – Alternative 2**

	No Action Alternative	Alternative 2
Daily VMT	4,443,000	4,681,000
Daily VMT per Capita	23.2	20.2

SOURCE: City of Bellevue 2023

Because daily VMT per capita is expected to decrease relative to the No Action Alternative, no significant impact on VMT is expected under Alternative 2.

TRANSIT TRAVEL TIME

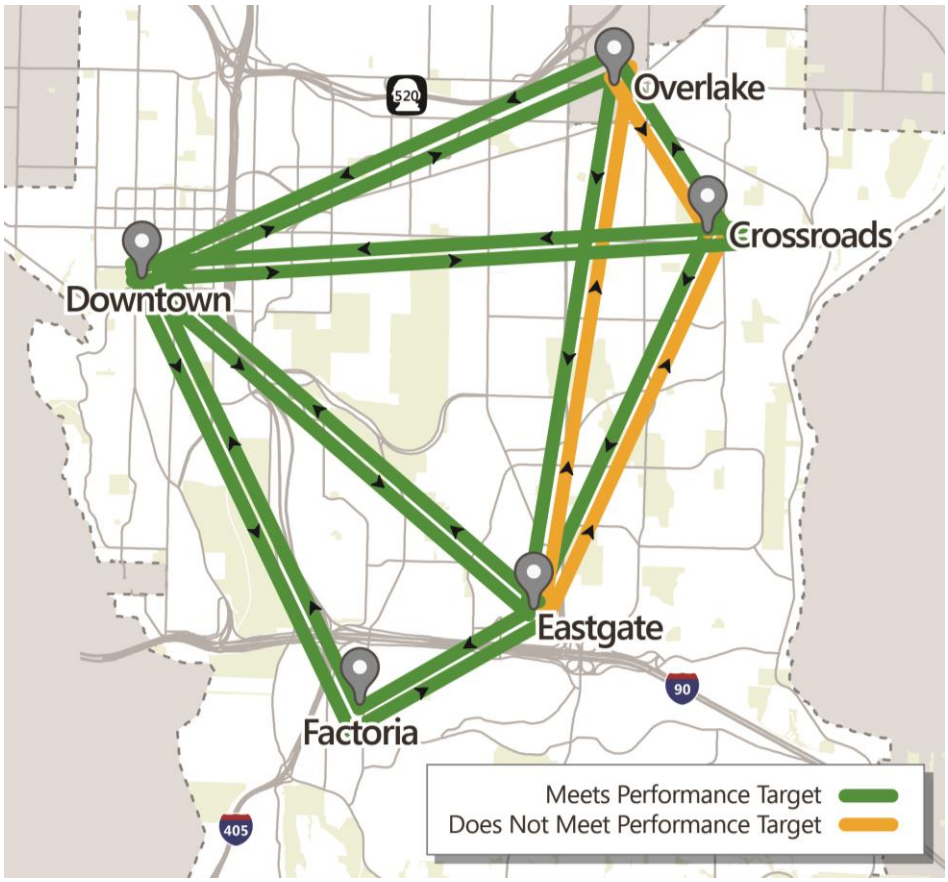
Using the forecasted Primary Vehicle Corridor travel speeds for vehicles as well as projected transit travel times, transit travel time ratios were calculated for each Activity Center pair. As shown in **Table 11-28** and **Figure 11-39**, there are three Activity Center pairs that are not expected to meet the MIP identified transit travel time ratio threshold of 2.0: Eastgate to Crossroads, Eastgate to Overlake, and Overlake to Crossroads. The transit travel time ratios that would not meet the performance target are **shown in bold.**

TABLE 11-28 **Transit Travel Time Ratio – Alternative 2**

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown	—	0.99	0.91	0.82	0.87
Crossroads	1.78	—	1.74	—	1.65
Eastgate	1.15	**2.14**	—	0.64	**2.27**
Factoria	1.12	—	0.52	—	—
Overlake	0.93	**2.04**	1.90	—	—

SOURCE: City of Bellevue 2023

Because the three Activity Center pairs noted above already did not meet the target under the No Action Alternative and would not meet the threshold of significance relative to the No Action Alternative, no significant impact on transit travel time is identified under Alternative 2.



SOURCE: City of Bellevue 2023

FIGURE 11-39 **Transit Network Performance – Alternative 2**

SYSTEM INTERSECTION VOLUME-TO-CAPACITY RATIO

A summary of intersection V/C results for Alternative 2 is shown in **Table 11-29** and mapped in **Figure 11-40**. The table includes all intersections that would not meet their performance target under Alternative 2 along with the V/C ratios expected under the No Action Alternative for comparison. A complete tabular summary is included in Appendix C. Under Alternative 2, the number of System Intersections that would meet their target would fall to 105 of 134 System Intersections (78 percent), a decrease of 16 intersections from the No Action Alternative. Specifically, the number of System Intersections that would meet their target would decrease to 59 of 74 (80 percent) in Type 1 PMAs, 22 of 24 (92 percent) in Type 2 PMAs, and 24 of 36 (67 percent) in the Type 3 PMA.

TABLE 11-29 **Vehicle Network Performance – System Intersections – Alternative 2**

Performance Management Area	Performance Target	% of Intersections That Meet Target	
		No Action	Alternative 2
Type 1 PMA	1.00	91%	80%
Type 2 PMA	0.90	96%	92%
Type 3 PMA	0.85	86%	67%
Total System intersections		***90%***	***78%***
Performance Management Area and Performance Target	**Intersections That Would Not Meet Target under Alternative 3**	**V/C Ratio**	
		No Action	**Alternative 2**
Type 1 PMA (Performance Target = 1.00)	**Bellevue Wy & Main St**	0.97	**1.03**
	112th Ave NE & NE 12th St	0.99	**1.16**
	112th Ave NE & NE 8th St	1.19	**1.38**
	112th Ave & Main St	0.97	**1.09**
	112th Ave NE & NE 10th St	1.08	**1.37**
	116th Ave NE & NE 12th St	1.24	**1.90**
	124th Ave NE & Bel-Red Rd	0.89	**1.09**
	148th Ave NE & NE 20th St	1.01	1.02
	148th Ave NE & Bel-Red Rd	1.10	**1.18**
	148th Ave NE & NE 24th St	0.98	**1.03**
	124th Ave NE & Northup Wy	1.18	**1.38**
	116th Ave NE & NE 8th St	0.82	**1.15**
	116th Ave SE & SE 1st St	1.13	**1.21**
	116th Ave NE & NE 4th St	0.97	**1.27**
	Lk Hills Connector& SE 7th Pl	1.00	**1.17**
Type 2 PMA (Performance Target = 0.90)	**142nd Ave SE & SE 36th St**	0.89	**0.93**
	I-405 SB Ramps & Coal Creek Pkwy	1.14	**1.20**

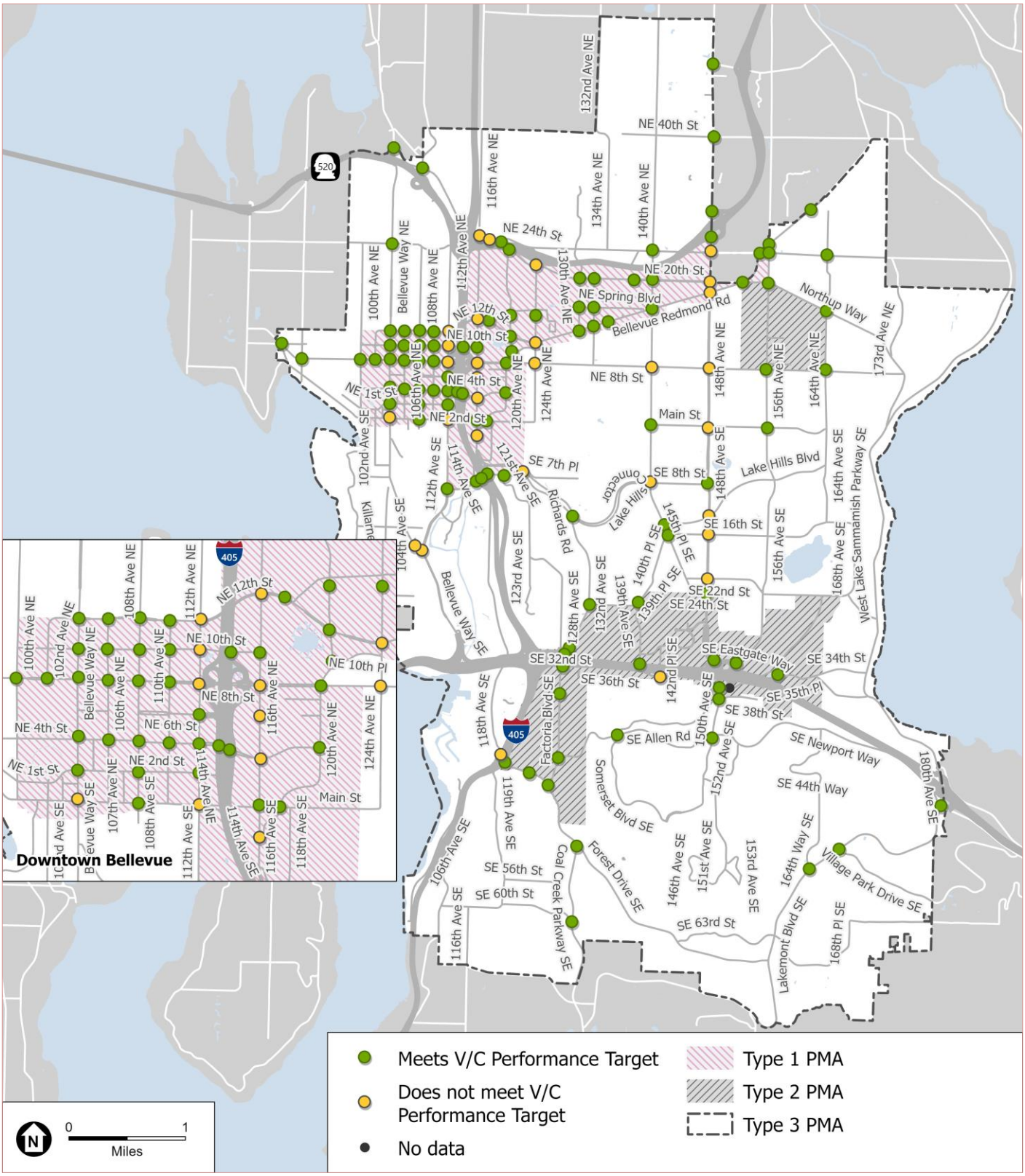
Performance Management Area and Performance Target	Intersections That Would Not Meet Target under Alternative 3	V/C Ratio	
		No Action	Alternative 2
Type 3 PMA (Performance Target = 0.85)	**112th Ave SE & Bellevue Wy SE**	0.98	**1.07**
	124th Ave NE & NE 8th St	0.74	**0.88**
	140th Ave NE & NE 8th St	0.77	**0.86**
	140th Ave SE & SE 8th St	0.85	**0.89**
	148th Ave NE & NE 8th St	0.94	**1.01**
	148th Ave & Main St	0.95	0.99
	148th Ave SE & Lk Hills Blvd	0.85	**0.88**
	148th Ave SE & SE 16th St	0.86	0.89
	116th Ave NE & Northup Wy	0.77	**0.95**
	115th Pl NE & Northup Wy	0.97	**1.02**
	148th Ave SE & SE 22nd St	0.85	**0.91**
	108th Ave SE& Bellevue Way SE	0.77	**0.86**

SOURCE: City of Bellevue 2023

Based on the impact criteria for Action Alternatives, 26 System Intersections would be significantly impacted under Alternative 2 as listed below. These include the 18 intersections that would be impacted under Alternative 1 as well as the following eight additional locations:

- 148th Avenue NE & NE 24th Street
- 142nd Avenue SE & SE 36th Street
- 124th Avenue NE & NE 8th Street
- 140th Avenue NE & NE 8th Street
- 148th Avenue NE & NE 8th Street
- 116th Avenue NE & Northup Way
- 115th Place NE & Northup Way
- 108th Avenue SE & Bellevue Way SE

Impacted System Intersections are **shown in bold** in Table 11-29.



SOURCE: City of Bellevue 2023

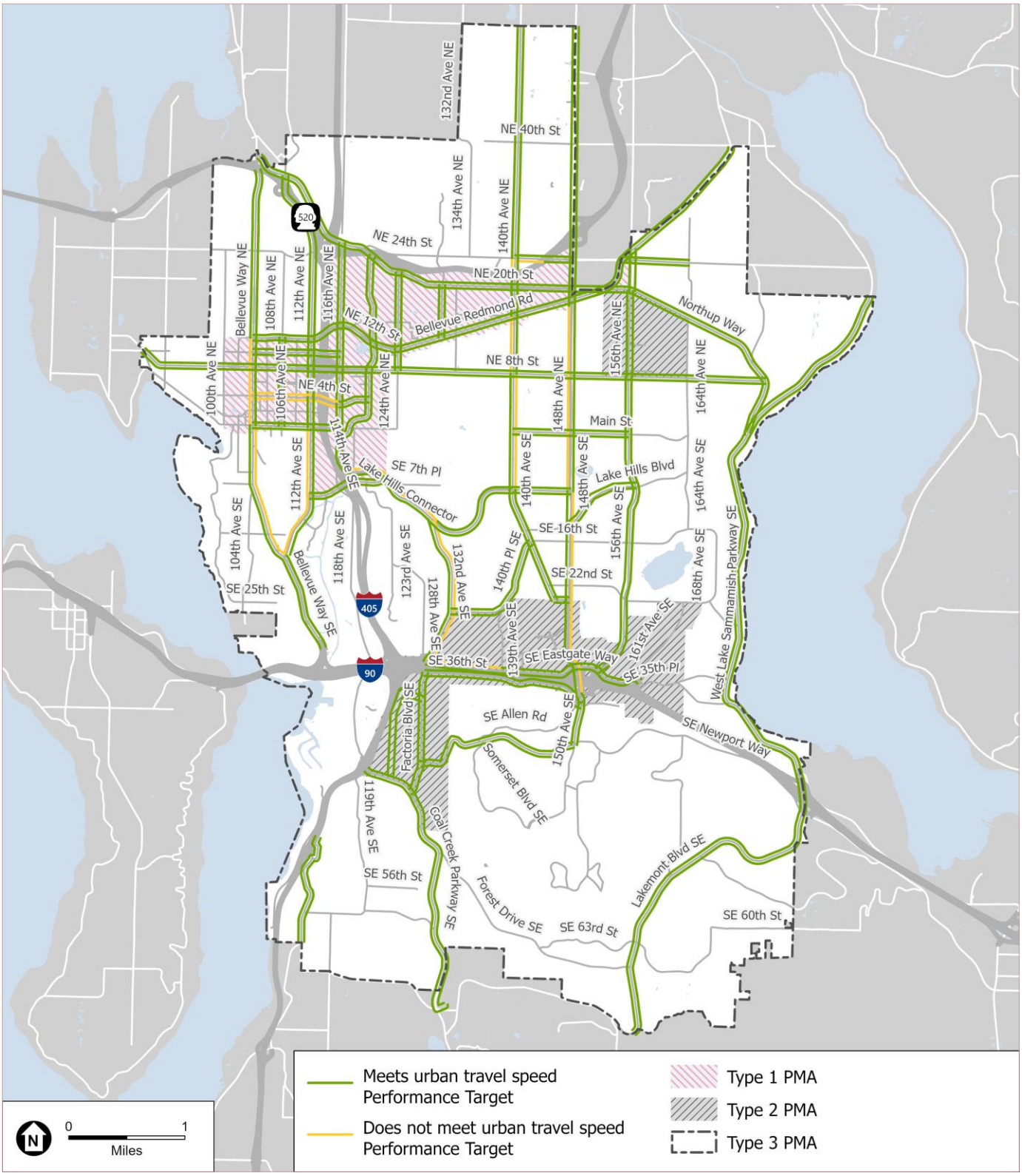
FIGURE 11-40 **System Intersection Performance – Alternative 2**

PRIMARY VEHICLE CORRIDOR TRAVEL SPEED

Primary Vehicle Corridor speed results are shown in **Figure 11-41** and **Table 11-30**. The table lists the corridors that would not meet their performance target under Alternative 2 along with the speeds under both the No Action Alternative and Alternative 2 for comparison. A full tabular summary is included in Appendix C. The same 18 locations (of a total of 95 Primary Vehicle Corridors) that would not meet their performance target under Alternative 1 would also not meet the target under Alternative 2. However, because traffic volume would generally be higher under Alternative 2, the travel speed-to-Typical Urban Travel Speed ratio would degrade to slightly lower levels resulting in several more impacted corridors than under Alternative 1.

The following five Primary Vehicle Corridors would be significantly impacted under Alternative 2:

- Bellevue Way from Main Street to 112th Avenue SE
- 112th Avenue SE from Main Street to SE 8th Street
- Richards Road from Lake Hills Connector to SE 26th Street
- 140th Avenue NE from Bel-Red Road to NE 14th Street
- 148th Avenue from NE 15th Court to NE 8th Street



SOURCE: City of Bellevue 2023

FIGURE 11-41 **Primary Vehicle Corridor Speed – Alternative 2**

TABLE 11-30 **Vehicle Network Performance – Primary Vehicle Corridor Speed – Alternative 2**

Performance Management Area and Performance Target	Corridors That Would Not Meet Performance Target	Speed (miles per hour)	
		No Action	Alt 2
Type 1 PMA (Performance target ≥0.5 Typical Urban Travel Speed)	Bellevue Way – NE 12th St to Main St (SB/WB)	5	5
	112th Ave SE – Main St to SE 8th St (SB/WB)	6	**5**
	140th Ave NE – Bel-Red Rd to NE 14th St (SB/WB)	5	**5**
	NE 4th St – Bellevue Way to 116th Ave NE (NB/EB and SB/WB)	5	5
Type 2 PMA (Performance target ≥0.75 Typical Urban Travel Speed)	148th Ave – SE 24th St to SE 37th St (SB/WB)	7	7
	Eastgate Way – Richards Rd to 139th Ave SE (SB/WB)	10	10
Type 3 PMA (Performance target ≥0.9 Typical Urban Travel Speed)	**Bellevue Way – Main St to 112th Ave SE (SB/WB)**	10	**9**
	112th Ave SE – SE 8th St to Bellevue Way (SB/WB)	6	6
	116th Ave NE/Lk Hills Connector – SE 8th St to Richards Rd (SB/WB)	15	11
	Richards Rd – Lk Hills Connector to SE 26th St (SB/WB)	12	**10**
	Richards Rd – SE 26th St to I-90 (SB/WB)	12	10
	140th Ave NE – NE 24th St to SR 520 (SB/WB)	10	10
	140th Ave NE – NE 14th St to NE 8th St (SB/WB)	5	5
	140th Ave – NE 8th St to SE 8th St (SB/WB)	11	10
	148th Ave – NE 15th Ct to NE 8th St (SB/WB)	12	**11**
	148th Ave – NE 8th St to SE 8th St (SB/WB)	14	12
	148th Ave – SE 8th St to SE 24th St (SB/WB)	9	8
	NE 24th St – 140th Ave NE to SR 520 (NB/EB)	13	12

SOURCE: City of Bellevue 2023

EB = east bound; NB = north bound; SB = southbound; WB = westbound.
NOTE: Spring Boulevard between NE 12th Street and NE 20th Street is a Primary Vehicle Corridor, but data are currently insufficient to project future volumes as it has only recently opened.

STATE FACILITIES

Table 11-31 summarizes projected daily volumes at each of the state facility study locations under Alternative 2. Compared to the No Action Alternative and Alternative 1, Alternative 2 would result in the same or slightly higher volumes on state facilities. The same I-405 study segments impacted under Alternative 1 would be impacted under Alternative 2. In addition, Alternative 2 is expected to cause SR 520 east of I-405 to not meet the maximum LOS D service volume.

TABLE 11-31 **State Facility Performance – Alternative 2**

Study Location	No Action Alternative		Alternative 2	
	AADT	Volume-to-LOS D Maximum Service Volume Ratio	AADT	Volume-to-LOS D Maximum Service Volume Ratio
I-405 north of SR 520	228,000	**1.07**	233,000	**1.09**
I-405 between SR 520 and I-90	238,000	**1.24**	242,000	**1.26**
I-405 south of I-90	181,000	**1.39**	185,000	**1.42**
SR 520 west of I-405	78,000	0.60	85,000	0.65
SR 520 east of I-405	121,000	0.95	129,000	**1.02**
I-90 west of I-405	145,000	0.84	149,000	0.86
I-90 east of I-405	156,000	0.73	160,000	0.75

SOURCE: Fehr & Peers 2023

Based on the impact criteria, four study segments would be significantly impacted by Alternative 2: I-405 north of SR 520, I-405 between SR 520 and I-90, I-405 south of I-90, and SR 520 east of I-405.

WILBURTON STUDY AREA

Primary Vehicle Corridor travel speed and intersection V/C ratio results within the Wilburton study area are shown in **Figure 11-42**. V/C ratio results are summarized in **Table 11-32** and impacted locations are **shown in bold**. The System Intersections and Primary Vehicle Corridors that would not meet their performance target would be similar between Alternatives 1 and 2. The only additional location to not meet its target would be 124th Avenue NE and NE 8th Street. Although that is the only additional location to not meet its target, volume would generally be higher than under Alternative 1 (and the No Action Alternative) so intersection and corridor operations would be more congested.

Seven System Intersections would result in V/C ratios that constitute significant impacts:

- 116th Avenue NE & NE 12th Street
- 124th Avenue NE & Bel-Red Road
- 116th Avenue NE & NE 8th Street
- 116th Avenue NE & SE 1st Street
- 116th Avenue NE & NE 4th Street
- 124th Avenue NE & NE 8th Street
- 116th Avenue NE & NE 6th Street

The impacted locations would include the new NE 6th Street extension's intersection with 116th Avenue NE.

SOURCE: City of Bellevue 2023

FIGURE 11-42 **Primary Vehicle Corridor System Intersection and Speed Performance – Alternative 2 in the Wilburton Study Area Vicinity**

TABLE 11-32 **Wilburton Study Area Vehicle Network Performance – System Intersections – Alternative 2**

Intersection	V/C Ratio	
	No Action	Alternative 2
I-405 SB Ramps & NE 4th St	0.54	0.61
116th Ave NE & NE 12th St	**1.24**	**1.90**
120th Ave NE & NE 12th St	0.77	0.86
124th Ave NE & Bel-Red Rd	0.89	**1.09**
Spring Blvd & NE 12th St	0.49	0.62
120th Ave NE & Bel-Red Rd	0.40	0.42
116th Ave NE & NE 8th St	0.82	**1.15**
116th Ave & Main St	0.79	0.89
116th Ave SE & SE 1st St	**1.13**	**1.21**
116th Ave NE & NE 4th St	0.97	**1.27**
120th Ave NE & NE 8th St	0.70	0.89
116th Ave NE & NE 10th St	0.69	0.88
NE 1st St & Main St	0.60	0.87
120th Ave NE & NE 4th St	0.49	0.53
I-405 NB Ramps & NE 4th St	0.58	0.64
I-405 NB Ramps & NE 10th St	0.61	0.81
124th Ave NE & NE 8th St	0.74	**0.88**
116th Ave NE & NE 6th St	0.75	**1.13**

SOURCE: City of Bellevue 2023

NOTE: All System Intersections within the Wilburton study area have a 1.0 performance target except for 124th Avenue NE/NE 8th Street, which has a 0.85 performance target.

11.5.7 Alternative 3

This section summarizes the model results for Alternative 3 and the impacts expected based on the thresholds of significance stated in Section 11.5.2, *Thresholds of Significance*.

MODE SHARE

Table 11-33 summarizes the mode shares projected under Alternative 3 in comparison to the No Action Alternative. Similar to Alternative 2, Alternative 3 is expected to result in slightly higher walk and SOV shares than the No Action Alternative for both Bellevue workers and residents. Also similar to Alternative 2, the shift among Bellevue workers is due largely to a decrease in the transit share while the shift among Bellevue residents is due largely to a decrease in the HOV mode share.

TABLE 11-33 **Mode Share – Alternative 3**

	Bellevue Workers		Bellevue Residents	
Mode	No Action	Alternative 3	No Action	Alternative 3
Walk	7%	8%	19%	21%
Bicycle	0%	0%	1%	1%
SOV	41%	44%	29%	31%
HOV	19%	19%	40%	34%
Transit	32%	29%	12%	13%

SOURCE: City of Bellevue 2023

NOTE: Mode shares are rounded and may not sum to 100%.

VMT PER CAPITA

Table 11-34 presents the total VMT and VMT per capita under Alternative 3 compared to the No Action Alternative. The BKRCast model projects that total daily VMT would increase to over 4.8 million, an 8 percent increase over the No Action Alternative and higher than both Alternatives 1 and 2. Daily VMT per capita is expected to be approximately 4 miles, or 18 percent, lower than the No Action Alternative at 19.1 miles per day. Alternative 3 daily VMT per capita would be lower than both Alternatives 1 and 2.

TABLE 11-34 **VMT and VMT per Capita – Alternative 3**

	No Action Alternative	Alternative 3
Daily VMT	4,443,000	4,816,000
Daily VMT per Capita	23.2	19.1

SOURCE: City of Bellevue 2023

Because daily VMT per capita is expected to decrease relative to the No Action Alternative, no significant impact on VMT is expected under Alternative 3.

TRANSIT TRAVEL TIME

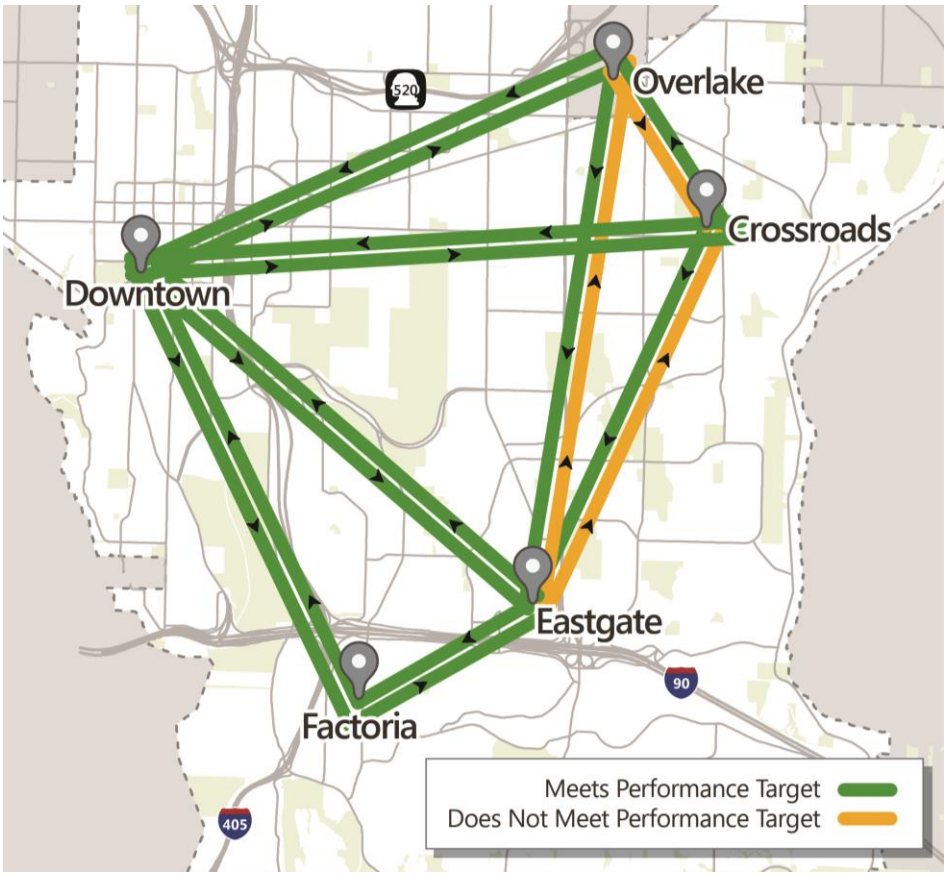
As shown in **Table 11-35** and **Figure 11-43**, two Activity Center pairs are not expected to meet the MIP transit travel time ratio target of 2.0: Eastgate to Crossroads and Eastgate to Overlake. However, as was the case for the other two Action Alternatives, the transit travel time ratios are expected to be lower than under the No Action Alternative, meaning that transit would be a more competitive option given increasing roadway congestion. The transit travel time ratios that would not meet the performance target are **shown in bold**.

TABLE 11-35 **Transit Travel Time Ratio – Alternative 3**

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown	—	1.00	0.90	0.80	0.86
Crossroads	1.75	—	1.72	—	1.63
Eastgate	1.12	**2.10**	—	0.62	**2.23**
Factoria	1.05	—	0.48	—	—
Overlake	0.90	**2.02**	1.87	—	—

SOURCE: City of Bellevue 2023

Because the three Activity Center pairs noted above already would not meet the target under the No Action Alternative and would not meet the threshold of significance relative to the No Action Alternative, no significant impact on transit travel time is identified under Alternative 3.



SOURCE: City of Bellevue 2023

FIGURE 11-43 **Transit Network Performance – Alternative 3**

SYSTEM INTERSECTION VOLUME-TO-CAPACITY RATIO

A summary of intersection V/C results for Alternative 3 is shown in **Table 11-36** and mapped in **Figure 11-44.** The table includes all intersections that would not meet their performance target under Alternative 3 along with the V/C ratios expected under the No Action Alternative for comparison. A complete tabular summary is included in Appendix C.

Under Alternative 3, the number of System Intersections that would not meet their target would fall to 100 of 134 (75 percent), a decrease of 21 intersections from the No Action Alternative. This is the lowest among all future year alternatives. Specifically, the number of System Intersections that would meet their target would decrease to 56 of 74 (76 percent) in Type 1 PMAs, 21 of 24 (88 percent) in Type 2 PMAs, and 23 of 36 (64 percent) in the Type 3 PMA.

TABLE 11-36 **Vehicle Network Performance – System Intersections – Alternative 3**

Performance Management Area	Performance Target	% of Intersections That Would Meet Target	
		No Action	Alternative 3
Type 1 PMA	1.00	91%	76%
Type 2 PMA	0.90	96%	88%
Type 3 PMA	0.85	86%	64%
Total System intersections		***90%***	***75%***
Performance Management Area and Performance Target	**Intersections That Would Not Meet Target under Alternative 3**	**V/C Ratio**	
		No Action	**Alternative 3**
Type 1 PMA (Performance Target = 1.00)	**Bellevue Wy NE & NE 12th St**	0.97	**1.05**
	Bellevue Wy & Main St	0.97	**1.06**
	112th Ave NE & NE 12th St	0.99	**1.21**
	112th Ave NE & NE 8th St	1.19	**1.41**
	112th Ave & Main St	0.97	**1.11**
	112th Ave NE & NE 10th St	1.08	**1.38**
	116th Ave NE & NE 12th St	1.24	**1.97**
	124th Ave NE & Bel-Red Rd	0.89	**1.15**
	140th Ave NE & Bel-Red Rd	0.85	**1.04**
	148th Ave NE & NE 20th St	1.01	**1.07**
	148th Ave NE & Bel-Red Rd	1.10	**1.25**
	148th Ave NE & NE 24th St	0.98	**1.10**
	124th Ave NE & Northup Wy	1.18	**1.48**
	116th Ave NE & NE 8th St	0.82	**1.23**
	118th Ave SE & SE 8th St	0.86	**1.01**
	116th Ave SE & SE 1st St	1.13	**1.25**
	116th Ave NE & NE 4th St	0.97	**1.37**
	Lk Hills Connector& SE 7th Pl	1.00	**1.21**
Type 2 PMA (Performance Target = 0.90)	**142nd Ave SE & SE 36th St**	0.89	**1.01**
	Factoria Blvd SE & SE 36th St (I-90 EB Off-ramp)	0.78	**0.91**
	I-405 SB Ramps & Coal Creek Pkwy	1.14	**1.24**

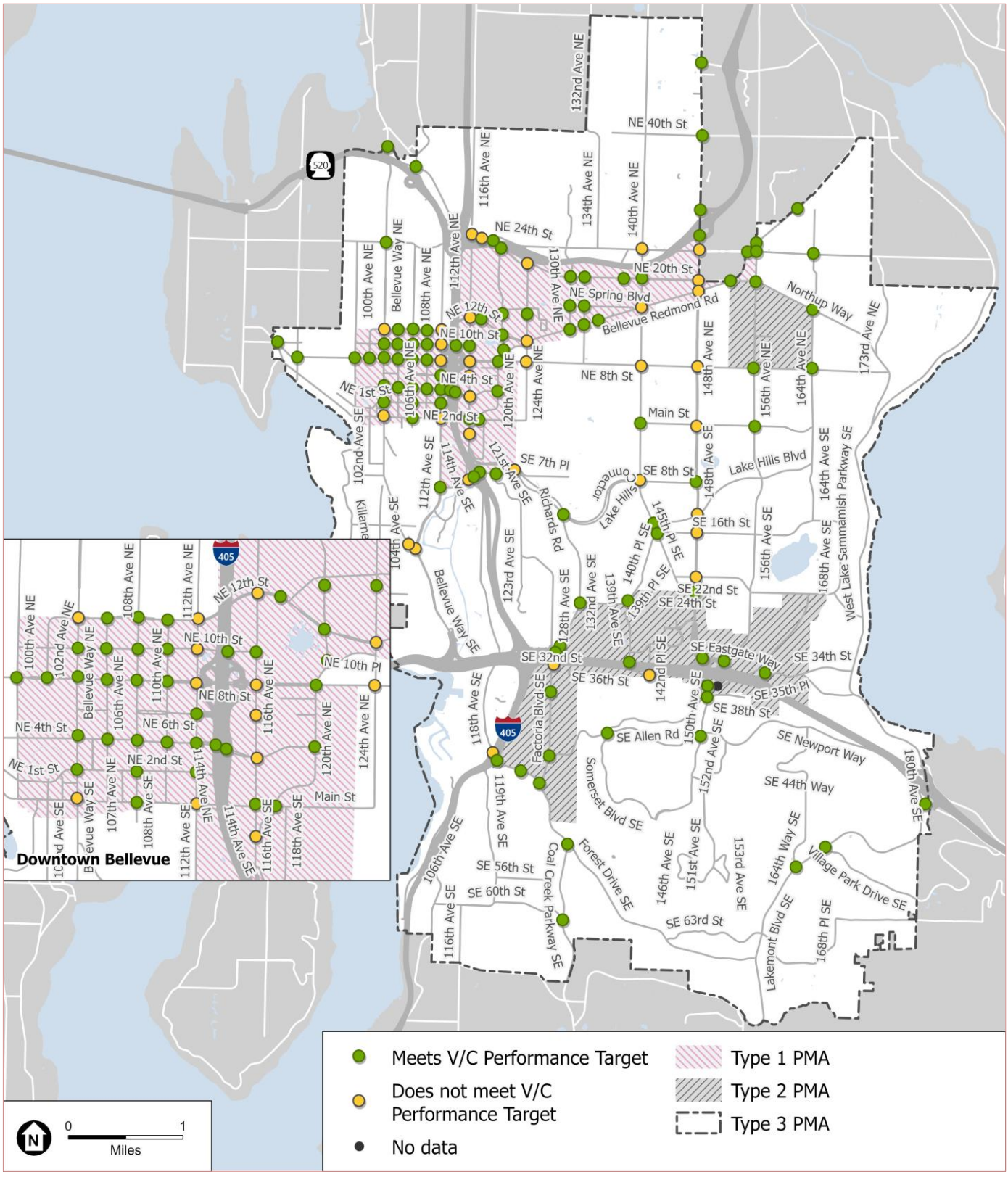
Performance Management Area and Performance Target	Intersections That Would Not Meet Target under Alternative 3	V/C Ratio	
		No Action	Alternative 3
Type 3 PMA (Performance Target = 0.85)	**112th Ave SE & Bellevue Wy SE**	0.98	**1.08**
	124th Ave NE & NE 8th St	0.74	**0.91**
	140th Ave NE & NE 8th St	0.77	**0.92**
	140th Ave SE & SE 8th St	0.85	**0.91**
	148th Ave NE & NE 8th St	0.94	**1.05**
	148th Ave & Main St	0.95	**1.02**
	148th Ave SE & Lk Hills Blvd	0.85	**0.88**
	148th Ave SE & SE 16th St	0.86	0.90
	140th Ave NE & NE 24th St	0.74	**0.96**
	116th Ave NE & Northup Wy	0.77	**0.97**
	115th Pl NE & Northup Wy	0.97	**1.09**
	148th Ave SE & SE 22nd St	0.85	**0.98**
	108th Ave SE& Bellevue Way SE	0.77	**0.90**

SOURCE: City of Bellevue 2023

Based on the impact criteria for Action Alternatives, 33 System Intersections would be significantly impacted under Alternative 3 as listed below. These include all the intersections impacted under Alternatives 1 and 2 as well as additional locations (15 additional locations relative to Alternative 1 and seven additional locations relative to Alternative 2). The seven locations that would only be impacted under Alternative 3 include:

- Bellevue Way NE & NE 12th Street
- 140th Avenue NE & Bel-Red Road
- 148th Avenue NE & Bel-Red Road
- 118th Avenue SE & SE 8th Street
- Factoria Boulevard SE & SE 36th Street (I-90 east-bound off-ramp)
- 148th Avenue & Main Street
- 140th Avenue NE & NE 24th Street

Impacted System Intersections are **shown in bold** in Table 11-36.



SOURCE: City of Bellevue 2023

FIGURE 11-44 **System Intersection Performance – Alternative 3**

PRIMARY VEHICLE CORRIDOR TRAVEL SPEED

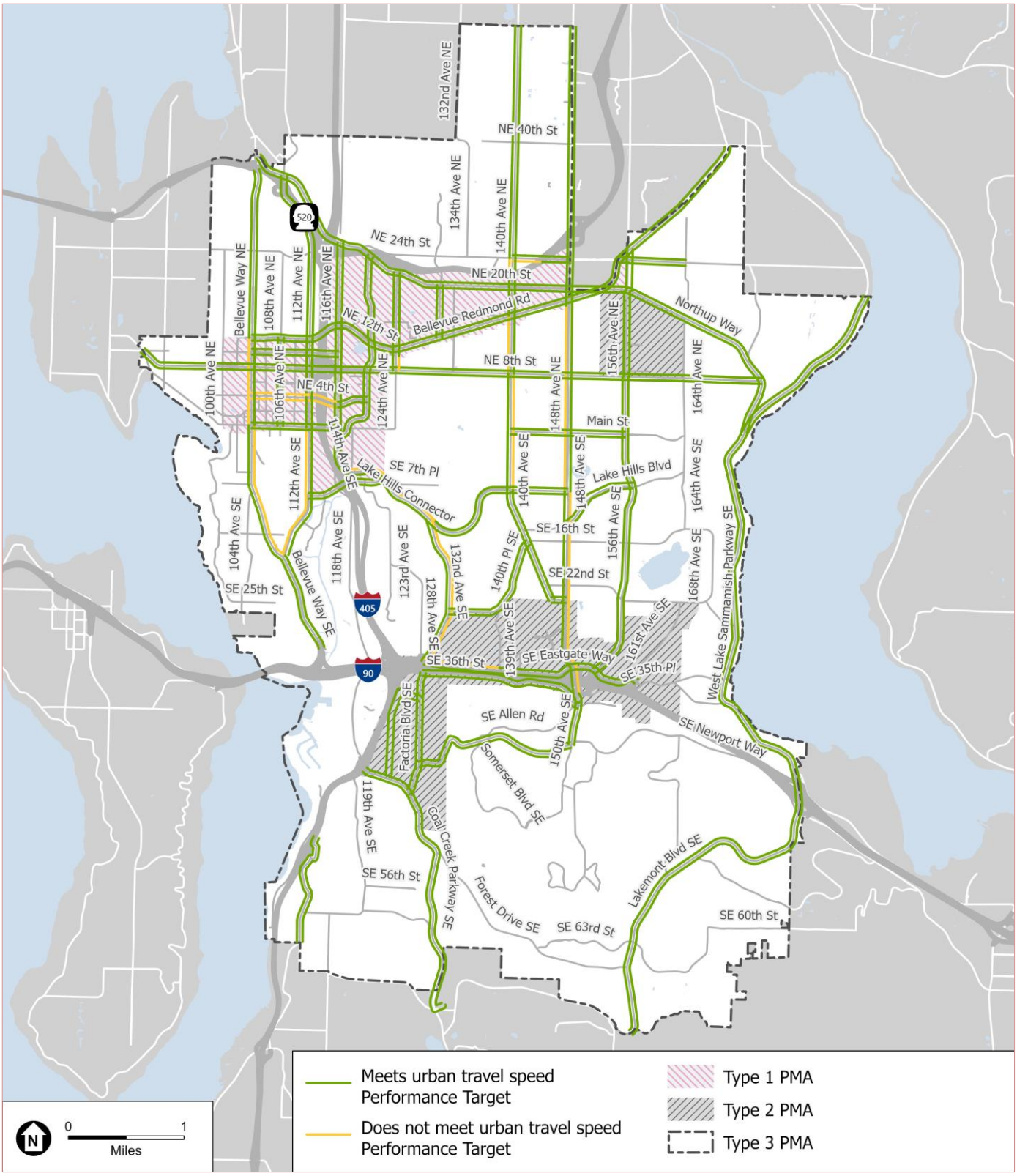
Primary Vehicle Corridor speed results are shown in **Figure 11-45** and **Table 11-37**. The table lists the corridors that would not meet their performance target under Alternative 3 along with the speed under both the No Action Alternative and Alternative 3 for comparison. A full tabular summary is included in Appendix C.

TABLE 11-37 **Vehicle Network Performance – Primary Vehicle Corridor Speed – Alternative 3**

Performance Management Area and Performance Target	Corridors That Would Not Meet Performance Target	Speed (miles per hour)	
		No Action	Alternative 3
Type 1 PMA (Performance target ≥0.5 Typical Urban Travel Speed)	Bellevue Way – NE 12th St to Main St (SB/WB)	5	5
	112th Ave SE – Main St to SE 8th St (SB/WB)	6	**4**
	140th Ave NE – Bel-Red Rd to NE 14th St (SB/WB)	5	**4**
	NE 4th St – Bellevue Way to 116th Ave NE (NB/EB and SB/WB)	5	5
Type 2 PMA (Performance target ≥0.75 Typical Urban Travel Speed)	148th Ave – SE 24th St to SE 37th St (SB/WB)	7	6
	Eastgate Way – Richards Rd to 139th Ave SE (SB/WB)	10	9
	Richards Rd – SE 26th St to I-90 (SB/WB)	12	10
Type 3 PMA (Performance target ≥0.9 Typical Urban Travel Speed)	**Bellevue Way – Main St to 112th Ave SE (SB/WB)**	10	**9**
	112th Ave SE – SE 8th St to Bellevue Way (SB/WB)	6	6
	116th Ave NE/Lk Hills Connector – SE 8th St to Richards Rd (SB/WB)	15	10
	Richards Rd – Lk Hills Connector to SE 26th St (SB/WB)	12	**10**
	140th Ave NE – NE 24th St to SR 520 (SB/WB)	10	9
	140th Ave NE – NE 14th St to NE 8th St (SB/WB)	5	**4**
	140th Ave – NE 8th St to SE 8th St (SB/WB)	11	9
	148th Ave – NE 15th Ct to NE 8th St (SB/WB)	12	**10**
	148th Ave – NE 8th St to SE 8th St (SB/WB)	14	11
	148th Ave – SE 8th St to SE 24th St (SB/WB)	9	8
	NE 24th St – 140th Ave NE to SR 520 (NB/EB)	13	**11**
	124th Ave NE – NE 10th Pl to NE 8th St (NB/EB)	15	10

SOURCE: City of Bellevue 2023

EB = east bound; NB = north bound; SB = southbound; WB = westbound.
NOTE: Spring Boulevard between NE 12th Street and NE 20th Street is a Primary Vehicle Corridor, but data are currently insufficient to project future volumes as it has only recently opened.



SOURCE: City of Bellevue 2023

FIGURE 11-45 **Primary Vehicle Corridor Speed – Alternative 3**

The 18 corridors that would not meet their performance target under Alternatives 1 and 2 would also not meet the target under Alternative 3. In addition, 124th Avenue NE from NE 10th Place to NE 8th Street would also not meet its performance target. Therefore, in total, 19 of the 95 Primary Vehicle Corridors would not meet their performance target under Alternative 3. Because traffic volume is expected to be highest under Alternative 3, corridor speed is expected to be lowest among the alternatives.

The following seven Primary Vehicle Corridors (**shown in bold** in Table 11-37) would be significantly impacted under Alternative 3.

- Bellevue Way from Main Street to 112th Avenue SE
- 112th Avenue SE from Main Street to SE 8th Street
- Richards Road from Lake Hills Connector to SE 26th Street
- 140th Avenue NE from Bel-Red Road to NE 14th Street
- 140th Avenue NE from NE 14th Street to NE 8th Street
- 148th Avenue from NE 15th Court to NE 8th Street
- NE 24th Street from 140th Avenue NE to SR 520

STATE FACILITIES

Table 11-38 summarizes projected daily volumes at each of the state facility study locations under Alternative 3. Alternative 3 would result in the highest volumes on state facilities among the alternatives. The four study segments that would not meet the LOS D standard under Alternative 2 would also not meet the standard under Alternative 3 and at slightly higher volumes.

Based on the impact criteria, four study segments would be significantly impacted by Alternative 3: I-405 north of SR 520, I-405 between SR 520 and I-90, I-405 south of I-90, and SR 520 east of I-405.

TABLE 11-38 **State Facility Performance – Alternative 3**

Study Location	No Action Alternative		Alternative 3	
	AADT	Volume-to-LOS D Maximum Service Volume Ratio	AADT	Volume-to-LOS D Maximum Service Volume Ratio
I-405 north of SR 520	228,000	**1.07**	235,000	**1.10**
I-405 between SR 520 and I-90	238,000	**1.24**	244,000	**1.27**
I-405 south of I-90	181,000	**1.39**	186,000	**1.44**
SR 520 west of I-405	78,000	0.60	86,000	0.66
SR 520 east of I-405	121,000	0.95	132,000	**1.04**
I-90 west of I-405	145,000	0.84	150,000	0.87
I-90 east of I-405	156,000	0.73	161,000	0.76

SOURCE: Fehr & Peers 2023

WILBURTON STUDY AREA

Alternative 3 would include the greatest capacity for growth in the Wilburton study area among the Action Alternatives. Therefore, it is projected to result in higher vehicle volume than the No Action Alternative and the other two Action Alternatives. Alternative 3 was evaluated using two different networks in the Wilburton study area:

- **Alternative 3**: NE 6th Street extension built to 116th Avenue NE (consistent with the assumptions for the other future year alternatives).
- **Alternative 3A:** NE 6th Street extension built farther east to 120th Avenue NE with an at-grade intersection at 116th Avenue NE and with Eastrail.

Extending NE 6th Street to 120th Avenue NE would require an additional trail crossing of Eastrail, which would degrade the experience for those using the trail. Creating an additional trail crossing also introduces a new modal conflict point between vehicles and vulnerable users (e.g., pedestrians and bicyclists) that would not exist under the No Action Alternative. This increased exposure could result in a potential safety impact at that location. In addition, the longer NE 6th Street extension would have more property impacts than an extension terminating at 116th Avenue NE.

Primary Vehicle Corridor travel speed and System Intersection V/C ratio results within the Wilburton study area are shown in **Figure 11-46** for Alternative 3 and **Figure 11-47** for Alternative 3A. V/C ratio results for both Alternatives 3 and 3A are summarized in **Table 11-39,** and impacted locations are **shown in bold.**

The sets of System Intersections and Primary Vehicle Corridors that would not meet their performance targets would be almost identical between Alternative 3 and 3A. The only difference is that 124th Avenue NE between NE 8th Street and NE 10th Place would not meet its performance target in only the northbound direction under Alternative 3, but not meet the target in both directions under Alternative 3A. The impact findings related to Primary Vehicle Corridor travel speed would be the same between Alternatives 3 and 3A. The follow System Intersections would be significantly impacted under both Alternatives 3 and 3A:

- 116th Avenue NE & NE 12th Street
- 124th Avenue NE & Bel-Red Road
- 116th Avenue NE & NE 8th Street
- 116th Avenue NE & SE 1st Street
- 116th Avenue NE & NE 4th Street
- 124th Avenue NE & NE 8th Street
- 116th Avenue NE & NE 6th Street

Although the same set of intersections would be impacted under Alternatives 3 and 3A, the V/C ratios would vary. The variation between the two network scenarios is generally small – no more than 0.05 except for 116th Avenue NE & NE 8th Street, which would have a V/C ratio 0.17 higher under Alternative 3A than under Alternative 3. In other words, extending NE 6th Street to 120th Avenue NE rather than 116th Avenue NE does not appear to materially alleviate congestion on NE 8th Street or NE 4th Street.

SOURCE: City of Bellevue 2023

FIGURE 11-46 **Primary Vehicle Corridor System Intersection and Speed Performance – Alternative 3 in the Wilburton Study Area Vicinity**

SOURCE: City of Bellevue 2023

FIGURE 11-47 **Primary Vehicle Corridor System Intersection and Speed Performance – Alternative 3A in the Wilburton Study Area Vicinity**

TABLE 11-39 **Wilburton Study Area Vehicle Network Performance – System Intersections – Alternatives 3 and 3A**

Intersection	V/C Ratio		
	No Action	Alt 3	Alt 3A
I-405 SB Ramps & NE 4th St	0.54	0.60	0.61
116th Ave NE & NE 12th St	**1.24**	**1.97**	**1.93**
120th Ave NE & NE 12th St	0.77	0.89	0.89
124th Ave NE & Bel-Red Rd	0.89	**1.15**	**1.12**
Spring Blvd & NE 12th St	0.49	0.70	0.68
120th Ave NE & Bel-Red Rd	0.40	0.46	0.47
116th Ave NE & NE 8th St	0.82	**1.23**	**1.40**
116th Ave & Main St	0.79	0.92	0.94
116th Ave SE & SE 1st St	**1.13**	**1.25**	**1.25**
116th Ave NE & NE 4th St	0.97	**1.37**	**1.36**
120th Ave NE & NE 8th St	0.70	0.94	0.90
116th Ave NE & NE 10th St	0.69	0.88	0.88
NE 1st St & Main St	0.60	0.98	0.91
120th Ave NE & NE 4th St	0.49	0.56	0.62
I-405 NB Ramps & NE 4th St	0.58	0.65	0.67
I-405 NB Ramps & NE 10th St	0.61	0.84	0.84
124th Ave NE & NE 8th St	0.74	**0.91**	**0.92**
116th Ave NE & NE 6th St	0.75	**1.11**	**1.16**
120th Ave NE & NE 6th St	N/A	N/A	0.93

SOURCE: City of Bellevue 2023

NOTE: All System Intersections within the Wilburton study area have a 1.0 performance target except for 124th Avenue NE/NE 8th Street, which has a 0.85 performance target.

11.5.8 Summary of Impacts

Table 11-40 summarizes the impact findings across the alternatives. The purpose of this programmatic EIS is to disclose how potential land use and land use designation actions by the City Council may impact the transportation system relative to what would occur with currently adopted land use designations and policies (in other words, the No Action Alternative). Therefore, the impacts of each Action Alternative under consideration are assessed against the

performance of the No Action Alternative. The impacts that are expected to occur as a result of the No Action Alternative are also expected under the Action Alternatives even if those alternatives would not result in additional significant impacts.

TABLE 11-40 **Summary of No Action Impacts and Significant Impacts Resulting from Action Alternatives**

Impact Type	No Action Alternative	Alternative 1	Alternative 2	Alternative 3
Pedestrian Network System Completeness	None	None	None	None
Bicycle Network System Completeness	None	None	None	None
Transit Network System Completeness	None	None	None	None
Safety	None	None	None	None
Parking	None	None	None	None
VMT Per Capita	None	None	None	None
Transit Travel Time	3 of 16 Activity Center pairs	None	None	None
Intersection V/C	13 of 134 System Intersections	18 of 134 System Intersections	26 of 134 System Intersections	33 of 134 System Intersections
Primary Vehicle Corridor Travel Speed	14 of 95 Primary Vehicle Corridors	2 of 95 Primary Vehicle Corridors	5 of 95 Primary Vehicle Corridors	7 of 95 Primary Vehicle Corridors
State Facilities	3 of 7 study segments	3 of 7 study segments	4 of 7 study segments	4 of 7 study segments

SOURCE: Fehr & Peers 2023

All Action Alternatives are expected to have significant impacts on System Intersection V/C, Primary Vehicle Corridor travel speed, and state facilities based on the thresholds for significance identified in this EIS. Among the Action Alternatives, the magnitude of impacts would generally be lowest for Alternative 1 and highest for Alternative 3.

Although the focus of the EIS is on mitigating conditions of the Action Alternatives rather than the current land use, policy, and adopted code (i.e., No Action), many of the mitigation measures proposed for the Action Alternatives would also reduce impacts under the No Action Alternative. These mitigation measures are discussed in the next section.

11.6 Avoidance, Minimization, and Mitigation Measures

This section identifies a range of potential mitigation strategies that could be implemented to reduce the significance of the adverse impacts identified for Alternatives 1, 2, and 3 in the previous section. These include impacts on System Intersection V/C ratios, Primary Vehicle Corridor speed, and state facility LOS.

As noted previously in this EIS, the transportation system analysis is based on the BKRCast travel demand model and analyzes growth to "build-out" capacity. Assumptions for future year land use and the transportation network are embedded into the model, as are assumptions related to factors such as parking cost, regional tolling, and energy prices. Because it is based on a set of assumptions that are likely to change over time, BKRCast is a tool best used to compare the relative differences among alternatives rather than to provide a precise prediction of future travel behavior. As such, this section describes the types of mitigation measures that could be pursued to reduce the expected impacts. As development occurs, Bellevue will determine the specific capital and programmatic improvements best suited to address the conditions that materialize. Capital projects will be identified in the Transportation Facilities Plan, a fiscally constrained plan prioritizing project needs over the subsequent 12-year period; the Transportation Facilities Plan is updated every two to three years.

A spectrum of impacts on System Intersection V/C ratio, Primary Vehicle Corridor speed, and state facilities were identified in the impact analysis. Among the alternatives studied, Alternative 3 is expected to result in the highest number and magnitude of impacted locations, while the No Action Alternative is expected to result in the lowest number and magnitude of impacts (with Alternatives 1 and 2 falling in between). While the preceding section identifies specific transportation facilities that may be impacted, the precise magnitude of these impacts cannot be known with certainty at this time. Rather, Bellevue would continue to monitor the transportation system performance over time as growth occurs and assumptions change (or become realities) and consider the best way to address impacts that are expected to arise.

It is also important to note that, for analysis purposes, the BKRCast modeling assumes growth at the build-out capacity of the land in Bellevue. This is a very conservative assumption that may indicate adverse impacts on the transportation that may not occur by the

2044 horizon year of this plan, as it takes time for properties to redevelop, and many properties are not built to the maximum capacity allowed.

Given the uncertainties with respect to land development and redevelopment and the transportation network, the mitigation measures and strategies identified in this EIS are programmatic in nature (e.g., they do not specify exact details, design, and performance outcome of a capital improvement at an intersection). Instead, the approach to mitigation first includes a process outlined in the Mobility Implementation Plan. The city may then determine interventions to reduce the magnitude of any transportation impacts, noting that any intervention may not reduce the impact to a level that is less-than-significant as defined herein. Potential mitigation measures and strategies may also be informed by several adopted transportation plans, programs, and strategies that can be combined to effectively address multimodal transportation impacts. These plans, programs, and approaches include:

- Transportation Demand Management Strategies
- Transportation Systems Operations and Management
- Agency Partnerships
- Parking Strategies
- Safety Strategies

11.6.1 Mobility Implementation Plan

The MIP outlines Bellevue's prioritization system to weigh needs across all modes such that transportation investments are aligned with the land use vision set out in the Comprehensive Plan. The MIP is a useful framework by which to identify potential mitigation measures because it recognizes that different areas of the city call for different approaches to addressing performance target gaps. Adapting the MIP to a mitigation identification and prioritization framework for this EIS results in two primary steps, listed below:

1. **Identify Performance Target Gaps**

   The first step of the MIP is to identify locations where transportation system performance does not meet expectations—performance target gaps. This EIS has identified performance target gaps for Alternatives 1, 2, and 3 related to the vehicle mode.

2. **Screen Performance Target Gaps – MIP Goals**

   Performance target gaps are next screened for alignment with the four goals of the MIP: Support Growth, Improve Safety, Consider Equity, and Improve Access and Mobility.

The MIP also includes two other steps that do not specifically apply to the programmatic mitigation measures identified in this plan but are important in identifying and implementing specific mitigation measures. These final two steps would be triggered as development occurs and more detailed transportation impact analyses are conducted as part of individual projects:

3. **Develop Project Concepts**

   For those performance target gaps with higher prioritization scores, staff would develop initial project concepts to improve performance target results. However, as noted above, it will not always be possible to fully meet each performance target. Project concepts will be developed and reviewed in the context of the four MIP goals as well as other performance factors such as environmental sustainability and livability.

4. **Screen for Funding and Implementation**

   The final step of the MIP is to inform the development of the Transportation Facilities Plan (TFP) based on the outcomes of Steps 1 through 3. Bellevue staff will deliver a prioritized list of project concepts for consideration in the TFP update process along with contextual information describing how each project concept would address performance target gaps, support MIP goals and other factors, and respond to community input.

   Bellevue also extensively partners with private development to address performance target gaps as mitigation for development-related impacts, particularly for those gaps that are immediately adjacent to a development. The MIP Implementation Guide outlines the process to determine whether project concepts are implemented through the TFP or through developer mitigation.

   As stated above, the MIP is also used in conjunction with the development and administration of the city's codes, standards, and regulations, including the Multimodal Concurrency Code (Chapter 14.10 Bellevue City Code [BCC]), Transportation Design Manual requirements, and Transportation Impact Fee Program (chapter 22.16 BCC) to ensure that the performance and capacity of the city's transportation system accommodate anticipated growth. Many of the impacts identified herein are to be expected as the city continues to grow and the transportation network

evolves with that growth. Although this programmatic EIS does not specifically analyze project-level level impacts, it is anticipated that the development of the city's codes, standards, and regulations will continue to be informed by the MIP, and the application of updated codes, standards, and regulations will continue to provide development-specific and project-level mitigation measures in connection with development proposed during the 20-year planning period.

The MIP prioritization framework will guide Bellevue's programmatic approach in this Draft EIS to identify potential mitigations and strategies for capital and operational investments in the transportation network to address performance target gaps (e.g., System Intersection V/C and Primary Vehicle Corridor speed) as well as investments that do not directly address an impact, but provide for more options and transportation capacity to support growth (e.g., continuing to build out the pedestrian and bicycle networks to address performance target gaps in those modes). As noted in the MIP, Bellevue will continue to invest in its multimodal network over time and there will likely be performance target gaps in the future. Some of these gaps are a result of the time it takes to build a complete network, and some gaps (particularly related to System Intersections and Primary Vehicle Corridors) will remain because reducing intersection congestion and increasing vehicle speeds must be balanced against priories including safety, environmental stewardship, land use impacts, etc.

11.6.2 Transportation Demand Management Strategies

Bellevue promotes a variety of transportation demand management (TDM) strategies to encourage travel by carpooling, vanpooling, transit, walking, and biking, as well as to reduce trips by promoting teleworking. These types of measures can contribute to mitigating performance target impacts related to traffic congestion including System Intersection V/C ratios and Primary Vehicle Corridor speed, as well as to state facility LOS, transit travel time ratios, and parking. The degree to which TDM strategies can mitigate traffic congestion impacts depends on the types of strategies and how aggressively they are implemented as well as the context of the impacted location, for example, location, other available mobility options, and magnitude of the impact relative to the performance target.

Bellevue maintains a travel options website, ChooseYourWayBellevue.org, which provides transportation information and resources, such as personalized commute assistance and travel rewards, to the community. TDM activities focus on employers, employees, property managers, residents, students, and visitors to maximize the efficiency of the existing transportation system and limit the effects of traffic on Bellevue neighborhoods. Bellevue published a TDM Plan in 2015 to guide its TDM strategies and implementation through 2023; a new plan will be initiated, in consultation with the Transportation Commission, in late 2023, for the period 2023–2031. Key strategies of the 2015 TDM Plan include:

- Requirement–based programs, including Commute Trip Reduction employer-based programs and Transportation Management Programs for large developments.
- Product subsidies and discounts, including transportation benefit rebates, transportation mini-grants, and emergency ride home.
- Education and assistance, including commute program consulting services, program expert consulting services, real-time and longer term travel information assistance, rideshare and ridematch promotion, and school programs aimed at K–12 students and their parents.
- Incentives and rewards, including trip logging and rewards programs, commute challenges, and parking cashout.
- Marketing and promotions of TDM strategies, the Choose Your Way Bellevue website, carsharing, recognition programs, and email newsletters.
- Research, planning, and internal and external coordination to explore new TDM approaches and program opportunities.

With the upcoming update to the TDM Plan, Bellevue has an opportunity to leverage new transportation investments, such as East Link light rail, to support the community in adopting new travel behaviors that can reduce impacts on the transportation system.

TDM-supportive policies are also outlined in the Comprehensive Plan along with related planning and implementation activities, including the Environmental Stewardship Initiative Strategic Plan 2021–2025, the Transit Master Plan (2014), the Pedestrian and Bicycle Implementation Initiative, the 2009 Pedestrian and Bicycle Transportation Plan, Downtown Transportation Plan, and the Economic Development Plan (2020).

Transportation Management Programs (TMPs) are required by Bellevue City Code (BCC Section 14.60.070) for property owners of large development projects. The programs are designed to encourage tenant employees to reduce commute trips and therefore the resulting vehicle traffic and parking impacts.

In addition to city programs, TransManage, a Transportation Management Association (TMA) operated by the Bellevue Downtown Association, works with property managers, employers, and businesses in the Downtown core and greater Eastside to promote non-drive alone commutes.

At the state level, the Washington State Commute Trip Reduction (CTR) Law, passed in 1991, requires large employers to implement employee commute programs to reduce drive-alone peak-hour commute trips, with the goals of reducing traffic congestion and energy use, and improving air quality. The CTR Law applies to employer worksites with at least 100 employees who begin work between 6 a.m. and 9 a.m. on weekdays. Employers who meet this threshold must develop commute trip reduction plans and work toward meeting their mode share targets through internal programs and monitoring. Affected employers must:

- Designate a transportation coordinator.
- Distribute information about non-drive alone commute options to employees.
- Survey employees every other year to measure VMT and mode choice.
- Implement measures designed to achieve CTR goals adopted by the jurisdiction in which they are located.

The CTR program is currently undergoing a shift in the funding allocation and approach to better meet employer and jurisdictional needs and increase the effectiveness of the program. The changes in the CTR program present an opportunity for Bellevue to reevaluate the city's TDM programs and implement new strategies to improve employer-focused TDM efforts. For instance, both the CTR and TMP programs are currently for large employment sites. Given the levels of growth considered in this EIS, Bellevue could consider adapting previous programs or developing new programs tailored to smaller employers, residential buildings, or trips for non-work purposes, such as recreation or shopping, to reach a broader population and further reduce drive alone travel.

The Land Use–Transportation Connection

While specific transportation projects and services can improve mobility and address performance target gaps, the interconnection between land use and transportation is critical to consider in the context of this EIS. The intensity, mix, and location of land uses have a strong effect on transportation system demand, not only in terms of the number of trips that are generated, but on the mode of travel people choose to take.

This pattern is reflected in both historic data and the modeling performed for this EIS. For example, based on data from the Commute Trip Reduction program, since 1995, drive-alone mode share for commuting trips in Downtown Bellevue has decreased from 67 to 45 percent.

In terms of the EIS modeling, the increasingly intense land development potential of Alternatives 1 through 3, which concentrate development density near frequent transit and areas with robust pedestrian and bicycle infrastructure, also result in higher mode shares for walking, bicycling, and transit.

In general, the land use strategies explored in Alternatives 1 through 3 will reduce reliance on cars and better leverage Bellevue's walking, bicycling, and transit networks, as these modes can move more people in less space and with fewer overall environmental impacts. Therefore, the growth alternatives have inherent transportation benefits compared to the No Action Alternative.

Research by the California Air Pollution Control Officers Association (CAPCOA) has demonstrated that implementation of TDM strategies can measurably reduce vehicle trips, potentially mitigating the Action Alternatives' impacts related to traffic congestion and parking. Additional new or expanded TDM measures could include:

- Encourage or require development to implement specific TDM strategies outside of those already required, such as shuttle programs between different buildings or park-and-ride lots.
- Review the parking minimums and maximums currently in place for possible revisions to help meet or exceed mode-share goals.
- Encourage or require developers to unbundle parking to separate parking costs from the cost of buying or renting a property; prohibit the sale of monthly commercial parking permits (all non-residential parking is priced at a daily rate).

- Expand subsidized transit pass programs, including residential developments.
- Expand trip reduction programs to include new participants such as smaller businesses, multi-family residential properties, or community members at large.
- Improve bicycle and pedestrian facilities, including last-mile connections and end of trip facilities such as bicycle parking.
- Support micromobility programs such as shared micromobility (e.g., bike share, other shared mobility devices).

Expanding TDM programs as described above, combined with Bellevue's planned improvements to the pedestrian and bicycle network and increased density, could further reduce vehicle trips and help mitigate the impacts of the Action Alternatives. Specifically, an analysis of CAPCOA data[3] suggests a vehicle trip reduction range of 5–10 percent for the above TDM programs. This reduction would be in addition to the vehicle trip reductions already gained by Bellevue's existing TDM requirements.

11.6.3 Smart Mobility

In addition to mitigating impacts through expanding capacity and reducing demand on the system, Bellevue continually works to gain more efficiency out of the existing system. Smart Mobility refers to strategies that optimize the existing multimodal transportation system by implementing improvements that support operations, traveler information, mobility services, and maintenance. The integration of technology in support of these areas allows agencies to maximize the performance of existing facilities without adding capacity. Smart Mobility solutions can also improve safety and provide flexibility to address changing conditions, such as traffic congestion. Smart Mobility strategies can prioritize movement of specific modes, including active transportation, transit, and freight. Coordination across agencies and integration of various modes allow the entire system to achieve greater overall performance. Bellevue's 2018 *Smart Mobility Plan* highlights many of the initiatives that have been deployed or are being developed to improve the performance of our multimodal transportation system.

Bellevue's Smart Mobility program is an important tool to mitigate impacts associated with traffic congestion, construction, delivery, and parking through the efficient management of our transportation

[3] https://www.caleemod.com/handbook/full_handbook.html

system. Potential Smart Mobility strategies that Bellevue might consider include:

- In-vehicle information about the presence of vulnerable road users such as people on bicycles and walking and notifications about posted speeds, speed warnings, and activation of rectangular rapid flashing beacons.
- Wayfinding in vehicles and on the roadside to support access to available parking and load zones on both public and private facilities.
- Improved transit signal priority (TSP) that is less reliant on roadside hardware and directly integrated between the city's traffic signal system and Metro's vehicle locating system. This integration will reduce the cost of expansion and improve the reliability of the system.
- Integrate local signal system data with probe-based speed data to evaluate signal system performance to improve travel flow. Also consider operational improvements at traffic signals that support pedestrian safety. This includes expanding the use of "leading pedestrian interval" and using video analytics to extend crossing timings based on real-time crosswalk activity.
- Use video analytics technology to study safety improvements along our High Injury Network.
- Support the advancement of new mobility solutions, such as autonomous and connected technology, that can advance travel options to reduce single occupancy vehicle trips and improve safety and sustainability. Bellevue's 2023 *Autonomous Vehicle Strategic Vision* outlines the next steps in advancing support of this technology.
- Work with regional partners to advance the virtually coordinated management of events and incidents that affect the transportation network regionally.
- Expand roadside equipment health monitoring to improve response to failures and tracking of equipment performance.

Bellevue's Smart Mobility program is well aligned with the MIP framework as it focuses on ways to improve the traveler experience in built-out areas that are physically constrained, where capacity improvements may not be feasible. Bellevue, together with regional partners such as King County Metro, Sound Transit, PSRC, and WSDOT, could coordinate implementation of Smart Mobility strategies to improve the performance of transit, highways, or other regional facilities that may be impacted by the Action Alternatives.

11.6.4 Agency Partnerships

WSDOT, King County Metro, Sound Transit, and PSRC all provide important transportation resources and facilities for the City of Bellevue. Bellevue has a long history of working with these partner agencies to expand multimodal access to and within the city. These partnerships are critical for the continued evolution of the regional multimodal network in Bellevue. For example, mitigating impacts on transit travel time ratios would require close coordination with Bellevue's transit agency partners. Bellevue could do more work with King County Metro and Sound Transit to identify new locations where buses experience delay on city streets and implement additional transit speed and reliability improvements, such as dedicated bus lanes, transit queue jumps, transit signal priority, or bus bulbs.

Bellevue will continue its partnership with WSDOT to monitor conditions on state facilities that connect to and traverse the city. WSDOT Design Manual Chapter 1130.09(2)(a) includes impact thresholds that apply at the individual project level. As the city continues to administer development approvals, staff can work with WSDOT to consider how to best integrate the state highway impact threshold into its development review process.

11.6.5 Parking Strategies

Parking is a complex subject. On one hand, cities work with developers to contain parking demand so that it does not spill out into the surrounding area and impede access to other land uses. On the other hand, extensive research shows that easy, free, and convenient parking makes driving to a destination the first choice by making access by all other modes more difficult and uncomfortable. Providing easy, free, and convenient parking therefore results in more vehicle trips, traffic congestion, and VMT. Therefore, Bellevue strives to:

- Manage the demand and use of public and on-street parking areas (curbspace).
- Ensure an adequate supply of private parking and vehicle access for those who need to drive and park.
- Ensure that supply of private parking does not incentivize driving to the point that it degrades the performance of the overall multimodal system.

CURBSPACE MANAGEMENT

Bellevue is developing a Curb Management Plan to balance the demand for curb uses against available space. The plan will provide a long-range vision for designating, maintaining, and operating curbspace in areas of high demand. The Curb Management Plan is flexible and will evolve over time to help mitigate on-street parking impacts. Specific actions incorporated in the Curb Management Plan include monitoring on-street parking utilization, loading zone utilization and potential changes to allowed curb users, time limits, and paid parking to balance supply and demand. These curb management strategies are particularly relevant in Type 1 and Type 2 PMAs.

The city manages on-street parking on local streets in residential neighborhoods through two types of restrictions: general parking restrictions, which apply to all vehicles; and residential parking zones, which require a permit to park a vehicle. Both types of restrictions are used to regulate parking in neighborhoods that experience spillover parking from destinations such as businesses or schools and require City Council approval as well as majority support from the neighborhood. Such programs could be expanded to include other neighborhoods if parking impacts materialize.

OFF-STREET PARKING

Off-street parking supply will continue to increase in accordance with Bellevue City Code requirements. The Bellevue Land Use Code[4] requires a minimum number of parking spaces per net square foot, depending on the use of the property. Some uses also have a maximum parking limit, although for many uses no maximum is specified. A developer may also be required to provide off-street loading space to serve the site.

Residential uses that are proximate to light rail and other frequent transit network service have lower minimum parking requirements. Downtown Land Use Districts also have lower minimum parking requirements and are more restricted by parking maximums than other areas of Bellevue, in recognition of the high level of transit service and availability of other modes of transportation that reduce the need to travel by vehicle.[5]

[4] https://bellevue.municipal.codes/LUC/20.20.590.
[5] https://bellevue.municipal.codes/LUC/20.25A.080.

To manage the transportation system impacts related to supply of parking and associated vehicle congestion, Bellevue could consider lowering or eliminating minimum parking requirements and reducing the maximum parking requirements, in conjunction with encouraging transit use, walking, and biking. While parking impacts may arise in the short term (parking spilling over into adjacent neighborhoods), the city's curbspace management policies are equipped to limit significant impacts in the long run. The degree to which these strategies can mitigate traffic congestion impacts depends on the types of strategies and how aggressively they are implemented as well as the context of the impacted area, for example, location, other available mobility options, and magnitude of the impact.

11.6.6 Safety Strategies

The City of Bellevue is guided by a commitment to Vision Zero, aligned with the statewide Target Zero plan, which aims to eliminate traffic deaths and serious injury collisions on city streets by 2030. Vision Zero is founded on the Safe Systems approach, which considers the design, infrastructure, and systemic issues behind crashes. Bellevue's Vision Zero Strategic Plan coordinates existing efforts and new ideas, evaluates crash data, considers public concerns, and identifies strategies to reduce traffic fatalities and serious injuries. The program was approved for funding in Bellevue's 2021–2027 and 2023–2029 capital budgets. The city's Annual Action Plans serve as living documents, updated as new data become available. Progress toward Vision Zero goals is tracked through a collision dashboard and biennial progress reports.

Bellevue has implemented a wide range of traffic safety programs in support of its Vision Zero program that could be leveraged to address safety impacts as they arise. Ongoing safety programs include:

- Neighborhood Traffic Safety Services (NTSS) works with residents to improve traffic safety and reduce parking impacts.
- Traffic safety request forms can be filled out online to contact Bellevue with traffic safety concerns or requests.
- The collision reduction program includes annual reviews of crashes on city roadways and identifies potential safety countermeasures available to improve safety.
- Crosswalk and sidewalk programs allow Bellevue residents to request new or improved pedestrian infrastructure.

- School Safety Program includes school zone speed limit signs and School Pool and Walk & Roll to encourage walking and bicycling to school, as well as the Pedbee educational program to teach safe travel tips to children.
- Rapid build data driven safety program funding implements safety countermeasures along High Injury Network (HIN) corridors.
- Road Safety Assessments (RSA), especially around schools, identify safety issues, particularly for pedestrians and bicyclists.
- Leading Pedestrian Intervals give pedestrians a WALK signal to cross a street before the green light for vehicular traffic.
- Slow Zone Pilot tested lower speed limits in a pilot program neighborhood.
- Micromobility regulations expand access to mobility while addressing safety as new modes, such as e-scooters, emerge.
- Vision Zero collision dashboard shows where and what type of collisions have occurred, providing data to understand the problem and develop a solution.
- Video analytics partnerships with private and non-profit organizations identify near-crash conflicts between vehicles, pedestrians, and bicyclists so that Bellevue can proactively identify safety improvements.

These safety programs demonstrate Bellevue's commitment to proactively identify and then take action to resolve potential safety issues as they arise.

11.6.7 Transportation Mitigation Measures

This section outlines specific, programmatic transportation mitigation measures to address the impacts identified in the previous chapters. The mitigation measures have their foundations in the plans, programs, and strategies described previously in this chapter. Mitigation measures are informed by the context of PMAs, which are geographic areas of Bellevue defined in the MIP that have distinct land use patterns, mixes and intensities of development, and transportation options. The PMAs are summarized below:

- **PMA 1: Downtown, Wilburton-East Main, BelRed.** High-density, mixed use areas with planned light rail and other frequent transit network service where walking, biking, and transit are key modes of access.

- **PMA 2: Crossroads, Eastgate, Factoria.** Medium-density, mixed use areas that are served by frequent transit network routes. Walking, biking, and transit are strong mobility options for most parts of Type 2 PMAs.
- **PMA 3: Lower density, predominantly residential areas of Bellevue.** The Type 3 PMA is characterized by single-family and multi-family residential areas with small-scale commercial nodes along arterials. Transit service is available, but there is generally sparse coverage by frequent transit network service. Due to separation of land uses, many walking trips are recreational in nature rather than to access daily needs. There are local bicycle connections to the regional bicycle facilities, commercial areas, and neighboring Type 1 or 2 PMAs.

To successfully accommodate the planned growth included in each of the alternatives and mitigate transportation impacts, Bellevue, in partnership with developers and other agencies, will need to implement a broad spectrum of the improvements and strategies described in this section. Taken together, these mitigation measures will expand the transportation network for walking, biking, and transit; manage traffic congestion; strategically add vehicle capacity; reduce the need to drive to destinations; and improve safety.

Mitigation Measure M-TR-1:
Performance target gaps to transit travel time ratios, System Intersection V/C ratios, Primary Vehicle Corridor speed, safety, and parking in Type 1 PMAs

The analysis indicated performance target gaps for transit travel time ratios, System Intersection V/C ratios, and Primary Vehicle Corridor speed as well as potential less-than-significant impacts on safety, and parking in Type 1 PMAs, including the Wilburton study area. The degree of the potential gap progressively increases for Alternatives 1, 2, and 3. Key mitigation measures Bellevue should consider in Type 1 PMAs include:

- To address transit travel time performance target gaps, Bellevue should continue to partner with King County Metro and Sound Transit. Improvements could include transit-only/HOV lanes on city streets, transit signal priority, and strong coordination to plan for the Link light rail 4 Line between South Kirkland and Issaquah, that will serve BelRed, Wilburton, Downtown, East Main, Factoria, and Eastgate.
- To address performance target gaps for System Intersection V/C ratios and Primary Vehicle Corridor speed, Bellevue should focus primarily on building out the pedestrian and bicycle network to ensure there are multiple mobility options for people to get to their destinations, "exceptional TDM" requirements beyond what is required by Bellevue City Code to further reduce SOV driving demand, Smart Mobility solutions on arterials and state highways, and parking code reforms to eliminate parking minimums near Link light rail stations, and potentially add further maximum parking limits to shift driving from the default mode of travel to a mode of necessity. Roadway or intersection capacity expansion should be a mitigation measure of "last resort" in PMA 1 given the secondary impacts on pedestrian and bicyclist comfort and safety and the very limited available space to expand the roadway network.
- To address safety impacts, Bellevue should continue to implement countermeasures and strategies consistent with its Vision Zero Action Plan and Safe Systems approach, with a particular focus on reducing risks to vulnerable pedestrians and bicyclists. Priority should be placed on improving the safety of people walking or bicycling along the road through closing sidewalk gaps, installing mid-block crossings, providing low-stress bicycle facilities, and reducing crossing distances and creating high-visibility crosswalks at intersections.
- As PMA 1 redevelops with a greater intensity and mix of land uses, on-street parking demand may exceed supply during peak periods, which can be mitigated through Bellevue's existing curbspace programs and with additional interventions identified in the Curb Management Plan.
- Review development projects in conjunction with the MIP and use the MIP to inform the development and administration of the city's codes, standards, regulations, the Multimodal Concurrency Code (Chapter 14.10 BCC), Transportation Design Manual requirements, the TFP, and Transportation Impact Fee Program (Chapter 22.16 BCC). Ensure that codes, standards, and regulations, as well as Transportation Plans and Programs adopted by the city, are administered and adopted to address transportation system impacts and to accommodate actual and anticipated growth throughout the city, including in PMA 1.

Mitigation Measure M-TR-2:
Performance target gaps to transit travel time ratios, System Intersection V/C ratios, Primary Vehicle Corridor speed, safety, and parking in Type 2 PMAs

The analysis indicated performance target gaps for transit travel time ratios, System Intersection V/C ratios, and Primary Vehicle Corridor speed, as well as potential less-than-significant impacts on safety, and parking in PMA 2. The degree of the potential impact increases for Alternatives 1, 2, and 3. Key mitigation measures Bellevue should consider in Type 2 PMAs include:

- To address transit travel time performance target gaps, Bellevue should continue to partner with King County Metro and Sound Transit. Improvements could include transit only/HOV lanes on city streets, transit signal priority, and strong coordination to plan for the Link light rail 4 Line between South Kirkland and Issaquah, that will serve BelRed, Wilburton, Downtown, East Main, Factoria, and Eastgate. Innovative projects like the Bellevue College Connector in Eastgate is a good example of this multi-agency collaboration.
- To address performance target gaps for System Intersection V/C ratios and Primary Vehicle Corridor speed, Bellevue should focus primarily on building out the pedestrian and bicycle network to ensure there are multiple mobility options for people to get to their destinations, and "exceptional TDM" requirements beyond what is required by Bellevue City Code to further reduce SOV driving demand. Smart Mobility solutions for city arterials are of key importance in Type 2 PMAs given busy arterials like Factoria Boulevard and 148th/150th Avenue. Further refinements in traffic signal timing could address Primary Vehicle Corridor performance target gaps even if there are still intersection V/C performance target gaps. Given the close proximity of the Factoria and Eastgate areas to major WSDOT facilities, Smart Mobility solutions on state routes are also important. Vehicle capacity expansions may be warranted in limited and strategic areas if the other project concepts or strategies do not adequately address vehicle performance target gaps. However, any capacity expansion should be weighed against safety and multimodal access impacts.
- To address safety impacts, Bellevue should continue to implement countermeasures and strategies consistent with its Vision Zero Action Plan and Safe Systems approach with a particular focus on reducing risks to vulnerable pedestrians and bicyclists. Managing vehicle speeds on arterials will be a key element of improving safety overall.
- Type 2 PMAs, with less intensity and mix of land uses than in Type 1 PMAs, may experience parking impacts around the fringes and along smaller streets within the PMA. As noted earlier, Bellevue has robust parking and curbspace management programs that can mitigate parking spillover impacts.
- Review development projects in conjunction with the MIP and use the MIP to inform the development and administration of the city's codes, standards, regulations, the Multimodal Concurrency Code (Chapter 14.10 BCC), Transportation Design Manual requirements, the TFP, and Transportation Impact Fee Program (Chapter 22.16 BCC). Ensure that codes, standards, and regulations, as well as Transportation Plans and Programs adopted by the city, are administered and adopted to address transportation system impacts and to accommodate actual and anticipated growth throughout the city, including in PMA 2.

Mitigation Measure M-TR-3:
Performance target gaps to transit travel time ratios, System Intersection V/C ratios, Primary Vehicle Corridor speed, safety, and parking in Type 3 PMA

The analysis indicated performance target gaps for transit travel time ratios, System Intersection V/C ratios, Primary Vehicle Corridor speed, as well as potential less-than-significant impacts on safety, and parking in the Type 3 PMA. The degree of the potential impact increases for Alternatives 1, 2, and 3. Key mitigation measures Bellevue should consider in the Type 3 PMA include:

- Transit travel time performance target gaps affect frequent transit network routes that traverse the Type 3 PMA, but there are no major transit nodes in the PMA. However, Bellevue should continue to work with partner transit agencies to implement strategic transit speed and reliability improvements within the Type 3 PMA to benefit service within the area and to enhance the performance of the overall transit system. Transit riders from the Type 3 PMA can benefit from these improvements both on routes that they are able to access by walking or bicycling, and also from major park-and-ride and transit centers across the city.
- To address performance target gaps for System Intersection V/C ratios and Primary Vehicle Corridor speed, Bellevue should continue to build out the pedestrian and bicycle network per the MIP within the Type 3 PMA as this large area of the city contains performance target gaps. Smart Mobility solutions for city arterials are of major importance for arterials like 148th Avenue and Coal Creek Parkway, for example. Further refinements in traffic signal timing could address primary vehicle corridor performance target gaps even if there are still intersection V/C performance target gaps. Vehicle capacity expansions may be warranted in strategic areas if the other project concepts and strategies do not adequately address vehicle performance target gaps.
- To address safety impacts, Bellevue should continue to implement countermeasures and strategies consistent with its Vision Zero Action Plan and Safe Systems approach with a particular focus on reducing risks to vulnerable pedestrians and bicyclists. Managing vehicle speed on arterials will be a key element of improving safety overall.
- As the city redevelops with a greater intensity and mix of land uses, particularly in Type 1 and Type 2 PMAs, there could be parking impacts on city streets within the Type 3 PMA. The city has robust parking and curbspace programs in place that can mitigate parking impacts.
- Review development projects in conjunction with the MIP and use the MIP to inform the development and administration of the city's codes, standards, regulations, the Multimodal Concurrency Code (Chapter 14.10 BCC), Transportation Design Manual requirements, the TFP, and Transportation Impact Fee Program (Chapter 22.16 BCC). Ensure that codes, standards, and regulations, as well as Transportation Plans and Programs adopted by the city, are administered and adopted to address transportation system impacts and to accommodate actual and anticipated growth throughout the city, including in PMA 3.

Mitigation Measure M-TR-4: Impacts on state facility LOS

The analysis indicated state facility LOS impacts from each of the alternatives. The degree of the potential impact increases for Alternatives 1, 2, and 3. Key mitigation measures Bellevue should consider include:

- To address impacts on state facility LOS, Bellevue should continue to coordinate and partner with WSDOT on state transportation investments to improve regional mobility. Specific examples could be continued collaboration on implementing elements of the I-405 Master Plan, including the South Downtown I-405 Access Study. Bellevue and WSDOT have a long history of implementing improvements to state routes through the city. Bellevue can also facilitate the implementation of Smart Mobility strategies on state facilities through sharing of travel data and using Bellevue's communications channels to communication information to travelers. Smart Mobility on state facilities is an important strategy to moving more people and addressing regional travel needs.
- "Exceptional TDM" requirements beyond what is required by Bellevue City Code to further reduce SOV driving demand, which will reduce overall traffic demand on state facilities. Similarly, considering parking code reforms to eliminate parking minimums near Link light rail stations and potentially add further maximum parking limits to shift driving from the default mode of travel to a mode of necessity would benefit state facilities.

11.7 Significant and Unavoidable Adverse Impacts on Transportation

This section identifies whether any significant and unavoidable adverse impacts on transportation would occur under the Action Alternatives. All Action Alternatives are expected to have significant impacts on System Intersection V/C, Primary Vehicle Corridor travel speed, and state facilities (with other potential impacts expected to be at a less than significant level).

With implementation of the mitigation measure approach outlined by PMA in the previous section, it is expected that Bellevue could manage some of those impacts over the course of the decades it would take to reach full build-out. As development occurs, Bellevue will determine the capital and programmatic improvements best suited to address the conditions that materialize. Capital projects will be identified in the Transportation Facilities Plan, a fiscally constrained plan prioritizing project needs over the subsequent 12-year period; the Transportation Facilities Plan is updated every two to three years. In addition, the city will continue to use the MIP when developing and administering the city's policies, codes, standards, regulations, and plans.

While incremental improvements in performance to some impacted facilities could be achieved, it is expected that some of the significant impacts on System Intersection V/C, Primary Vehicle Corridor travel speed, and state facilities would remain.

CHAPTER 12 Cumulative Impacts

12.1 Introduction

The State Environmental Policy Act (SEPA) directs lead agencies to consider the direct, indirect, and cumulative impacts of proposed actions. Direct and indirect impacts are described in the preceding chapters. Requirements for cumulative impact analysis are described below.

12.2 Regulatory Context

"Cumulative impact" is not defined in the SEPA Rules, but it is defined under federal rules implementing the National Environmental Policy Act (NEPA). "Cumulative impact" is defined in the Council on Environmental Quality (CEQ) Regulations as the "*impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions*" (40 CFR Part 1508). This chapter considers the effects of the Comprehensive Plan Periodic Update and Wilburton Vision Implementation when considered with other proposed actions or projects within the potentially affected area.

Washington courts have limited the requirement for cumulative impact analysis under SEPA, stating that an analysis of the cumulative impacts of a proposed project is not required under SEPA unless: (1) there is some evidence that the project will facilitate future action that will result in additional impacts, or (2) the project is dependent on subsequent proposed development. A project's cumulative

impacts that are merely speculative need not be considered (*Boehm v. City of Vancouver*, 111 Wn. App. 711(2002) – Cumulative impacts).

12.3 Cumulative Impact Evaluation

The City of Bellevue Comprehensive Plan Periodic Update and Wilburton Vision Implementation Environmental Impact Statement falls under the category of (1) there is some evidence that the project will facilitate future action that will result in additional impacts. As required by the Growth Management Act, it is anticipated that any changes to codes, standards, or regulations that follow in the wake of this non-project action will be consistent with the Grown Alternatives and policy changes evaluated in this Draft EIS. Potential future actions are speculative at this point. Therefore, cumulative impacts cannot be evaluated for this non-project action.

In addition, there are no current or existing projects that are functionally related or interconnected to this project (i.e., one could proceed without the other). Future projects would be required to conduct separate, project-specific environmental review, as appropriate. Mitigation measures for each project would also decrease the potential for cumulative impacts.

Finally, the environmental review contained in this Draft EIS takes a conservative approach by assuming growth to "build-out" capacity under the No Action Alternative and under each of the Action Alternatives. It is not expected that this level of growth would all occur by 2044, but the EIS nonetheless assumes this growth when evaluating potential environmental impacts associated with the Alternatives. In addition, the EIS also includes land use assumptions for the rest of the region, based on Puget Sound Regional Council (PSRC) growth targets, where applicable and reasonably foreseeable. Any cumulative impacts associated with additional regional growth, citywide growth, or growth anticipated by Wilburton Vision Implementation beyond that evaluated in this EIS is merely speculative and need not be considered as part of this programmatic environmental review.

CHAPTER 13 Distribution List

TRIBES

- The Duwamish Tribe
- The Muckleshoot Indian Tribe
- The Puyallup Tribe of Indians
- The Snoqualmie Indian Tribe
- Squaxin Island Tribe
- Stillaguamish Tribe of Indians
- The Suquamish Tribe
- The Tulalip Tribes

FEDERAL

- U.S. Army Corps of Engineers
- U.S. Dept. of Housing and Urban Development
- U.S. Dept. of Transportation-Federal Highway Administration
- U.S. Environmental Protection Agency-Region 10

STATE

- WA State Dept. of Agriculture
- WA State Dept. of Archaeology and Historic Preservation
- WA State Dept. of Commerce
- WA State Dept. of Ecology
- WA State Dept. of Fish and Wildlife
- WA State Dept. of Health
- WA State Dept. of Natural Resources
- WA State Dept. of Social and Health Services
- WA State Dept. of Transportation
- WA State Dept. of Transportation-NW Region

- WA State Parks and Recreation Commission
- WA State Recreation Conservation Office

REGIONAL

- Puget Sound Clean Air Agency
- Puget Sound Partnership
- Puget Sound Regional Council
- Sound Transit

OTHER MUNICIPALITIES

- City of Clyde Hill
- City of Issaquah
- City of Kirkland
- City of Medina
- City of Mercer Island
- City of Newcastle
- City of Redmond
- City of Renton
- King County Boundary Review Board
- King County Dept. of Permitting and Environmental Review
- King County Road Services
- King County Historic Preservation Program
- King County Metro Transit Environmental Planning
- King County Natural Resources and Parks
- Office of the King County Executive

SERVICE PROVIDERS, SCHOOLS, UTILITIES, FRANCHISE SERVICES

- Bellevue College
- Bellevue School District No. 405
- Cascade Water Alliance
- Comcast
- Issaquah School District
- Lake Washington School District
- Renton School District

INDIVIDUALS

- M. Adams
- J. Altman
- L. Bachman
- R. Bannecker
- C. Bauman
- R. Bennett
- E. Bolles
- B. Braun
- C. Buchanan
- D. Burg
- B. Carey
- S. Cobert
- D. Curran
- H. Dean

- R. Dearth
- J. Doyle
- D. Dubofsky
- Ca. Dugoni
- Cr. Dugoni
- J. Dugoni
- D. Duitch
- J. Duntz
- L. Edson
- I. Ensing
- K. Ferris
- B. Finkbeiner
- H. Finkbeiner
- G. Floss
- M. Foltz
- D. Goodwin
- B. Hansen
- E. Hansen
- K. Helwgren
- M. Hui
- B. Hummer
- C. Klansnic
- A. Lachini
- R. Lipscomb
- D. Mahon
- J. Marshall
- D. Mathews
- O. Mawjee
- F. Miller
- V. Miller
- M. Mostov
- C. Munson
- M. Nash
- M. Niemann
- A. Olsen
- Ga. Olsen
- Gl. Olsen
- L. Olsen
- C. Olson
- B. Parker
- K. Paulich
- D. Plummer
- C. Randels
- J. Rasmussen
- H. Ressler
- A. Rittenhouse
- C. Roeter
- D. Roeter
- R. Roeter
- J. Roskill
- K. Sayers
- W. Scott
- E. Segat
- G. Sferra
- L. Sferra
- T. Siegel
- K. Singh
- D. Thompson
- J. Totis
- L. Ulrich
- J. Van Duzor
- T. Wahl
- R. Wallace
- C. Wang
- P. White
- M. Wickens
- T. Woosley
- D. Wright
- J. Wu

ORGANIZATIONS

- Alexandria Real Estate Equities, Inc.
- Amazon
- American Capital Group
- Bellevue Chamber Planning, Land Use, Sustainability and Housing (PLUSH) Committee
- Bellevue Downtown Association
- Berg Holdings
- Blu Compass, LLC
- BRIDGE Housing
- Cairn Cross & Hempelmann on Behalf of R. White
- Careage and Mission Healthcare Investments, LLC
- Coast Hospitality, LLC
- Compton Design Office
- Davis Investors and Management, LLC
- Ditty Properties
- Eastridge Properties, LLC
- EGBW38R Owner, LLC
- Essex Property Trust, Inc.
- Ferris Advisors
- Futurewise
- GIS Companies
- Habitat for Humanity of Seattle-King & Kittitas Counties
- Hal Woosley Properties, Inc.
- Henbart, LLC and Gorlick Properties
- Housing Development Consortium of Seattle-King County
- KG Investment Properties
- KTB Properties
- Lee & Associates
- Master Builder Association of King and Snohomish Counties
- McCullough Hill Leary on Behalf of KG Investment Properties & Continental Properties
- Microsoft
- Montvue Place, LLC
- MRM Capital
- N124 Holdings, LLC
- NAIOP Washington State
- Overlake Medical Center
- Pacific Oak Capital Advisors on Behalf of KORE Bellevue Technology Center, Inc.
- Parkay Investments
- PMF Capital Management, LLC
- Public Health-Seattle & King County
- Puget Sound Energy
- RCJ Properties, LLC
- Scarff Law Firm
- Sterling Realty Organization
- Tharsis Law on Behalf of Beta-Bellevue Auto Center, LLC
- The Bellevue Collection
- Touchstone, LLC
- Urban Renaissance Group
- Wallace Properties, Inc.
- Wig Properties, LLC
- Wright Runstad & Company
- WTM Property Owner, LLC

CHAPTER 14 References

14.1 Chapter 1 Summary

City of Bellevue. 2018a. Wilburton Commercial Area Land Use and Transportation Project Draft Environmental Impact Statement. Accessed March 2023. https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/wilburton.

City of Bellevue. 2018b. Wilburton Commercial Area Study. Prepared by NBBJ. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/WCA%20Report%20Final%20Published%20Version%20with%20Errata.pdf.

City of Bellevue. 2020. Vision Zero Strategic Plan. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2021/vision-zero-strategic-plan-120120.pdf.

City of Bellevue. 2021. Bellevue City Council 2021-2023 Vision & Priorities. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2021/Council-Vision-Priorities-2021.pdf.

City of Bellevue. 2022a. Comprehensive Plan Periodic Update Scope of Work Summary. Accessed March 2023. https://bellevue.legistar.com/View.ashx?M=F&ID=10549908&GUID=BDA37AF2-CF3E-4645-AD6A-E5AE80173C42.

City of Bellevue. 2022b. Mobility Implementation Plan. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/Bellevue_MIP_Vol1%262_8.1.22.pdf.

City of Bellevue. 2022c. 2022-2033 Transportation Facilities Plan. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/City%20of%20Bellevue%202022-2033%20Transportation%20Facilities%20Plan_0.pdf .

City of Bellevue. 2023a. Bellevue 2044 Environmental Review. Accessed March 2023. https://bellevuewa.gov/2044-environmental-review.

City of Bellevue. 2023b. Curb Management Plan. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2023/Bellevue_CMP.pdf.

City of Bellevue Transportation Department. 2021. South Downtown I-405 Access Study Report. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2021/South%20Downtown%20Access%20Study%20Final%20report%20July2021.pdf.

Community Attributes Inc. 2022. City of Bellevue Housing Needs Assessment. Prepared for City of Bellevue. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/Bellevue%202022%20HNA%20Report.pdf.

King County. 2021a. Countywide Planning Policies. Prepared by King County, Seattle, WA. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/CPPs/2021_CPPs-Adopted_and_Ratified.ashx?la=en.

King County. 2021b. King County Urban Growth Capacity Report. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/UGC/KC-UGC-Final-Report-2021-Ratified.ashx?la=en.

PSRC (Puget Sound Regional Council). 2020. VISION 2050. Prepared by Puget Sound Regional Council, Seattle, WA. Accessed March 2023. https://www.psrc.org/sites/default/files/2022-11/vision-2050-plan.pdf.

WSDOT (Washington State Department of Transportation). 2002. I-405 Corridor Program Final Recommendation Report. Accessed April 2023. https://wsdot.wa.gov/sites/default/files/2021-11/I405RecommendationReport2002.pdf.

14.2 Chapter 2 Alternatives

City of Bellevue. 2015. Wilburton/Grand Connection Project Draft Council Principles. Accessed March 2023. https://bellevue.legistar.com/View.ashx?M=F&ID=4159805&GUID=BE3E959B-D8A4-4A73-BA35-201A221C60EC.

City of Bellevue. 2016. Wilburton Commercial Area Existing Conditions Report. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/Wilburton_ExistingConditions.pdf.

City of Bellevue. 2018. Wilburton Commercial Area Land Use and Transportation Project Draft Environmental Impact Statement. Accessed March 2023. https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/wilburton.

City of Bellevue. 2020. Economic Development Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/sites/default/files/media/pdf_document/2020/Bellevue%20Economic%20Development%20Plan%20%28Full%20File%2C%20Adopted%2011-2-2020%29.pdf.

City of Bellevue. 2023a. Scoping Comment Summary-Final. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2023/Bellevue_CompPlanEIS_ScopingSummary_FINAL.pdf.

City of Bellevue. 2023b. Scoping Comment Summary Attachments. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2023/Scoping%20Attachments%20FINAL_0.pdf.

King County. 2021a. Countywide Planning Policies. Prepared by King County, Seattle, WA. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/CPPs/2021_CPPs-Adopted_and_Ratified.ashx?la=en.

King County. 2021b. King County Urban Growth Capacity Report. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/UGC/KC-UGC-Final-Report-2021-Ratified.ashx?la=en.

PSRC (Puget Sound Regional Council). 2019. VISION 2050 Draft Supplemental Environmental Impact Statement. Accessed March 2023. https://www.psrc.org/sites/default/files/2022-02/v2050-draft-seis.pdf.

PSRC (Puget Sound Regional Council). 2020a. VISION 2050. Prepared by Puget Sound Regional Council, Seattle, WA. Accessed March 2023. https://www.psrc.org/sites/default/files/2022-11/vision-2050-plan.pdf.

PSRC (Puget Sound Regional Council). 2020b. VISION 2050 Final Supplemental Environmental Impact Statement. Accessed March 2023. https://www.psrc.org/sites/default/files/2022-02/v2050finalseis-march2020.pdf.

14.3 Chapter 3 Land Use

City of Bellevue. Bellevue Map Viewer powered by ESRI. Accessed March 2023. https://bellevuewa.gov/city-government/departments/ITD/services/maps.

City of Bellevue. Critical Area Handbook: Restoring, Enhancing, and Preserving. Prepared by the Watershed Company. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/ca_handbook.pdf.

City of Bellevue. 2015a. Bel-Red Subarea Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/SP01.BelRed2010.pdf.

City of Bellevue. 2015b. Bellevue Comprehensive Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan.

City of Bellevue. 2015c. Downtown Subarea Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/SP04.DowntownPlan_2015.pdf.

City of Bellevue. 2015d. Eastgate Subarea Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/SP05.Eastgate_2015.pdf.

City of Bellevue. 2018. Shoreline Master Program. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/file/2019-07/SMP%202018%200312no%20heron%20boat.indd_.pdf.

City of Bellevue. 2022. Downtown Subarea Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/Downtown%202022.pdf.

City of Bellevue. 2023. Comprehensive Land Use Plan Map. Accessed March 2023. https://apps.bellevuewa.gov/gisdownload/PDF/Planning/complan2str_b_11x17.pdf.

CoStar. 2023a. Triple net rent. Accessed March 2023 through CoStar Database.

CoStar. 2023b. Total Vacancy Rates, Q1 2006-Q1 2023 YTD. Accessed March 2023 through CoStar Database.

Federal Reserve. 2013. The Great Recession. Written by Robert Rich, Federal Reserve Bank of Cleveland. Accessed March 2023. https://www.federalreservehistory.org/essays/great-recession-of-200709.

King County. 2018. King County Parcel Viewer. Accessed March 2023. https://gismaps.kingcounty.gov/parcelviewer2/.

King County. 2021a. Countywide Planning Policies. Prepared by King County, Seattle, WA. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/CPPs/2021_CPPs-Adopted_and_Ratified.ashx?la=en.

King County. 2021b. King County Urban Growth Capacity Report. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/UGC/KC-UGC-Final-Report-2021-Ratified.ashx?la=en.

King County Assessor's Office. 2021. Localscape: Putting King County in Focus. Powered by Spatialist. Accessed March 2023. https://localscape.property/#kingcountyassessor/.

PSRC (Puget Sound Regional Council). 2020. VISION 2050. Prepared by Puget Sound Regional Council, Seattle, WA. Accessed March 2023. https://www.psrc.org/sites/default/files/2022-11/vision-2050-plan.pdf.

PSRC (Puget Sound Regional Council). 2020. VISION 2050 Multicounty Planning Policies. Accessed March 2023. https://www.psrc.org/sites/default/files/2022-02/vision-2050-mpps.pdf.

USGBC (U.S. Green Building Council). 2023. LEED Appendix 1. Use Types and Categories. Accessed March 2023. https://www.usgbc.org/credits/new-construction-existing-buildings-commercial-interiors-core-and-shell-schools-new-constr-2.

USGBC (U.S. Green Building Council). 2023. LEED Surrounding Density and Diverse Uses. Accessed March 2023. https://www.usgbc.org/credits/core-shell/v2012/ltc4.

14.4 Chapter 4 Plans and Policies

City of Bellevue. 2014. Bellevue Transit Master Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/TMP-Bellevue-Transit-Master-Plan-2014.pdf.

City of Bellevue. 2015a. Bel-Red Subarea Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/SP01.BelRed2010.pdf.

City of Bellevue. 2015b. Bellevue Comprehensive Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan.

City of Bellevue. 2015c. Bellevue Storm and Surface Water System Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/Storm%20and%20Surface%20Water%20System%20Plan%20Table%20of%20Contents.pdf.

City of Bellevue. 2018. Shoreline Master Program. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/file/2019-07/SMP%202018%200312no%20heron%20boat.indd_.pdf.

City of Bellevue, 2020a. 2021-2027 Capital Investment Program Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2021/CIP%20%202021-2022%20Adopted%20Budget.pdf.

City of Bellevue. 2020b. Economic Development Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/sites/default/files/media/pdf_document/2020/Bellevue%20Economic%20Development%20Plan%20%28Full%20File%2C%20Adopted%2011-2-2020%29.pdf.

City of Bellevue. 2021. Wilburton/NE 8th Street Subarea Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/SP14.WilburtonNE8th_2022_0104.pdf.

King County. 2021a. Countywide Planning Policies. Prepared by King County, Seattle, WA. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/CPPs/2021_CPPs-Adopted_and_Ratified.ashx?la=en.

King County. 2021b. King County Urban Growth Capacity Report. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/UGC/KC-UGC-Final-Report-2021-Ratified.ashx?la=en.

PSRC (Puget Sound Regional Council). 2020. VISION 2050. Prepared by Puget Sound Regional Council, Seattle, WA. Access March 2023. https://www.psrc.org/sites/default/files/2022-11/vision-2050-plan.pdf.

14.5 Chapter 5 Population and Employment

ACS (American Community Survey). 2021a. 5-year Estimates: Age and Language (Table S0601). Accessed March 2023. https://data.census.gov/.

ACS (American Community Survey). 2021b. 5-year Estimates: Household Size (Table S1101). Accessed March 2023. https://data.census.gov/.

ACS (American Community Survey). 2021c. 5-year Estimates: Income (Table S1901). Accessed March 2023. https://data.census.gov/.

ACS (American Community Survey). 2021d. 5-year Estimates: Tenure and Household Size (Table DP04). Accessed March 2023. https://data.census.gov/.

ACS (American Community Survey). 2021e. 5-year Estimates: Occupancy (Table B25002). Accessed March 2023. https://data.census.gov/.

Census (U.S. Census Bureau). 2020. DEC Redistricting Data: Hispanic or Latino, and Not Hispanic or Latino By Race (Table P2). Accessed March 2023. https://data.census.gov/.

City of Bellevue. 2015. Bellevue Comprehensive Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan.

City of Bellevue. 2020. Economic Development Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/sites/default/files/media/pdf_document/2020/Bellevue%20Economic%20Development%20Plan%20%28Full%20File%2C%20Adopted%2011-2-2020%29.pdf.

City of Bellevue. 2023. Air Quality and Land Use Planning: A Review of the Literature on High-Volume Roadways, Health Effects, and Mitigation Strategies. Prepared by the City of Bellevue and Broadview Planning.

EPA (U.S. Environmental Protection Agency). 2021. EJScreen. Accessed March 2023. https://ejscreen.epa.gov/mapper/.

ESRI. 2022. Esri Community Profile: Wilburton Study Area. Accessed through Esri Business Analyst.

King County. 2021. Countywide Planning Policies. Prepared by King County, Seattle, WA. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/CPPs/2021_CPPs-Adopted_and_Ratified.ashx?la=en.

OFM (Washington Office of Financial Management). 2022. April 1 Population Estimates. Accessed March 2022. ofm.wa.gov/washington-data-research/population-demographics/population-estimates/april-1-official-population-estimates.

14.6 Chapter 6 Aesthetics

City of Bellevue. 2015. Bellevue Comprehensive Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan.

City of Bellevue. 2021. Wilburton/NE 8th Street Subarea Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/SP14.WilburtonNE8th_2022_0104.pdf.

City of Bellevue. 2022. Preliminary Community Engagement Report Phase 1- Spring 2022 Report for the 2024 Comprehensive Plan Periodic Update. Accessed March 2023. https://s3-us-west-1.amazonaws.com/ehq-production-us-california/5de63dccb332c82b97dd619af7e45a20d0752568/original/1668103946/6d6799ccfb353194c05e6a8e3bb2d8c9_Bellevue_2044_-_Phase_1_Community_Engagement_Report.pdf.

City of Bellevue. 2023. Photos of Bellevue buildings. Provided by City of Bellevue Staff and ESA.

14.7 Chapter 7 Housing

ARCH (A Regional Coalition for Housing). 2023. Housing Trust Fund. Accessed March 2023. https://www.archhousing.org/housing-trust-fund.

Census (U.S. Census Bureau). 2022. Data Releases. Accessed March 2023. https://www.census.gov/programs-surveys/acs/news/data-releases.html.

City of Bellevue. 2015. Bellevue Comprehensive Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan.

City of Bellevue. 2017. City of Bellevue Affordable Housing Strategy. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/FINAL_Bellevue%20Affordable%20Housing%20Strategy_withres.pdf.

City of Bellevue. 2020. Economic Development Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/sites/default/files/media/pdf_document/2020/Bellevue%20Economic%20Development%20Plan%20%28Full%20File%2C%20Adopted%2011-2-2020%29.pdf.

Community Attributes Inc. 2022. City of Bellevue Housing Needs Assessment. Prepared for City of Bellevue. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/Bellevue%202022%20HNA%20Report.pdf.

HUD (U.S. Department of Housing & Urban Development Office of Policy Development and Research). CHAS: Background. Accessed March 2023. https://www.huduser.gov/portal/datasets/cp/CHAS/bg_chas.html.

HUD (U.S. Department of Housing & Urban Development Office of Policy Development and Research). 2022a. Consolidated Planning/CHAS Data 2015-2019. Accessed March 2023. https://www.huduser.gov/portal/datasets/cp.html.

HUD (U.S. Department of Housing & Urban Development Office of Policy Development and Research). 2022b. Income Limits. Accessed March 2023. https://www.huduser.gov/portal/datasets/il.html.

King County. 2018. King County Parcel Viewer. Accessed March 2023. https://gismaps.kingcounty.gov/parcelviewer2/.

King County. 2021a. Countywide Planning Policies. Prepared by King County, Seattle, WA. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/CPPs/2021_CPPs-Adopted_and_Ratified.ashx?la=en.

King County. 2021b. King County Urban Growth Capacity Report. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/UGC/KC-UGC-Final-Report-2021-Ratified.ashx?la=en.

King County Assessor's Office. 2021. Localscape: Putting King County in Focus. Powered by Spatialist. Accessed March 2023. https://localscape.property/#kingcountyassessor/.

MRSC (Municipal Research and Services Center of Washington). 2021. "Changing Your Zoning Code to Accommodate Housing and Shelters for the Homeless". Accessed March 2023. https://mrsc.org/stay-informed/mrsc-insight/june-2021/changing-your-zoning-code-for-homeless-housing.

PSRC (Puget Sound Regional Council). 2020. VISION 2050 Multicounty Planning Policies. Accessed March 2023. https://www.psrc.org/sites/default/files/2022-02/vision-2050-mpps.pdf.

PSRC (Puget Sound Regional Council) 2023. Displacement Risk Mapping. Accessed March 2023. https://www.psrc.org/our-work/displacement-risk-mapping.

Regional Affordable Housing Task Force. 2019. Final Report and Recommendations for King County, WA. Accessed March 2023. https://kingcounty.gov/~/media/initiatives/affordablehousing/documents/report/RAH_Report_Print_File_Updated_10,-d-,28,-d-,19.ashx?la=en.

Zillow. 2023. Zillow Home Value Index Tool. Accessed February 2022. https://www.zillow.com/home-values/102001/united-states/.

14.8 Chapter 8 Air Quality

City of Bellevue. 2020. Environmental Stewardship Plan 2021-2025. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2020/Bellevue%20Enviornmental%20Stewardship%20Plan_Adopted.pdf.

City of Bellevue. 2021. City of Bellevue Environmental Performance Dashboard. https://cobgis.maps.arcgis.com/apps/MapSeries/index.html?appid=be30baa631864324bd2119db1b48514e.

City of Bellevue. 2023. Air Quality and Land Use Planning: A Review of the Literature on High-Volume Roadways, Health Effects, and Mitigation Strategies. Prepared by the City of Bellevue and Broadview Planning.

Ecology (Washington State Department of Ecology). 2022. Washington State Greenhouse Gas Emissions Inventory: 1990-2019 Publication 22-02-054. Accessed March 2023. https://apps.ecology.wa.gov/publications/documents/2202054.pdf.

Ecology (Washington Department of Ecology). 2023. Tracking Greenhouse Gasses. Accessed March 2023. https://ecology.wa.gov/Air-Climate/Reducing-Greenhouse-Gas-Emissions/Tracking-greenhouse-gases.

EPA (U.S. Environmental Protection Agency). 2022a. Our Nation's Air Flyer. Accessed March 2023. https://gispub.epa.gov/air/trendsreport/2022/documentation/AirTrends_Flyer.pdf.

EPA (U.S. Environmental Protection Agency). 2022b. Our Nation's Air: Trends through 2021. Accessed March 2023. https://gispub.epa.gov/air/trendsreport/2022/#home.

Federal Register. Volume 61, No. 113, Tuesday June 11, 1996, page 29515. Accessed March 2023. https://www.govinfo.gov/content/pkg/FR-1996-06-11/pdf/96-14679.pdf#page=1.

King County. 2021. 2020 King County Strategic Climate Action Plan. Accessed March 2023. https://your.kingcounty.gov/dnrp/climate/documents/scap-2020-approved/2020-scap-reducing-ghg-emissions-section.pdf.

King County. 2022a. King County Communitywide Geographic Greenhouse Gas Emissions- Puget Sound Regional Emissions Analysis. Produced by Cascadia Consulting Group. Accessed March 2023. https://your.kingcounty.gov/dnrp/climate/documents/2022/king-county-geographic-ghg-emissions-inventory-and-wedge-report-09-2022.pdf.

King County. 2022b. Geographic GHG Emissions Inventory Database. Accessed March 2023. PowerBI database accessible at https://kc1.sharepoint.com/:u:/t/DNRPa/EZ7hxHhEx2FLpuRtRAVbwB4BSDLkeOrqlQMgvMyy1xd-wQ?e=7gu1uL.

PSCAA (Puget Sound Clean Air Agency). 2014. Highly Impacted Communities. Written by Tania Tam Park, et. al. Accessed March 2023. https://pscleanair.gov/DocumentCenter/View/2323/Highly-Impacted-Communities-HI-C-ReportPDF?bidId=.

PSCAA (Puget Sound Clean Air Agency). 2022. 2021 Air Quality Data Summary. Accessed March 2023. https://pscleanair.gov/DocumentCenter/View/4828/Air-Quality-Data-Summary-2021-PDF?bidId=.

PSRC (Puget Sound Regional Council). 2020. VISION 2050. Prepared by Puget Sound Regional Council, Seattle, WA. Accessed March 2023. https://www.psrc.org/sites/default/files/2022-11/vision-2050-plan.pdf.

PSRC (Puget Sound Regional Council). 2022. 2022-2050 Regional Transportation Plan. Accessed March 2023. https://www.psrc.org/media/5934.

WSDOT (Washington State Department of Transportation). 2022. Environmental Manual M 31-11.26. Accessed March 2023. https://www.wsdot.wa.gov/publications/manuals/fulltext/M31-11/em.pdf.

14.9 Chapter 9 Noise

FHWA (Federal Highway Administration). 2023. FHWA Noise Barrier Handbook. Accessed March 2023. https://www.fhwa.dot.gov/Environment/noise/noise_barriers/design_construction/design/design00.cfm.

Seltenrich, Nate, 2017. Inequality of Noise Exposures: A Portrait of the United States, Environmental Health Perspectives, September. Accessed April 2023: https://ehp.niehs.nih.gov/doi/10.1289/ehp2471.

HUD (United State Department of Housing and Urban Development). 2009. The Noise Guidebook. Accessed April 2023: https://www.hudexchange.info/resource/313/hud-noise-guidebook/.

WSDOT (Washington State Department of Transportation). 2020. 2020 Traffic Noise Policy and Procedures. Accessed March 2023. https://wsdot.wa.gov/sites/default/files/2021-10/ENV-ANE-NoisePolicy2020.pdf.

WSDOT (Washington State Department of Transportation). 2022. Environmental Manual M 31011.26, Chapter 446 Noise. Accessed March 2023. https://wsdot.wa.gov/publications/manuals/fulltext/M31-11/446.pdf.

14.10 Chapter 10 Public Services and Utilities

Bellevue Fire Department. 2012. Standards of Response Coverage. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/Standards%20of%20Coverage.pdf.

Bellevue Fire Department. 2021. 2021 Annual Report. Accessed March 2023. https://bellevuefirefoundation.org/wp-content/uploads/2022/06/BFD_2021_Annual_Report.pdf.

Bellevue Fire Department. 2022. "Fire Station 10". Accessed March 2023. https://bellevuewa.gov/city-government/departments/fire/about/fire-stations/fire-station-10.

Bellevue Fire Department. 2023. "Emergency Medical Services". Accessed March 2023. https://bellevuewa.gov/city-government/departments/fire/medical.

Bellevue Parks & Community Services. 2016. Bellevue Parks & Open Space System Plan 2016. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/parks-open-space-plan-2016.pdf.

Bellevue Police Department. 2021. 2021 Report to the Community. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/BPD-22-7131-2021%20Police%20Annual%20Report-WEB.pdf.

Bellevue Police Department. 2023. "About Police". Accessed March 2023. https://bellevuewa.gov/city-government/departments/police/about-police.

Bellevue School District. 2023. Planning for the Future: School Consolidation. Accessed March 2023. https://go.boarddocs.com/wa/bsd405/Board.nsf/files/CNW2UL03E3E8/$file/Planning%20for%20the%20Future%20Board%20Report.pdf.

Bellevue Utilities Department. 2014. Wastewater System Plan. Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/utilities-plans-and-reports/wastewater-system-plan.

Bellevue Utilities Department. 2016. Water System Plan. Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/utilities-plans-and-reports/water-system-plan.

Bellevue Utilities Department. 2022. 2023-2029 Capital Investment Program Plan (CIP) Sewer Fund Proposed Budget by Program. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/ESC%20SEWER%20CIP%20Updates%202023-2029%20Budget%20by%20Program.pdf.

Bellevue Utilities Department. 2023a. "Bellevue Water System & Leak Management". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/manage-your-utility-services/water/bellevue-water-system-leak.

Bellevue Utilities Department. 2023b. "Sewer Capital Investment Projects". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/capital-projects/sewer-capital-investment-projects.

Bellevue Utilities Department. 2023c. "Recycle Right". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/manage-your-utility-services/solid-waste/recycle-right.

Bellevue Utilities Department. 2023d. "Sewer". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/manage-your-utility-services/sewer.

Bellevue Utilities Department. 2023e. "Smart Water Meters FAQ". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/manage-your-utility-services/water/smart-water-meters/smart.

Bellevue Utilities Department. 2023f. "Water". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/manage-your-utility-services/water.

Bellevue Utilities Department. 2023g. "Water Capital Investment Projects". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/capital-projects/water-capital-investment-projects.

Bellevue Utilities Department. 2023h. "Water Source". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/manage-your-utility-services/water/water-source.

Bellevue Utilities Department. 2023i. "Watershed Management Plan". Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/capital-projects/watershed-management.

City of Bellevue. 2014. Septic Sites Map. Produced March 12, 2014.

City of Bellevue. 2015. Neighborhood Fire Stations Map. Produced October 13, 2015.

City of Bellevue. 2016a. Parks & Open Space System Map. Produced September 29, 2016.

City of Bellevue. 2016b. The City of Bellevue Storm and Surface Water System Plan. Accessed March 2023. https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/utilities-plans-and-reports/storm-and-surface-water-system-plan.

Issaquah School District. 2022. 2022 Capital Facilities Plan. Accessed March 2023. https://resources.finalsite.net/images/v1654891626/issaquah/vkxwzlizyzde8uelyizv/FINALISD2022CapitalFacilitiesPlan-BoardApproved.pdf.

King County. 2017. Amended and Restated Solid Waste Interlocal Agreement. Accessed March 2023. https://kingcounty.gov/~/media/depts/dnrp/solid-waste/about/documents/ILA-Bellevue-SWD-2017.ashx?la=en.

Lake Washington School District. 2022. 2020-21 Annual Report. Accessed March 2023. https://www.lwsd.org/about-us/annual-report/2020-21-annual-report.

Lake Washington School District. 2023. October 1, 2022, Enrollment Report. Accessed March 2023. https://www.lwsd.org/about-us/enrollment-report.

PSE (Puget Sound Energy). 2021. 2021 Service Quality Report. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/2021%20Service%20Quality%20Report%20Card.pdf.

PSE (Puget Sound Energy). 2022. Memo to Thara Johnson Re: 2021 Electric Service Reliability Report. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/Bellevue%20Reliability%20Report%20%282021%29.pdf.

PSE (Puget Sound Energy). 2023a. “Pay Station Locations”. Accessed March 2023. https://www.pse.com/en/pay-stations-map.

PSE (Puget Sound Energy). 2023b. Pole inspection and maintenance program. Accessed March 2023. https://www.pse.com/en/pages/pse-projects/pole-inspection-and-maintenance-program.

Quanta Technology. 2013. Eastside Needs Assessment Report Transmission System King County. Accessed March 2023 at https://energizeeastside.com/documents.

Quanta Technology. 2015. Supplemental Eastside Needs Assessment Report. Accessed March 2023 at https://energizeeastside.com/documents.

Renton School District. 2023a. Community. Accessed March 2023. https://www.rentonschools.us/our-district/community.

Renton School District. 2023b. District Demographic Reports. Accessed March 2023. https://www.rentonschools.us/learning-and-teaching/student-information-services/district-demographic-reports.

14.11 Chapter 11 Transportation

California Air Pollution Control Officers Association. 2021. Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. Accessed April 2023. https://www.caleemod.com/documents/handbook/full_handbook.pdf.

City of Bellevue. 2009. Pedestrian and Bicycle Transportation Plan. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/ped-bike-plan-2009.pdf.

City of Bellevue. 2013. Downtown Transportation Plan. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/DTPFINAL2015.pdf.

City of Bellevue. 2014. Bellevue Transit Master Plan. Accessed March 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/TMP-Bellevue-Transit-Master-Plan-2014.pdf.

City of Bellevue. 2015a. Bellevue Transportation Demand Management Plan 2015-2023. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/transportation-demand-management-plan01152016.pdf.

City of Bellevue. 2015b. Pedestrian & Bicycle Implementation Initiative Program Principles. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/PBII-Program-Principles-2015.pdf.

City of Bellevue. 2018. Smart Mobility Plan. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/smart-mobility-plan-2018.pdf.

City of Bellevue. 2020a. Economic Development Plan. Accessed March 2023. Prepared by City of Bellevue, Bellevue, WA. https://bellevuewa.gov/sites/default/files/media/pdf_document/2020/Bellevue%20Economic%20Development%20Plan%20%28Full%20File%2C%20Adopted%2011-2-2020%29.pdf.

City of Bellevue. 2020b. Environmental Stewardship Plan 2021-2025. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2020/Bellevue%20Enviornmental%20Stewardship%20Plan_Adopted.pdf.

City of Bellevue. 2020c. Vision Zero Strategic Plan. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2021/vision-zero-strategic-plan-120120.pdf.

City of Bellevue. 2022a. Mobility Implementation Plan (MIP). Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/Bellevue_MIP_Vol1%262_8.1.22.pdf.

City of Bellevue. 2022b. 2022-2033 Transportation Facilities Plan. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/City%20of%20Bellevue%202022-2033%20Transportation%20Facilities%20Plan_0.pdf.

City of Bellevue. 2023a. Choose Your Way Bellevue. Accessed April 2023. https://chooseyourwaybellevue.org/.

City of Bellevue. 2023b. Curb Management Plan. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2023/Bellevue_CMP.pdf.

City of Bellevue. 2023c. MIP Concurrency Implementation Guide. September 2022. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/Multimodal_Concurrency_Guide.pdf.

City of Bellevue and City of Seattle. 2023. A Strategic Vision for Automated Vehicles. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2023/FR1_Bellevue_Seattle_AVStrategicPlan_Feb23.pdf.

City of Bellevue Transportation Department. 2021. South Downtown I-405 Access Study Report. Accessed February 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2021/South%20Downtown%20Access%20Study%20Final%20report%20July2021.pdf.

King County. 2021. King County Urban Growth Capacity Report. Accessed March 2023. https://kingcounty.gov/~/media/depts/executive/performance-strategy-budget/regional-planning/UGC/KC-UGC-Final-Report-2021-Ratified.ashx?la=en.

State of Florida Department of Transportation, Systems Implementation Office. 2020. Quality/Level of Service Handbook.

WSDOT (Washington State Department of Transportation). 2002. I-405 Corridor Program Final Recommendation Report. Accessed April 2023. https://wsdot.wa.gov/sites/default/files/2021-11/I405RecommendationReport2002.pdf.

WSDOT (Washington State Department of Transportation). 2022. Accessed February 2023. Design Manual. https://www.wsdot.wa.gov/publications/manuals/fulltext/M22-01/design.pdf.

WSDOT (Washington State Department of Transportation). 2023. Traffic count data from Traffic Count Database System. Accessed December 2022. https://wsdot.public.ms2soft.com/tcds/tsearch.asp?loc=Wsdot&mod=TCDS.

WSDOT (Washington State Department of Transportation). 2023. I-405/SR 167 Corridor Program. Accessed March 2023. https://wsdot.wa.gov/construction-planning/major-projects/i-405sr-167-corridor-program.

Washington Traffic Safety Commission. 2019. Washington State Strategic Highway Safety Plan: Target Zero 2019. Accessed March 2023. http://targetzero.com/wp-content/uploads/2020/03/TargetZero2019_Lo-Res.pdf.

APPENDIX A Scoping Information

NOTICE OF DETERMINATION OF SIGNIFICANCE (DS),

NOTICE OF ENVIRONMENTAL IMPACT STATEMENT (EIS), PUBLIC SCOPING COMMENT PERIOD AND PUBLIC SCOPING MEETINGS

Project Name: City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Proponent: City of Bellevue Community Development Department

File Number: 22-116423-LE

Location of Proposal: City of Bellevue – citywide

Lead Agency: The City of Bellevue

Description of the Proposal: The City of Bellevue is updating its Comprehensive Plan in accordance with the requirements of the state Growth Management Act (GMA). The prior periodic update in 2015 established the City's overall growth strategy with a focus on a majority of new growth in both Bellevue's Downtown, which is a designated Regional Growth Center, and BelRed with less growth planned for other mixed-use areas such as Eastgate and Factoria. This growth strategy has resulted in investments in transportation with planning around six new light rail stations as well as other infrastructure and capital facilities.

The proposed update to the City's Comprehensive Plan will plan for growth of at least an additional 35,000 housing units and 70,000 jobs by the year 2044. The EIS will consider a range of approaches to distributing the growth that aligns with regional requirements for equity, climate change, and housing as well as recently adopted City Council vision and priorities. Amendments to the Comprehensive Plan could include changes, such as those defined in the City Council directed scope.

The programmatic EIS will include development of plan alternatives, environmental analysis of those alternatives, and identification of impacts and mitigation measures. The EIS will include subarea-specific analysis for future land use and associated environmental impacts for the Wilburton study area (consists of portions of the Wilburton/NE 8th St and BelRed Subareas).

A Draft Environmental Impact Statement (DEIS) was prepared for the Wilburton study area (referred to as the "Wilburton Commercial Area") in February 2018, followed by the Wilburton Commercial Area Study in July 2018. The study identified a "preferred alternative" for the future state of Wilburton. Due to changed circumstances and the City's desire to incorporate the Wilburton-specific environmental analysis within the City-wide Comprehensive Plan analysis to ensure a cumulative evaluation of potential environmental impacts, the EIS for the Comprehensive Plan Periodic Update will complete the environmental review for the Wilburton study area.

The City is also soliciting feedback from the public relating to amendment requests associated with specific properties which may include desired changes to the plans, policies, or land use map for specific properties. Formal Community Initiated Amendment Requests for changes to the City's Comprehensive Plan land use map, plans or policies related to a particular property will be

considered as part of the plan update, but changes to the land use designations that apply to individual properties will be considered in the context of the community's vision for the plan.

Determination of Significance (DS) and EIS Required: The lead agency has determined this proposal is likely to have a significant adverse impact on the environment. An environmental impact statement (EIS) is required under RCW 43.21C.030(2)(c) and will be prepared. The lead agency has identified the following areas for possible discussion in the programmatic EIS:

- Earth and water quality
- Air quality and greenhouse gas emissions
- Plants and animals
- Energy and natural resources
- Noise
- Land use patterns and urban form
- Historic Resources
- Relationship to plans, policies, and regulations
- Population, employment, and housing
- Transportation (Traffic)
- Public services
- Utilities
- Displacement analysis
- Equitable impacts analysis
- Economic analysis

Alternatives: The EIS will analyze several alternatives. The Alternatives include a No Action Alternative and three Action Alternatives. The alternatives being proposed below include ideas to be analyzed which will lead to development of specific alternatives. The City anticipates having all the alternatives analyzed and brought forward for future discussion.

For purposes of the No Action Alternative, it is assumed that development would occur within the City of Bellevue based on the existing Comprehensive Plan land use, zoning and development standards. It is anticipated that the action alternatives will be based on variations of elements such as the amount and distribution of growth, and the implementation of new policies and infrastructure.

The action alternatives are described in more detail on the project webpage found at https://bellevuewa.gov/2044-environmental-review.

EIS Scoping: Agencies, affected tribes and members of the public are invited to comment on the scope of this proposed EIS. You may comment on the alternatives, probable significant adverse impacts, proposed mitigation measures, and licenses or other approvals that may be required. Methods for presenting your comments are described below. The expanded scoping process is being provided pursuant to the Washington Administrative Code (WAC) 197-11-410 and will include two public scoping meetings. Due to continued precautions for COVID-19, one of the meetings will be held virtually and one will be held in-person.

The City of Bellevue assures that no person shall on the grounds of race, color, national origin, or sex as provided by Title VI of the Civil Rights Act of 1964, and related statutes, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any

City of Bellevue program or activity. Any person who believes his/her Title VI protection has been violated may file a complaint with the ADA/Title VI Administrator. For Title VI complaint forms and advice, please contact the ADA/Title VI Administrator at 425-452-6168.

Members of the public, agencies, Tribes, businesses, and organizations are invited to comment on the scope of the EIS. Comments will be accepted on:

- EIS Growth alternatives
- EIS elements of the environment
- Probable significant adverse impacts
- Mitigation measures

Comment Deadline: The 30-day EIS public scoping comment period begins 8:00 AM on Thursday, September 29, 2022 and ends at 4:30 PM on Monday, October 31, 2022 Pacific Standard Time (PST). All comments related to project scoping must be submitted by this date. Comments may be submitted in writing or orally at the scoping meetings. A valid physical mailing address is required to establish status as an official party of record.

EIS Comments may be submitted in writing by:

Online at https://comment-tracker.esassoc.com/bellevue/index.html.

By email: CompPlan2044EIS@bellevuewa.gov

By mail to:
City of Bellevue Development Services Department
Attn: Reilly Pittman
450 110th Avenue NE
Bellevue, WA 98004

Virtual EIS Public Scoping Meeting: An EIS Scoping meeting is scheduled from 6:00-8:00 pm PST, Thursday, October 13, 2022. The purpose of the meeting is to present information about the proposed Comprehensive Plan Periodic Update, the SEPA process, and to provide a verbal comment opportunity on the scope of the proposed EIS. To participate in the scoping meeting attendees are requested to register in advance and may sign up to provide an official scoping comment using the following meeting link: bit.ly/bellevuecomp . Attendees who do not sign up to provide a scoping comment in advance may still make a verbal scoping comment at the meeting. A court reporter will be in attendance to transcribe comments.

In-Person EIS Public Scoping Meeting: An in-person EIS Scoping meeting is scheduled at the City of Bellevue City Hall, Council Chambers (1E-126) at 450 110th Avenue NE, Bellevue, WA 98004 from 6:00-8:00 pm PST, Tuesday, October 18, 2022. There will be an opportunity to provide public comment and a court reporter will be in attendance to transcribe comments.

Project-related information can be reviewed on the project website at:
Bellevue 2044 Environmental Review. For more information on this process, and to submit comments directly to the Comprehensive Plan Update team, please consider attending upcoming public meetings listed in this notice.

If an individual is planning on attending one of these meetings and needs alternate formats, interpreters, language assistance, or reasonable accommodation requests, please phone at least 48 hours in advance 425-452-6930 (voice) or email bbrod@bellevuewa.gov. For complaints regarding accommodations, contact City of Bellevue ADA/Title VI Administrator at 425-452-6168 (voice). If you are deaf or hard of hearing dial 711. All meetings are wheelchair accessible.

If you have any questions regarding the ADA statement above or need help please reach out to ADA Coordinator Blayne Amson, bamson@bellevuewa.gov or 425-452-6168.

Contact Information:

Project Manager
Thara Johnson, Comprehensive Planning Manager, tmjohnson@bellevuewa.gov

SEPA Lead Agency Contact
Elizabeth Stead, Land Use Director and SEPA Responsible Official, estead@bellevuewa.gov

BELLEVUE 2044
COMPREHENSIVE PLAN
Building A Livable City for All

Comprehensive Plan Periodic Update and Wilburton Vision Implementation

Environmental Impact Statement

January 2023

Scoping Comment Summary—Final

Contents

INTENTIONALLY BLANK

1. Introduction and Project Overview

The City of Bellevue's Comprehensive Plan is updated approximately every 10 years in accordance with the Growth Management Act (GMA). The 2024 Periodic Update, to guide Bellevue's development through 2044 ("Bellevue 2044"), is now underway. The update includes an Environmental Impact Statement (EIS) as a requirement of the State Environmental Policy Act (SEPA). The EIS will also include additional analysis for the Wilburton study area. The purpose of this Scoping Comment Summary document is to summarize the EIS scoping comments received by the City of Bellevue (city) during the scoping period for the Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS.

Scoping is the first step in the EIS process. Scoping helps focus the EIS by identifying specific elements like carbon emissions, wildlife habitat or resident displacement that might be affected by the proposed growth alternatives. During scoping members of the public can learn more about the Comprehensive Plan Periodic Update and the draft growth alternatives. As part of the process members of the public can raise any concerns about potential environmental impacts of each alternative. The draft growth alternatives will be analyzed along with comments received during scoping. The EIS analysis will determine if the impacts are significant.

This summary provides information on the comments received and does not indicate any position by the city regarding the stated information. Many of the comments address topics for the general Comprehensive Plan update or the Wilburton Vision Implementation as opposed to comments on the environmental elements or alternatives. Comments will be considered for evaluation and analysis in the Draft EIS as appropriate.

The city project team will review all scoping comments received and use them, as appropriate, to focus the environmental analysis in the Draft EIS. This will include identifying specific environmental analyses for the elements of the environment and the range of alternatives to be analyzed in the Draft EIS. Scoping comments will not be addressed individually with a specific response; however, the concerns and topics identified will be addressed in the body of the Draft EIS document.

a. Project Background

The city's most recent periodic update in 2015 was built around an overall growth strategy to focus most of the new growth in Bellevue's Downtown neighborhood, which is a designated Regional Growth Center, and the BelRed area. The remainder of the growth was planned for other mixed-use areas such as Eastgate and Factoria, and other multi-family and commercial areas across the city. This growth strategy has resulted in investments in transportation with planning around six new light rail stations as well as other infrastructure and capital facilities.

The current work to update the city's Comprehensive Plan will plan for growth of at least an additional 35,000 housing units and 70,000 jobs by the year 2044. The update includes an EIS consistent with the requirements of SEPA in Washington State.

The EIS will consider a range of approaches to distribute this growth that aligns with regional requirements for equity, climate change, and housing, as well as the recently adopted vision and priorities by the City Council.

The EIS will also consider implementation of the vision established by a Citizen Advisory Committee (CAC) in 2018 for the Wilburton study area (referred to as the "Wilburton Commercial Area") by amending the existing Wilburton/NE 8th Street Subarea Plan and BelRed Subarea Plan, the Comprehensive Plan Map, and the City's Land Use Code. A Draft EIS was prepared for the Wilburton study area in 2018. The EIS process now underway combines Wilburton-specific environmental analysis in the overall Comprehensive Plan Periodic Update EIS process to ensure the cumulative evaluation of potential environmental impacts.

b. Alternatives

As part of the Comprehensive Plan update, the city had developed the No Action Alternative and three Action Alternatives to support housing and job growth. Four alternatives for the Comprehensive Plan update as proposed during scoping are listed below.

- **Alternative 0: No Action.** Capacity for about 30,000 additional housing units beyond ~65,000 existing units in 2022.
- **Alternative 1: Providing options for families of all kinds.** Capacity for 45,000 – 50,000 additional housing units beyond ~65,000 existing units in 2022.
- **Alternative 2: Unlocking access for more residents.** Capacity for 55,000–60,000 additional housing units beyond ~65,000 existing units in 2022.
- **Alternative 3: Providing options throughout the city.** Capacity for 65,000–70,000 additional housing units beyond ~65,000 existing units in 2022.

Action Alternatives for the Wilburton study area were also presented during scoping. The Alternatives for the Wilburton study area build on the preferred development alternative identified in the 2017–2018 Wilburton Commercial Area Study. The three alternatives proposed during scoping for the Wilburton study area are listed below:

- **Wilburton Study Area Alternative 0: No Action.** Capacity for ~330 housing units. Capacity for ~12,000 jobs.
- **Wilburton Study Area Alternative 1: Focus of Growth in Core.** Capacity for 5,000–7,000 additional housing units above No Action Alternative. Capacity for around 20,000 or more additional jobs above No Action Alternative.

- **Wilburton Study Area Alternative 2: Focus of Growth in Core + Transition Areas.** Capacity for 7,000–10,000 additional housing units above No Action Alternative. Capacity for around 20,000 or more additional jobs above No Action Alternative.
- **Wilburton Study Area Alternative 3: Focus of Growth in Core + Secondary Nodes.** Capacity for 12,000 or more additional housing units above No Action Alternative. Capacity for around 20,000 or more additional jobs above No Action Alternative.

Full details about the draft alternatives are available on the city website.

In addition, the city may decide to make additional revisions to the alternatives or review of environmental elements prior to the Draft EIS analysis. Any additional changes made will be documented in the Draft EIS. While scoping comments do not receive individual responses, each comment received during the Draft EIS comment period will receive a response in the Final EIS.

2. EIS Scoping Process

Scoping is one of the earliest steps in the EIS process, as mandated by SEPA (Washington Administrative Code [WAC] 197-11-408) and includes a public comment period. The purpose of scoping is to determine the range, or "scope," of issues to study in the EIS. The City of Bellevue is committed to sharing information and gathering feedback from community members amid the ongoing Covid-19 pandemic. The city followed the legal notification requirements and conducted outreach activities to notify agencies, tribal governments, members of the public, and stakeholders of the scoping comment period and in-person and virtual public scoping meetings. City staff remain available to answer questions via email and telephone during regular business hours.

a. Determination of Significance and Scoping Notice Issuance

Pursuant to SEPA, the city issued a SEPA threshold Determination of Significance on September 29, 2022, to notify the public of the intent to prepare an EIS so that agencies, tribes, communities, organizations, and members of the public have an opportunity to comment on the scope of the impacts and range of alternatives to be analyzed. The minimum required scoping comment period is 21 days. However, the city elected to expand the scoping comment period to 30 days. Information obtained from the public comments will be used to help the city in framing the alternatives to be evaluated and the environmental elements to be analyzed in the SEPA EIS. Please see Attachment 1 Determination of Significance to view the threshold determination.

b. Public Notifications

The city notified the public of the SEPA scoping comment period through the following methods:

- Email notification to existing city email subscribers
- Email notification to city employees
- Email notification shared with organizations to forward to their memberships
- City of Bellevue website
- Neighborhood News
- Press release
- Website
- Social media posts
- Legal ad posted in the Seattle Times on September 29, 2022

The scoping notice, available on the Comprehensive Plan update website, was translated from English into seven other languages used in the city: traditional Chinese, simplified Chinese, Japanese, Korean, Russian, Spanish, and Vietnamese.

3. SEPA Scoping Outreach Activities

The city accepted public comments through the following means: an online portal linked to the website; mailed through the postal service; emailed comments addressed to city staff or the city's Comp Plan2044 EIS email address; hand-delivered comments; comments submitted via laptop computer stations provided at the in-person public meeting; verbal comments in person at the public meeting, and via Zoom at the virtual public meeting (transcribed by a court reporter).

a. Virtual Public Meeting

The city hosted a virtual public meeting on Zoom on October 13, 2022, starting at 6:00 pm to accept verbal comments on the scope of the EIS. A total of 12 members of the public attended the virtual meeting, and four of them provided verbal comments. The meeting was recorded and posted on the city website for community members to view. The scoping meeting was formatted into two sections, starting with a presentation by the project team. After the presentation, an open forum allowed attendees to submit their comments about the EIS process through the Q&A tool on Zoom. Attendees were asked to submit EIS comments or questions directly related to the EIS process to be answered live; any other questions, including those related to the Comprehensive Plan, were answered offline by a project team member. The meeting concluded with a public scoping comment session.

Those wishing to give comment had 2 minutes to speak. A court reporter attended to record all comments into a formal transcript.

b. In-Person Public Meeting

An in-person public meeting started at 6:00 pm on October 18, 2022, at Bellevue City Hall. The meeting began with an informal open house in the lobby. City project team members were stationed at boards that provided an overview of the Comprehensive Plan update and EIS process. Community members were able to casually review boards, ask clarifying questions, and sign up to provide written public comments.

The formal public meeting included a short presentation by the project team, an opportunity for clarifying questions about the EIS and scoping period, and then a formal public comment. Those wishing to provide comments had 2 minutes to speak. A court reporter was present to record all comments into a formal transcript. Laptops were also available for participants to write their comments and submit them to the website. A total of 15 members of the public attended and seven of them provided verbal comment. Comment forms were also available for attendees to complete and submit in writing at the public meeting.

4. Summary of Scoping Comments

This section provides a high-level summary of comments received during the SEPA scoping process. The comments are organized by topic according to general themes. Comments have been summarized and paraphrased and are grouped generally for review purposes.

Please go to Attachment 2 Scoping Period Comments to see the complete list of comments received. Please go to Attachment 3 Wilburton Vision Implementation Related Comment Summary to see examples of comments made specific to the Wilburton study area.

a. Comment Review Methodology

Comments received during scoping will be used to inform the analysis performed in development of the Draft EIS. All comments received through the scoping process were reviewed and categorized by topic. Many topics overlap, and best professional judgement was used to sort the comments and classify them into an appropriate category. The purpose of this summary is to provide information on the comments received and does not indicate any position by the city regarding the stated information. Comments will be considered for evaluation and analysis in the Draft EIS as appropriate.

A total of 163 individual comments were received during the scoping period, excluding duplicates of the same comment from the same person submitted via different channels.

These comments are compiled and included in Attachment 2 of this report. Comment letters were largely submitted by email. Comments include four verbal comments given during the virtual public meeting held on October 13, 2022, and seven verbal comments given at the in-person public meeting on October 18, 2022. A court reporter attended and transcribed comments at both events.

In addition to the individuals submitting comments on their own behalf, many submitted comments on behalf of organized groups. A list of those groups that provided comments is included below:

- Alexandria Real Estate Equities
- Amazon
- American Capital
- Bellevue Chamber Permitting, Land Use, Sustainability, and Housing (PLUSH) Committee
- Bellevue College
- Bellevue Downtown Association
- Bellevue Redmond Professional Center
- Berg Holdings
- Beta-Bellevue Auto Center LLC
- Blu Compass LLC, Wallace Park LLC, & Wig Properties LLC
- Brierwood Center LLC
- Careage
- CIRC Downtown Action To Save Housing (DASH)
- Coast Hospitality
- Color Cult Art
- Compton Design Office
- Continental Properties
- Ditty Properties
- Dog Walk LLC
- Eastridge Partners LLC
- Eastside Affordable Housing Coalition
- Edson family
- EGBW38R Owner LLC
- Futurewise
- Guntower Capital LLC
- Habitat for Humanity Seattle-King & Kittitas Counties
- Hal Woosley Properties, Inc./Brierwood Center
- Henbart and Gorlick
- Independent
- Kemper Development Company
- KG Investment Properties
- KORE Bellevue Technology Center, INC
- KTB Properties
- Legacy Commercial
- Lexus of Bellevue/ Hansen Real Estate, LLC
- Master Builders Association of King and Snohomish Counties
- Microsoft
- MRM Capital
- N124 Holdings, LLC
- NAIOP Washington State
- Overlake Farm
- Overlake Medical Center
- Parkay Investments LLC
- Pine Forest Properties
- PMF Capital Management

- Public Health-Seattle & King County
- Puget Sound Energy
- RCJ Properties, LLC
- Scarff Law Firm
- Seattle King County Realtors
- Sterling Realty Organization
- Timothy E Siegel Patent Law, PLLC
- Wright Runstad & Company
- WTM Property Owner, LLC

b. High-Level Comment Themes

Comments regarding the Bellevue Comprehensive Plan update and the Wilburton Vision Implementation were collected, and themes and examples from both are presented in this summary. The summary is not exhaustive and does not replace the review of each of the individual comments received. Across all forms of comments key themes include:

- ♣ Land Use Patterns and Urban Form: Support or refinements of alternatives to be studied. Alternative 3 with all types and locations of housing in nodes, corridors, and across neighborhood residential areas was supported the most followed by a suggested new alternative.
- ♣ Plans, policies, and regulations: Need for housing especially affordable housing and avoiding displacement.
- ♣ Population, employment, and housing: Enhance green space, parks, urban tree canopy, and addressing climate change and sustainable development patterns.
- ♣ Transportation: Improve connections for walking, biking, transit, other. Each major theme is addressed below.

Other topics that received fewer comments were related to natural environment, public services, displacement elements, and alternatives as indicated below:

- Air quality
- Noise
- Water quality
- Plants and animals
- Public services
- Displacement
- Comments on Different Alternatives

The most common comments received are summarized below by topic. Although the comment summary is not presented as quoted material, the summary text preserves the nature and flavor of the individual comments received. Therefore, the text uses a mix of grammatical constructions (e.g., phrases, full sentences, questions, etc.) that reflect the

original comments and best represent the intent of the commenter, rather than parallel construction (each part of sentence using the same grammatical structure).

c. Land Use Patterns and Urban Form

The topic of land use patterns and urban form received over 150 comments during the scoping period. Many of the comments in this category fell outside of the scope of the comprehensive plan and instead relate more directly to land use code or other areas. These topics are still included in this summary report that relate more directly to the comprehensive planning work. Because many of the comments on land use were broad and overlapping, they have been broken into subtopics with examples quotations of comments provided for each:

Zoning

- *Expand the BR-MO-1 node designation north of NE 12th Ave and increase height and FAR.*
- *Increase the areas in which 450' building heights apply between 116th Ave NE and Eastrail in Wilburton Study Area Alternative 3.*
- *Increase amount of residential allowed in the BR-MO area.*
- *Expand high-rise zoning area.*
- *Explore opportunities to streamline zoning process and update city code.*
- *Consider modifying zoning to mixed-use in Eastgate, BelRed, and Wilburton to maximize housing capacity.*
- *Request zoning changes including medical to mixed-use residential and campus from residential to zoning.*
- *Retain medical focus in area across from Kaiser/Overlake Medical Centers, reflecting concerns that introducing residential in this area would preclude or disincentivize medical uses locating in this area.*
- *EIS should analyze trade-offs of square footage requirements for commercial/retail space for mixed-use buildings.*
- *Alternatives evaluation should consider the impact of rezoning the 140th corridor on housing capacity.*
- *Alternatives evaluation should include impact of zoning changes on "neighborhood character."*
- *Analyze implementation of mandatory inclusionary zoning across all the growth alternatives.*
- *Consider form-based codes in single-family zoned areas to allow for more housing capacity.*

- *Alternatives evaluation should consider impacts of increasing maximum residential height requirements in urban centers.*
- *Alternatives evaluation should analyze potential displacement risk in different neighborhoods and mitigation strategies.*
- *Alternatives evaluation should consider displacement risk across different demographic groups.*

Density

- *Expand low density zoning.*
- *Increase densities and height in BelRed.*
- *Allow additional density in the lowest density areas of the city, such as Bridle Trails.*
- *Add density in areas with good transit access, as well as more housing options.*
- *Consider focusing density in areas already zoned for it.*
- *Consider changing requirements that limit housing density, including lot coverage limits and setback requirements.*
- *Alternatives evaluation should consider possible trade-offs between high-rise zoning and housing affordability.*
- *Expand areas zoned for high-density housing to include the area north of the Downtown core.*
- *Explore ways that publicly owned land could be used to create more housing density.*
- *Alternatives evaluation should consider expanding low-density (5–8 story) zoning.*
- *Increasing density along 120th Avenue NE toward the Spring District.*
- *Analyze trade-offs of eliminating, or providing exemptions to, the critical areas and development density requirement in urban centers to maximize housing capacity.*
- *Increase housing density in residential areas with access to transit and jobs.*
- *Consider increasing density in Wilburton due to its numerous transit connections.*

Development Costs & Incentives

- *Consider the efficacy of using multi-family tax exemption as a building incentive.*
- *Consider incentives to develop residential buildings, including exemptions to the multi-family tax and floor area ratio requirements.*
- *Increase affordable housing incentives or requirements.*
- *Maintain affordable housing incentives rather than requirements.*
- *Include analysis of building requirements and impact on housing construction cost.*

d. Plans, Policies, and Regulations

There were over 20 comments related to plans, policies, and regulations and some examples quotations of comments are provided below:

- *Request for the scoping process to conduct foundational work to address the myriad regulatory requirements and processes (structural, energy, climate, and environmental) that add tremendous costs to housing construction.*
- *Lobby King County and the State Legislature to modify the SEPA and county zoning to allow more development in rural areas with proximity to major highways and freeways.*
- *Weigh the implications of each policy change and how they will be implemented. Many times, new and revised policies are implemented through the development of new or modified regulations. New regulations often have a direct or indirect impact on the cost of providing housing.*
- *How will the Comprehensive Plan and EIS address implementation of the state's Clean Energy Transformation Act (CETA)?*
- *How will the Comprehensive Plan and EIS integrate applicable information from the ongoing King County–Cities Climate Collaboration, such as the Joint Letter of Commitment: Climate Change Actions in King County?*
- *How will the Comprehensive Plan and EIS address the city's implementation of transportation electrification and building electrification?*
- *Revise Alternatives 1, 2, and 3 to ensure that each alternative will be developed to meet the 35,000-housing unit growth objective in accordance with 2021 King County Countywide Planning Policies.*

e. Population, Employment, and Housing

There were over 50 comments related to population, employment, and housing and the examples of quotations of comments are provided below:

- *Maximize housing capacity in mixed-use centers, neighborhood centers, and light rail stations.*
- *Desire for increased housing and housing density.*
- *Incentivize horse pasture owners in Bridle Trails to allow their lots to be developed into housing.*
- *Consider increasing density in areas with numerous transit connections.*
- *Alternatives evaluation should consider the impact of remote work on housing.*
- *Alternatives evaluation should consider impacts on people with jobs in the city who cannot afford to live in the city.*
- *Explore the impact of subarea planning policies on overall housing capacity.*

- *Alternatives evaluation should explore ways to use unused or underutilized parcels of land for housing. Bridle Trails was called out multiple times as a place for upzoning/development.*
- *Consider allowing small businesses to operate out of people's homes.*
- *Consider policies to support arts organizations in the BelRed area.*
- *Ensure that an increase in housing and jobs in BelRed is considered across all alternatives.*
- *Concern about rental costs for small businesses.*
- *Concern about impacts of increased housing.*
- *Concern about high-rises in Downtown providing jobs for non-Bellevue residents and the associated impacts.*
- *Analyze impacts from the rate of growth from the proposed increase in housing and jobs.*
- *Analyze the impact of increasing housing capacity to single-family neighborhoods.*
- *Analyze the impact of adding more housing units beyond the minimum growth targets.*
- *Evaluate reducing or eliminating minimum parking space requirements to reduce housing costs.*

Housing affordability was a key topic mentioned in over 70 scoping comments. Many commented on the need for affordable housing and were concerned about how density was placed. Because affordable housing was brought up so frequently, it has been broken into a subtopic with example quotations of comments listed below.

Affordable Housing

- *Explore range of "missing middle" housing options including accessory dwelling units (ADUs), detached accessory dwelling units (DADUs), fourplexes, townhouses, and cottage clusters throughout the city.*
- *Address strategies to allow middle and low-income people to live near where they work.*
- *Consider mandates on percentage of affordable units for new development.*
- *Explore a mandatory housing affordability program and zoning incentive programs that will produce housing at all affordability levels.*
- *Affordable housing should be spread throughout the city, not limited to high-density areas.*
- *Alternatives evaluation should analyze potential displacement risk in different neighborhoods and mitigation strategies.*
- *Alternatives evaluation should consider displacement risk across different demographic groups.*

f. Transportation

Transportation, especially transit and multimodal options, emerged as a significant theme of interest in over 65 scoping comments. The following are examples of quotations of comments related to transportation:

Transit

- *Terminate the extension of NE 6th Street at 120th Ave NE.*
- *Consider building housing density at transportation hubs to address congestion and greenhouse gas emissions.*
- *Consider increasing density at transportation nodes including light rail stations to maximize transit ridership.*
- *Alternatives evaluation should consider the impact of remote work on transit use.*
- *Alternatives evaluation should consider reducing or eliminating minimum parking ratios to encourage transit use.*
- *Study traffic impacts due to increased density.*

Multimodal Transportation

- *Look at expanding bus lanes, bike lanes, and sidewalks to address congestion.*
- *Alternatives evaluation should assess options through 15-minute city lens (i.e., ensure a community's needs can be met within 15 minutes from home on foot, bike, or via public transit).*
- *Consider lidding portions of I-405 to encourage multimodal transportation.*
- *Consider exemptions to street grid for Wilburton and BelRed.*

g. Air Quality

There were approximately 10 comments related to air quality with examples of quotations of comments provided below:

- *Analyze the impact of single-family home zoning on air quality.*
- *Alternatives evaluation should analyze how to decrease greenhouse gas emissions from increasing building density and building emissions that could result in increased emissions.*
- *Reduce carbon emissions from building construction and implement stricter efficient building design standards.*
- *Alternatives evaluation should consider 2030 decarbonization goals.*
- *Analyze potential air quality impacts due to the proximity of highways, traffic congestion, and public transit.*

- *Alternatives evaluation should consider the impact of greenhouse gas emissions from increased transportation due to displacement.*
- *Encourage city to take up stronger regulations on new construction relating to greenhouse gas emissions. Update code to statewide 2031 goals. Require greater energy efficiency and low carbon or no carbon impacts from new buildings.*

h. Water Quality

There were approximately 6 comments related to stormwater and local watersheds with examples of quotations of comments provided below:

- *Alternatives evaluation should consider the impacts of new development on area watersheds, such as Kelsey Creek basin.*
- *Alternatives evaluation should examine impacts of surface water runoff.*
- *Analyze the impact of single-family home zoning on water use and quality.*
- *Renew water (and other utilities) infrastructure for the northeast Bellevue neighborhood to accommodate the next 50 years.*
- *Incorporate existing waterways into all development – daylight rivers and streams and provide access to riparian areas.*

i. Noise

There were approximately 5 comments related to noise with examples of quotations of comments provided below:

- *Consider better sound barrier walls to reduce excessive traffic noise in neighborhoods.*
- *Noise even several hundred feet away from the current noise wall off I-405 is often above noise regulations in the City of Bellevue.*
- *Noise pollution creates health risks to sensitive receivers.*
- *Soundproof all buildings to the highest degree.*
- *Noise wall is not effective along 116th Avenue NE, and noise from the road is loud.*

j. Plants and Animals

There were approximately 7 comments related to plants and animals with examples quotations of comments provided below:

- *Alternatives evaluation should look at potential impacts on plants and animals in natural areas, including Coal Creek and Kelsey Creek.*
- *Consider requirements to add vegetation for new buildings.*

- *We have deer, coyotes, bald eagles, hawks, blue herons, beavers, opossums, and other wildlife living in our Wilburton neighborhood between Bel-Red and NE 8th. There are numerous trees over 100 years of age and the Kelsey Creek stream runs through the neighborhood.*
- *There should be more dense foliage areas in each new building location too; right now, the emphasis seems to be tons more parking with black tarmac, which just creates more heat maximizing for cars and traffic.*

There were approximately 13 comments specifically related to trees so it has been broken into a subtopic with examples of quotations of comments provided below:

Trees

- *Alternatives evaluation should include the impact of the loss of tree canopy on greenhouse gas emissions, urban wildlife, heat reduction, and green space.*
- *Consider mandates to replace trees removed during construction.*
- *Alternatives evaluation should analyze impacts of removing mature trees.*
- *Exempt urban center and transit-oriented development (TOD) areas from tree preservation regulations, similar to Downtown.*
- *Impacts on tree canopy if there are changes to single-family zoning, specifically requiring more housing*.

k. Public Services

There were approximately 10 comments related to public services with examples below:

- *Evaluate impact of population growth on public services, including schools and use of public parks and trails.*
- *Evaluate impact of population growth on infrastructure, including roads and utilities.*
- *Alternatives evaluation should consider the impact of population growth on public safety services, including law enforcement, fire, and rescue services.*
- *Implement complete streets to improve public safety.*
- *Consider greatly expanded recreation facilities.*

l. Displacement

There were a few comments related to displacement. Commenters were concerned about potential displacement of vulnerable communities. A comment example is provided below:

- *I am against a brutal transition to skyscrapers as we've seen downtime Bellevue, and the displacement of low, moderate, and stable incoming residents. We need a progressive transition to duplex, triplex, supported by a capable infrastructure.*

m. Comments on Different Alternatives

Approximately 70 comments related to the proposed alternatives. The majority of comments related to alternatives expressed a preference for Citywide Alternative 3 or Wilburton Option 3. Examples of quotations of comments received include:

- *Of the alternatives drafted, Alternative 3 goes the furthest to scale up housing production, distribute growth more equitably, and advance housing affordability. However, we recommend changes to the scope of the proposed alternatives to ensure Bellevue leads the region and creates a more affordable, equitable, and sustainable city.*
- *I support to implementation on alternative 3. I've lived in this neighborhood all my life and have seen the incredible growth over the decades. The cost of housing here is way too high. The demand far out stretches the supply. My friends and I would love to live/own in the area where we grew up, but currently it is out of reach.*
- *We ask that Alternative 3 in the EIS be refined to include this area immediately north of and adjacent to Downtown in the target zone for development of greater intensity.*
- *In the Bellevue 2044 EIS Scoping Handout, Alternatives 2 and 3 are the only ones that make sense, and Alternative 3 is really the only one that will have a chance of providing a spectrum of affordable housing and a variety of housing types.*
- *There is significant investment being made in Wilburton for parks and trails and a high density neighborhood should be created to take advantage of the presence of the Eastrail and future Grand Connection. Please select (Wilburton) option 3 in the scoping alternatives and increase the housing studied to 15,000 new units.*

Examples of quotations of comments that relate to other Alternatives include those listed below:

- *As a general matter, we support (Wilburton) Alternative 3 described in the EIS scoping notice, with the notation that this alternative should also be informed by code changes. We also note that Alternatives 1 and 2 reflect a lower density for the core area of Wilburton, which may be useful for comparison purposes, but the fundamental concept that should be reflected in all alternatives is that the maximum height and density within Wilburton should occur at the Property, since the Property is the epicenter of urban activity in the subarea.*
- *Alternative 2 would turn the city into a hodgepodge that would not be conducive to either the young professional or young family crowds.*
- *Alternatives Two and Three include voluntary incentive-based programs that provide flexibility to develop more housing for all incomes widely across Bellevue sub-areas.*
- *In Alternative 1 it focuses on Wilburton, Crossroads, Eastgate and Factor, but not Bel-Red. RECOMMENDATION: Bel-Red is the most blank slate of all these areas and should be a top priority focus for density.*

- *I support Bellevue 2044 Alternative 1 because it addresses the need for growth while maintaining the neighborhood-friendly aspect of our city. Duplexes, cottage housing, and other low-density typologies will continue to provide family-friendly areas while allowing growth to occur in major developmental areas; this aligns with the nature of today's younger generation who are marrying later and delaying their choice to have families.*
- *Hope Option 1 is not chosen because it sounds like the City is going not put in the sweeping rezones that would increase supply of housing, but rather help affordability through increased government policies to incentivize affordability.*
- *Revise Alternatives 1, 2, and 3 to include only those changes needed to bring Alternative 0 into compliance with the housing unit growth target specified in 2021 King County Countywide Planning Policies.*

5. Next Steps

The Draft EIS is scheduled to be published in the spring of 2023, at which point it will be available for public review and comment. Following publication of the Draft EIS, agencies, affected tribes, and the public will have an opportunity to comment on the content of the document. The city will host an extensive public notification process to solicit comments on the Draft EIS.

Notice of the public comment period will be posted in the Seattle Times, on the Washington State Department of Ecology's SEPA Register, and sent directly to all parties who submitted scoping comments, as well as affected tribes, agencies with jurisdiction, and those who have specifically asked to receive notice about the project. Notice will also be posted on the project website.

After the Draft EIS comment period, the City of Bellevue will prepare the Final EIS, which will identify a preferred alternative for the Comprehensive Plan and Wilburton Vision Implementation.

APPENDIX B Land Use Patterns and Urban Form Appendix

Zoning Designations

Table B-1 summarizes the zoning designations established in Bellevue City Code (BCC) Title 20 that help implement the future land use designations.

TABLE B-1 **Zoning Designations and Descriptions**

Zoning Designation	Description
SINGLE-FAMILY	
Single Family Low Density (R-1 and R-1.8)	Areas zoned for low-density single-family provide for detached residential densities of up to 1 or 1.8 dwellings per acre. These areas may protect steep slopes or unstable land from overdevelopment and may include agricultural uses and activities compatible with low residential density.
Single Family Medium Density (R-2.5 and R-3.5)	Areas zoned for medium-density single-family provide for detached residential densities of up to 2.5 or 3.5 dwellings per acre and permit compatible, related activities.
Single Family High Density (R-4 and R-5)	Areas zoned for high-density single-family provide for detached residential densities of up to 4 or 5 dwellings per acre and permit compatible, related activities.
Single Family Urban Residential (R-7.5)	Areas zoned for urban residential single-family provide for detached residential densities of up to 7.5 dwellings per acre and permit compatible, related activities.
MULTI-FAMILY	
Multifamily Low Density (R-10)	Areas zoned for low-density multi-family provide for attached residential dwellings of up to 10 units per acre. The R-10 District is intended to be more restrictive and may be utilized as a buffer between Suburban Residential Districts and moderate-density residential or commercial districts.

Zoning Designation	Description
Multifamily Medium Density (R-15 and R-20)	Areas zoned for medium-density multi-family provide for attached residential dwellings of moderate density (15 or 20 dwellings per acre). The R-20 District is intended to be convenient to centers of employment and have primary access to arterial streets. The R-15 District is more restrictive and may be utilized as a buffer between Suburban Residential Districts and moderate-density residential or commercial districts.
Multifamily High Density (R-30)	Areas zoned for high-density multi-family provide for attached residential dwellings of up to 30 dwellings per acre. The R-30 District is intended to be convenient to centers of employment and have primary access to arterial streets.
RETAIL	
Neighborhood Business (NB)	Neighborhood Business Districts are small-scale, mixed use commercial areas that provide housing opportunities and retail and service businesses for the surrounding residential community. These sites may also accommodate a limited amount of administrative office space, provided that the office use does not interfere with the site's primary neighborhood-serving function. NB Districts front on designated primary or minor arterials and are generally 1,000 feet or more apart along the arterials. It is the city's intent that any such district be located adjacent to existing or proposed residential areas. The maximum size of an NB District, composed of contiguous properties and located on one side of a street, is 4.5 acres. The maximum size is expanded to 6 acres for NB sites separated by a street.
Community Business (CB)	Community Business Districts serve community markets and provide areas for the location of services and retail outlets, other than Downtown.
General Commercial (GC)	General Commercial is a mixed retail and commercial designation that provides for the location of a variety of business activities that provide goods and services to other businesses and the general public.
OFFICE	
Office (O)	Office Districts provide areas for business, financial, and professional service offices, located on arterial or commercial access streets. In the proximity of other major business and commercial districts, this district may serve as a buffer between residential areas and more intensive commercial districts.
Office and Limited Business (OLB)	Office and Limited Business Districts provide areas for the location of integrated complexes made up of offices, hotels or motels, eating establishments, and retail sales accessory to permitted uses. Such districts are located in areas that abut and have convenient access to freeways and major highways.
Office and Limited Business District 2 (OLB 2)	The purpose of the OLB 2 District is to provide an area of integrated complexes made up of offices, hotels, or motels, eating and drinking establishments, and retail sales within walking distance to support business and employees. The OLB 2 District has greater intensity and a larger mix of uses than the OLB District. Such districts are located in areas that abut and have convenient access to freeways, major highways, and transit.
Office and Limited Business-Open Space (OLB-OS)	Office and Limited Business-Open Space Districts provide for significant amounts of open space and for offices, hotels, or motels, and other uses permitted in the Office and Limited Business District, except for residential uses. The OLB-OS properties are developed as a cohesive site with unified building design. The open space area is

Zoning Designation	Description
	reserved for public use and access and may include active and passive recreational uses. OLB-OS properties are at least 25 acres in size with at least 40 percent of the total site area reserved as a contiguous open space area.
Professional Office (PO)	Professional Office Districts provide areas for low-intensity office uses. Structures shall have exterior designs that are compatible with surrounding developments, vegetation, and topography. The Professional Office District may act as a buffer between residential and more intensively developed properties.
INDUSTRIAL	
Light Industrial (LI)	Light Industrial Districts provide for the location of a broad array of activities, including manufacturing, wholesale trade, and distribution activities. Offices are discouraged unless they support the primary functions of the LI District. Sales of goods and services subordinate to permitted activities and sales of bulky or large-scale items are appropriate, except for auto sales and rentals, which are appropriate only in certain locations.
MIXED USE	
Neighborhood Mixed Use District (NMU)	The purpose of the NMU District is to provide an area with a mix of retail, service, office, and residential uses with an emphasis on neighborhood retail and service uses. This district is designed to be compatible with nearby neighborhoods and is easily accessible from the nearby office and residential uses.
NEIGHBORHOOD SPECIFIC	
DOWNTOWN	
Downtown–Office 1 (DT-O-1)	The purpose of the Downtown–O-1 District is to provide an area for the most intensive business, financial, specialized retail, hotel, entertainment, and urban residential uses. This district is limited in extent to provide the level of intensity needed to encourage and facilitate a significant level of transit service. Day and nighttime uses that attract pedestrians are encouraged. All transportation travel modes are encouraged to create links between activities and uses.
Downtown–Office 2 (DT-O-2)	The purpose of the Downtown–O-2 District is to provide an area for intensive business, financial, retail, hotel, entertainment, institutional, and urban residential uses and to serve as a transition between the more intensive Downtown–O-1 District and the less intensive Downtown–Mixed Use District. The Downtown–O-2 District includes different maximum building heights for areas north of NE 8th Street, east of 110th Avenue NE, and south of NE 4th Street based on proximity to the Downtown Core and access to the regional freeway system and transit, creating the Downtown O-2 Districts North, East, and South (DT-O-2 North, DT-O-2 East, and DT-O-2 South).
Downtown–Mixed Use (DT-MU)	The purpose of the Downtown–MU District is to provide an area for a range of retail, office, residential, and support uses. Multiple uses are encouraged on individual sites and in individual buildings, as well as broadly in the district as a whole. The Downtown–MU District allows for taller buildings and additional density in the Civic Center portion of the district east of 111th Avenue NE between NE 4th and NE 8th Street based on its proximity to the Downtown Core and convenient access to the regional freeway system and transit. This area is called the Downtown–Mixed Use District – Civic Center (DT-MU Civic Center), while the rest of the district is called the Downtown–Mixed Use District (DT-MU).

Zoning Designation	Description
Downtown–Residential (DT-R)	The purpose of the Downtown–R District is to provide an area for predominantly urban residential uses. Limited office and retail uses are permitted as secondary to residential use to provide the amenity of shopping and services within an easy walking distance of residential structures.
Downtown–Old Bellevue (DT-OB)	The purpose of the Downtown–OB District is to reinforce the character of the Old Bellevue area and ensure compatibility of new development with the scale and intensity of the area. The social and historic qualities of this area are to be preserved.
Downtown–Office and Limited Business (DT-OLB)	The purpose of the Downtown–OLB District is to provide an area for integrated complexes made up of office, residential, and hotel uses, with eating establishments and retail sales secondary to these primary uses. The district abuts and has access to both I-405 and light-rail transit service. The Downtown–OLB District differentiates maximum building heights and allowed density for areas north of NE 8th Street, between NE 4th and NE 8th Street, and south of NE 4th Street based on proximity to the Downtown Core and convenient access to the regional freeway system and transit. This creates three districts: Downtown–OLB North, Downtown–OLB Central, and Downtown–OLB South (DT-OLB North, DT-OLB Central, and DT-OLB South).
BELRED	
BelRed–Medical Office (BelRed-MO)	The purpose of the BelRed-MO Land Use District is to provide an area for office uses, with an emphasis on medical office.
BelRed–Medical Office Node (BelRed-MO-1)	The purpose of the BelRed-MO-1 Land Use District is to provide an area for the most intense medical office uses. The district is located within the core of a nodal area and is limited in extent to provide the level of intensity appropriate for areas in close proximity to the highest levels of transit service within the BelRed area.
BelRed–Office/Residential (BelRed-OR)	The purpose of the BelRed-OR Land Use District is to provide an area for a mix of office, housing, and retail uses, with office as the predominant use.
BelRed–Office/Residential Node 1 (BelRed-OR-1)	The purpose of the BelRed-OR-1 Land Use District is to provide an area for a mix of office, housing, and retail uses within the core of a nodal area, with offices as the predominant use. The district is limited in extent to provide the level of intensity appropriate for areas in close proximity to the highest levels of transit service within the BelRed area.
BelRed–Office/Residential Node 2 (BelRed-OR-2)	The purpose of the BelRed-OR-2 Land Use District is to provide an area for a mix of office, housing, and retail uses, with office as the predominant use. The district is located within a node but outside the node's core, and building heights provide for a transition between the node's core and areas outside the node.
BelRed–Office/Residential Transition (BelRed-ORT)	The purpose of the BelRed-ORT Land Use District is to provide an area for low-intensity offices and uses and low-density multi-family residential dwellings, developed in such a manner as to provide a buffer between residential and more intensively developed properties.
BelRed–Residential (BelRed-R)	The purpose of the BelRed-R Land Use District is to provide an area for residential uses. Limited retail and service uses are permitted secondary to residential use to provide the amenity of shopping and services within easy walking distance of residential structures.

Zoning Designation	Description
BelRed–Residential/ Commercial Node 1 (BelRed-RC-1)	The purpose of the BelRed-RC-1 Land Use District is to provide an area for a mix of housing, retail, office, and service uses within the core of a nodal area, with an emphasis on housing. The district is limited in extent to provide the level of intensity appropriate for areas in close proximity to the highest levels of transit service within the BelRed area.
BelRed–Residential/ Commercial Node 2 (BelRed-RC-2)	The purpose of the BelRed-RC-2 Land Use District is to provide an area for a mix of housing, retail, office, and service uses. The district is located within a node but outside the node's core, and building heights provide for a transition between the node's core and areas outside the node.
BelRed–Residential/ Commercial Node 3 (BelRed-RC-3)	The purpose of the BelRed-RC-3 Land Use District is to provide an area for a mix of housing, retail, office, and service uses, with an emphasis on housing. The district is located within a node but in close proximity to mature, stable neighborhoods, and is thus appropriate for transitional heights.
BelRed–Commercial/ Residential (BelRed-CR)	The purpose of the BelRed-CR Land Use District is to provide an area for a mix of housing, retail, office, and services. Multiple uses are encouraged on individual sites, in individual buildings, and in the district as a whole.
BelRed–General Commercial (BelRed-GC)	The purpose of the BelRed-GC Land Use District is to provide an area for a variety of business activities that provide goods and services to other businesses and the general public.
EVERGREEN HIGHLANDS	
Evergreen Highlands Design District (EH)	The Evergreen Highlands Design District provides an area for the location of high technology research and development facilities; associated light assembly and warehousing; other manufacturing uses with similar character, intensity, and impact; support service and retail uses; office uses; corporate headquarters; and residential uses. It represents a unique land resource, and is to be developed as a well-integrated, mixed use district sensitive to natural constraints and surrounding established development patterns. All development should exhibit high quality design and maintain high performance levels. The district is divided into four performance areas further discussed in Table B-2, below.
EASTGATE	
Eastgate Transit-Oriented Development (EG-TOD)	The purpose of the Eastgate TOD District is to provide an area for a mix of housing, retail, office, and service uses, with an emphasis on housing. The district is limited in area so that there is an appropriate level of density nearest the highest levels of transit service.
EAST MAIN	
East Main TOD Higher Density (EM-TOD-H)	The purpose of the EM-TOD-H Land Use District is to create a vibrant mixed use hub of activity with an intensive mix of transit-supportive uses such as housing, office, retail, and hotel uses. This unique transit-proximate neighborhood is distinct from and complementary to Downtown. Due to its proximity to the Sound Transit East Main Light-Rail Station, the pattern and intensity of development in this district are intended to maximize transit ridership by generating high transit usage and optimizing density and access to the transit network. This district's size is limited to achieve desired intensities in a compact, walkable pattern that reinforces its role as development-oriented to transit. A balanced mix of housing, office, retail, and hotel uses supports a

Zoning Designation	Description
	safe and active neighborhood during daytime and evening hours. The multimodal transportation system prioritizes pedestrian and bicycle access as the primary means of travel within this district, while light rail will serve as the primary transportation system outside of the district.
East Main TOD Lower Density (EM-TOD-L)	The purpose of the EM-TOD-L Land Use District is to provide a mix of housing, office, retail, hotel, and open space uses. While within a reasonable walking distance to the Sound Transit East Main Station, the EM-TOD-L Land Use District location does not provide the immediate access to the station provided by the EM-TOD-H Land Use District. Mercer Slough and the associated wetland complex are prominent in EM-TOD-L, and development is intended to maximize connections to these natural features. Mercer Slough and the associated wetland complex are Shorelines of Statewide Significance pursuant to RCW 90.58.020, which places the statewide interest over local interest and the preservation of the natural character above all other use preferences. Based on the presence of these natural systems, this district is intended to be supported by transit use and access, but at a lower intensity.
FACTORIA	
Factoria 1 (F1)	The Factoria, F1 District is a mixed use residential and regional retail center located adjacent to freeway corridors. It is to be developed as an aesthetically attractive urban village center to serve the Factoria community as well as shoppers attracted to the retail stores. Specific development areas and design guidelines apply within the district. The total size of the district is approximately 40 acres.
Factoria 2 (F2)	The Factoria, F2 District provides for intensive office, movie theater, and service uses adjacent to freeway corridors in the Factoria area.
Factoria 3 (F3)	The Factoria, F3 District provides for highly intensive office use in an integrated complex adjacent to freeway corridors in the Factoria area. This is the most intensive office district outside the Downtown.
OTHER	
Medical Institution (MI)	The Medical Institution District provides for the location of hospital uses and ancillary uses to the primary hospital use located on the same site or on sites in close proximity. The purpose of the district is to encourage comprehensive long-term master development planning for the properties designated MI and to allow flexible dimensional standards to facilitate development of major medical institutions and provision of the vital public services offered by these institutions. Three specific development areas have been established to implement the objectives of the Medical Institution District (further discussed in Table B-2, below).
Camp and Conference Center (CCC)	Camp and Conference Center (CCC) provides areas for a unified mix of group day or residence camps and professional, educational, or religious meetings, conferences, seminars, and retreats and their associated facilities and activities. These are used primarily by organizations and schools and the families and individuals they enroll. The purpose of the designation is to maintain the compatibility of this unique mix of uses with surrounding neighborhoods by limiting the overall intensity of the site and protect lower intensity uses from the effects of higher intensity uses.

SOURCES: Ordinance 6670, adopted July 18, 2022; Bellevue Map Viewer, 2023; Title 20 BCC, 2023; BERK 2023

NOTE: BCC Chapter 20.10 was recently amended by Ordinance 6670, codified in September 2022.

Overlay Districts

Table B-2 summarize the overlay districts established in Title 20 BCC that help implement the future land use designations.

TABLE B-2 **Overlay Districts**

District	Purpose
Shoreline Overlay District	The Shoreline Overlay District, or Shoreline Master Program, regulates development of the shorelines in Bellevue to protect the ecosystems of the shoreline areas; encourage water-dependent uses; provide for maximum public use and enjoyment of the shorelines of the city; and preserve, enhance, and increase views of the water and access to the water. See Chapter 4, *Relationship to Plans and Policies*, for more information about the Shoreline Master Program and the purpose of each environment designation.
Critical Areas Overlay District	The Critical Areas Overlay District is a mechanism by which the city recognizes the existence of natural conditions that affect the use and development of property. Through this part, the city designates and classifies ecologically sensitive and hazard areas and imposes regulations on the use and development of affected property to protect the functions and values of these areas and the public health, safety, and welfare, and to allow the reasonable use of private property. See Appendix E, *Plants and Animals Memorandum*, for further discussion of critical areas
Downtown Perimeter Overlays	The Downtown Perimeter Overlays provide an area of lower-intensity development to buffer between less-intense uses outside Downtown and more intensively developed properties in Downtown. These include Perimeter Overlays A-1, A-2, A-3, B-1, B-2, and B-3, each of which has varying dimensional requirements (including setback, lot coverage, building height, and floor area ratio) for nonresidential, residential, and abovegrade parking facilities.
Transition Area Design District	The Transition Area Design District provides a buffer between residential uses in a residential land use district and a land use district that permits development of higher intensity. Where multi-family development is planned adjacent to single-family residential uses or commercial development is planned adjacent to residential uses, such development should incorporate elements in the site design and building design to soften its impact and to result in a compatible transition.
Evergreen Highlands Performance Areas	The Evergreen Highlands Design District is divided into four performance areas: • The Evergreen Highlands Performance Area A (EH-A) provides a location for medium-density multi-family development, not exceeding 11 units per gross acre. This performance area is intended to provide housing opportunities, and to serve as a transition to the single-family housing adjacent to the Evergreen Highlands Design District. • The Evergreen Highlands Performance Area B (EH-B) provides a location for lower intensity office uses. It serves as a transition between the residential development in EH-A and the higher intensity nonresidential uses in EH-C. This performance area constitutes the area of highest environmental sensitivity within the Design District, and development must reflect the natural limitations of the land.

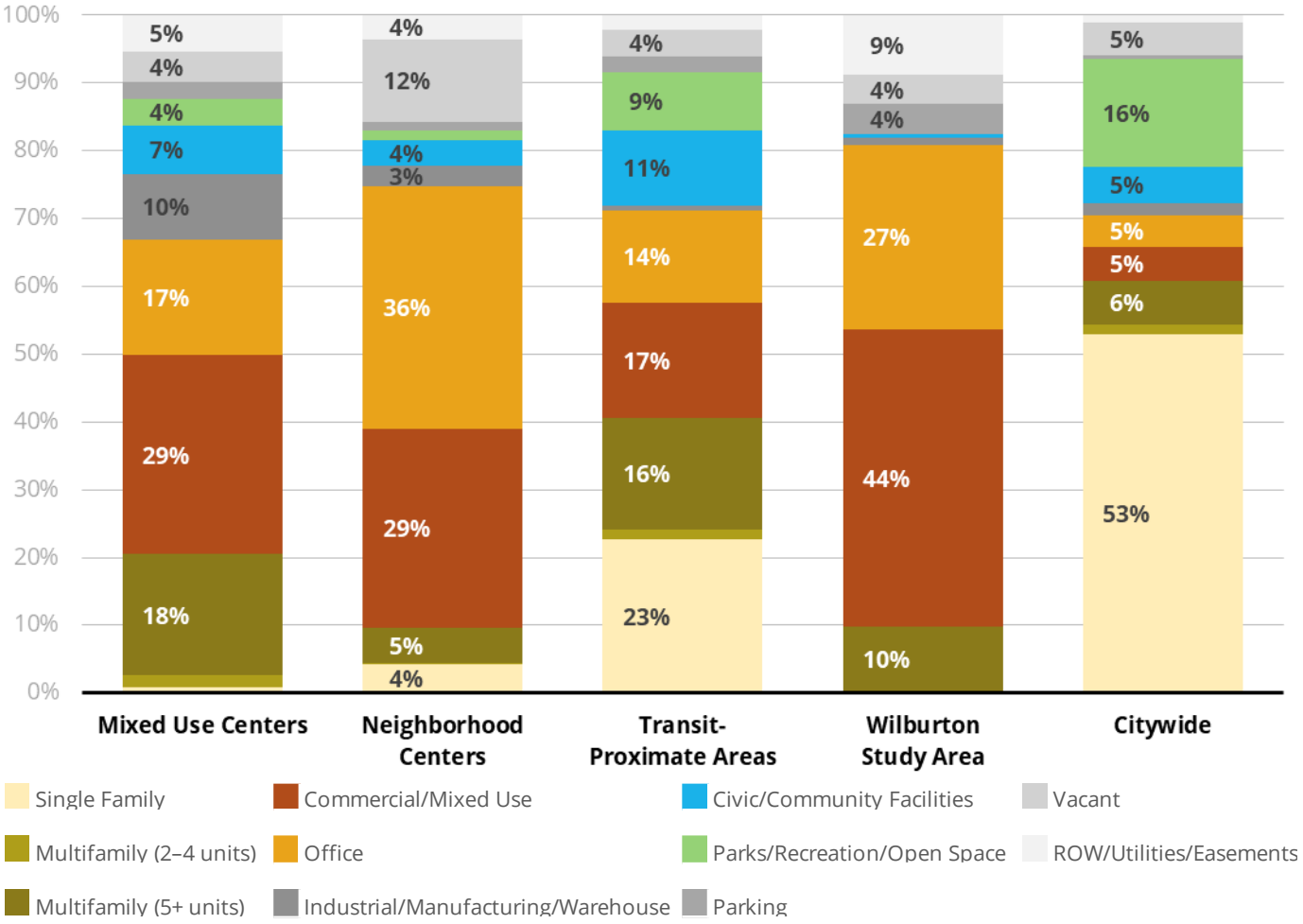
District	Purpose
	• The Evergreen Highlands Performance Area C (EH-C) provides a location for research and development activity, office uses, and convenience retail and service uses. This performance area will serve as the focal point for the entire Design District. It must be developed in a campus-like research and development park theme and should be compatible with nearby less-intense areas. • The Evergreen Highlands Performance Area D (EH-D) provides a location for office uses. It serves as a transition between the concentration of research and development and office uses to the north and the surrounding land use districts.
Evergreen Highlands Subarea Transportation Improvement Overlay District	The Evergreen Highlands Subarea Transportation Improvement Overlay District implements phased transportation improvements to mitigate the adverse impacts of development on the pre-existing circulation system. Phased development with associated transportation improvements and limited access to NE 40th Street, Bellevue-Redmond Road, and 156th Avenue NE will result in an efficient transportation system for the subarea and surrounding properties.
Light Rail Overlay District	This Light Rail Overlay District specifically identifies and regulates regional light-rail transit systems (RLRT system) and regional light-rail transit facilities (RLRT facility), including all areas where the use, construction, or installation of an RLRT system or facility is proposed (including areas disturbed temporarily during construction and identified for mitigation of permanent and temporary impacts related thereto). The district specifically acknowledges the unique characteristics of a regional essential public facility that is linear in nature and passes through the City of Bellevue, touching numerous land use districts and overlay areas.
Medical Institution District Development Areas	Three specific development areas have been established to implement the objectives of the Medical Institution District: • The Hospital Center Development Area (DA1) provides an area for the primary hospital and the most intensive ambulatory health care center uses to be located within close proximity. The tallest heights and largest floor plates in the MI District are appropriate in this area. • The Medical Office Development Area (DA2) provides an area for medical office and hospital-related uses that are less dependent on immediate access to the primary hospital emergency rooms and patient beds. • The Hospital Perimeter Development Area (DA3) provides an area for less intense hospital and ambulatory health care center uses to be located within close proximity to the primary hospital located in DA1.

SOURCE: Ordinance 6670, Adopted July 18, 2022; Title 20 BCC, 2023; BERK 2023

NOTES: BCC Chapter 20.10 was recently amended by Ordinance 6670, codified in September 2022. Additional elements of the Land Use Code specific to urban form are discussed in Chapter 6, *Aesthetics* (such as design guidelines).

Current Land Use

Current land uses were based on the City's parcel and park GIS layers and current use codes from the King County Assessor (per "KCPresentUse" field codes). Present use codes from the Assessor were assigned a general land use category and checked against the city's park layer. Uncategorized parcels were assigned a present use category based on Google Maps. The acreage totals do not include all ROW in the city—only ROW associated with a designated parcel per the Assessor is included. **Figure B-1** displays the relative percent of acres citywide versus the Mixed Use Centers, Neighborhood Centers, transit-proximate areas, and Wilburton study area.



SOURCE: City of Bellevue 2023; King County Assessor 2023; Google Maps 2023; BERK 2023

NOTES: Based on the City's parcel and park GIS layers and current use codes from the King County Assessor (per "KCPresentUse" field codes). Present use codes from the Assessor were assigned a general land use category and checked against the city's park layer. Uncategorized parcels were assigned a present use category based on Google Maps. Does not include all ROW in the city—only includes ROW associated with a designated parcel per the Assessor.

FIGURE B-1 **Current Land Use, Percent Citywide and by Location**

Diverse Use Categories and Sources

Diverse land uses in Bellevue were derived from the city's inventories of amenities, parks, and public facilities (including police and fire stations) and current land use from the King County Assessor. The general diverse use categories are based on a LEED measure for diverse use—not all LEED categories were used in this analysis based on available data. **Table B-3** summarizes the LEED use categories and types and the source layer or layers used to map these within Bellevue.

TABLE B-3 **Diverse Use Categories and Types**

Category	Use Type	Source Layers (GIS Based)
Food Retail	Supermarket	City amenities layer (grocery store, bakery)
	Grocery with produce section	*Note: distinction between supermarket or grocery with or without produce not available*
Community-Serving Retail	Convenience store	King County Assessor, current use (convenience stores with or without gas)
	Farmers market	Google maps
	Hardware store	City amenities layer (hardware store)
	Pharmacy	City amenities layer (pharmacy)
	Other retail	City amenities layer (repair services, shopping mall, technology, or other retail)
Services	Bank	King County Assessor, current use (bank)
	Family entertainment venue (e.g., theater, sports)[a,b]	City amenities layer (pool) King County Assessor, current use (family entertainment, private golf course, or sports facility)
	Gym, health club, exercise studio	City amenities layer (gym/exercise studio)
	Hair care	*Not available*
	Laundry, dry cleaner	*Not available*
	Restaurant, café, diner (excluding those with only drive-thru service)	City amenities layer (restaurant or bar)
Civic & Community Facilities	Adult or senior care (licensed)	City amenities layer (subset of civic uses) King County Assessor, current use (subset of group homes or nursing homes)
	Child care (licensed)	City amenities layer (day care)
	Community or recreation center[b]	King County Assessor, current use (subset of multiple present use categories including clubs, governmental services, or public parks)

Category	Use Type	Source Layers (GIS Based)
	Cultural arts facility (museum, performing arts)	City amenities layer (theater, theatre) King County Assessor, current use (subset of art gallery / museum / soc services or auditorium / assembly building)
	Education facility (e.g., K–12 school, university, adult education center, vocational school, community college)	City amenities layer (schools or educational services)
	Government office that serves public on-site, including social services[b]	City amenities layer (city services, other government)
	Medical clinic or office that treats patients	City amenities layer (hospital or neighborhood clinics)
	Place of worship	King County Assessor, current use (place of worship)
	Police or fire station	City fire house layer (active fire houses) City police station layer (police substations)
	Post office	City amenities layer (postal service)
	Public library	City amenities layer (library)
	Public park[b,c]	City parks layer King County Assessor, current use (open space, cemetery, or public park)
Community Anchor Uses	Commercial office (≥100 FTE jobs)	*Not available*
	Housing (≥100 dwelling units)	*Not available*

SOURCE: City of Bellevue 2023; King County Assessor 2023; LEED Diverse Use Categories (Option 2 and Appendix 1), 2023; Google Maps 2023; BERK 2023

NOTES: Based on the City's amenity, facilities, and park GIS layers and King County Assessor current land use data. Parcel-based present uses are based on the city's parcel and park GIS layers and current use codes from the King County Assessor (per "KCPresentUse" field codes). Present use codes from the Assessor were assigned a general land use category and checked against the city's park layer. Uncategorized parcels were assigned a present use category based on Google Maps.

Based on city's amenity, facilities:

a. Includes country clubs or private, fee-based recreation clubs.
b. Reviewed for duplicates (e.g., multiple polygons or points associated with a single facility) before summarizing in Chapter 3, *Land Use Patterns and Urban Form*. Duplicates removed for government offices offering multiple services. For example, all amenities listed a location of City Hall were collapsed into one "Government office that serves public on-site."
c. Includes active parks and passive open space as well as cemeteries.

References

City of Bellevue. Bellevue Map Viewer powered by ESRI. Accessed March 2023. https://bellevuewa.gov/city-government/departments/ITD/services/maps.

City of Bellevue. Ordinance 6670. Accessed April 2023. https://bellevue.municipal.codes/enactments/Ord6670.

King County Assessor. 2023a. "Parcel Viewer 2". Accessed March 2023. https://gismaps.kingcounty.gov/parcelviewer2/.

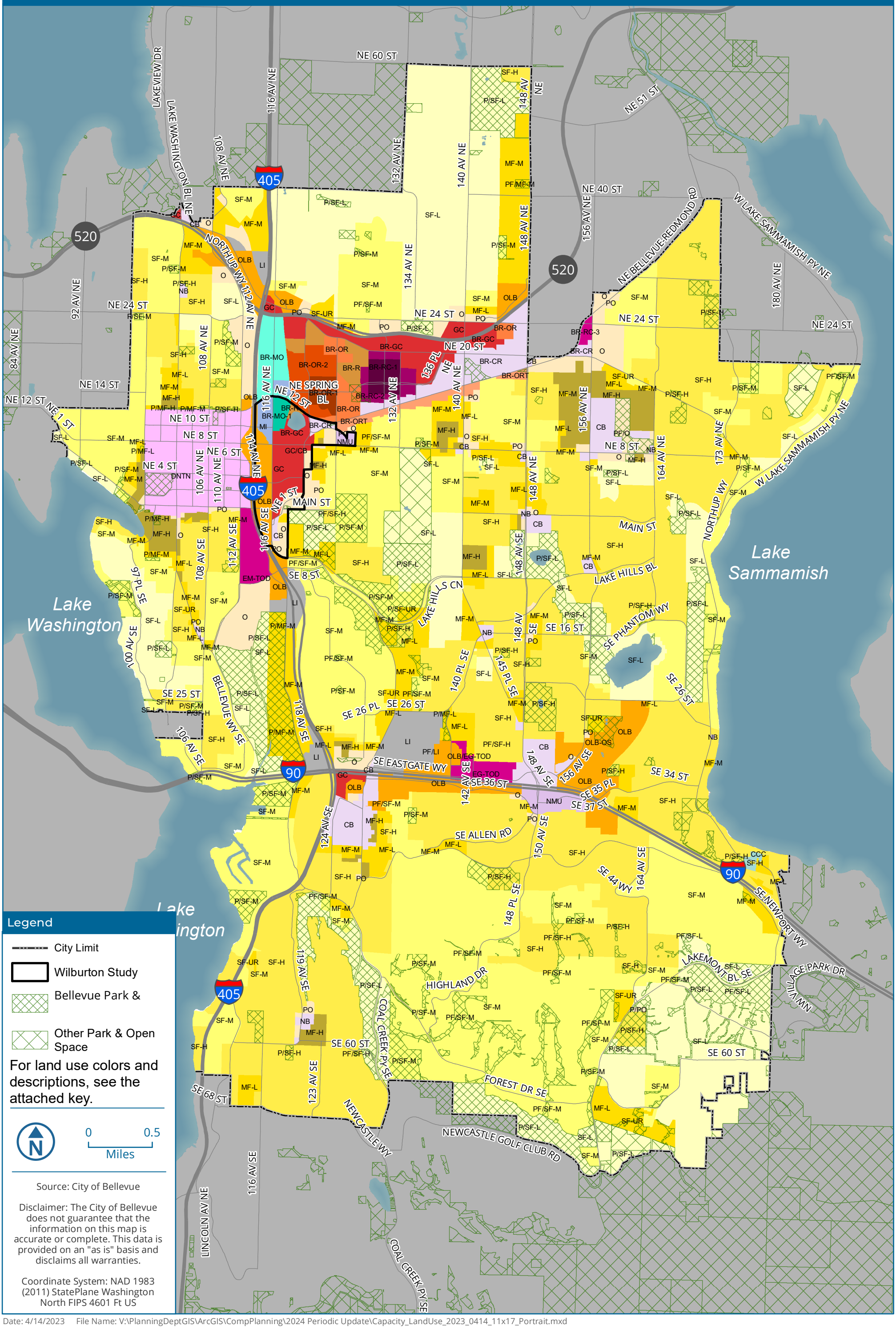
King County Assessor. 2023b. "Decode Table for Values in item PRESENTUSE in table PARCEL_EXTR". Accessed March 2023. https://www5.kingcounty.gov/sdc/Metadata.aspx?Layer=kca102_presentuse_parcel.

USGBC (U.S. Green Building Council). 2023. LEED Appendix 1. Use Types and Categories. Accessed March 2023. https://www.usgbc.org/credits/new-construction-existing-buildings-commercial-interiors-core-and-shell-schools-new-constr-2.

USGBC (U.S. Green Building Council). 2023. LEED Surrounding Density and Diverse Uses. Accessed March 2023. https://www.usgbc.org/credits/core-shell/v2012/ltc4.

Alternative 0

Land Use Categories



Legend

- City Limit
- Wilburton Study
- Bellevue Park &
- Other Park & Open Space

For land use colors and descriptions, see the attached key.

N

0 0.5 Miles

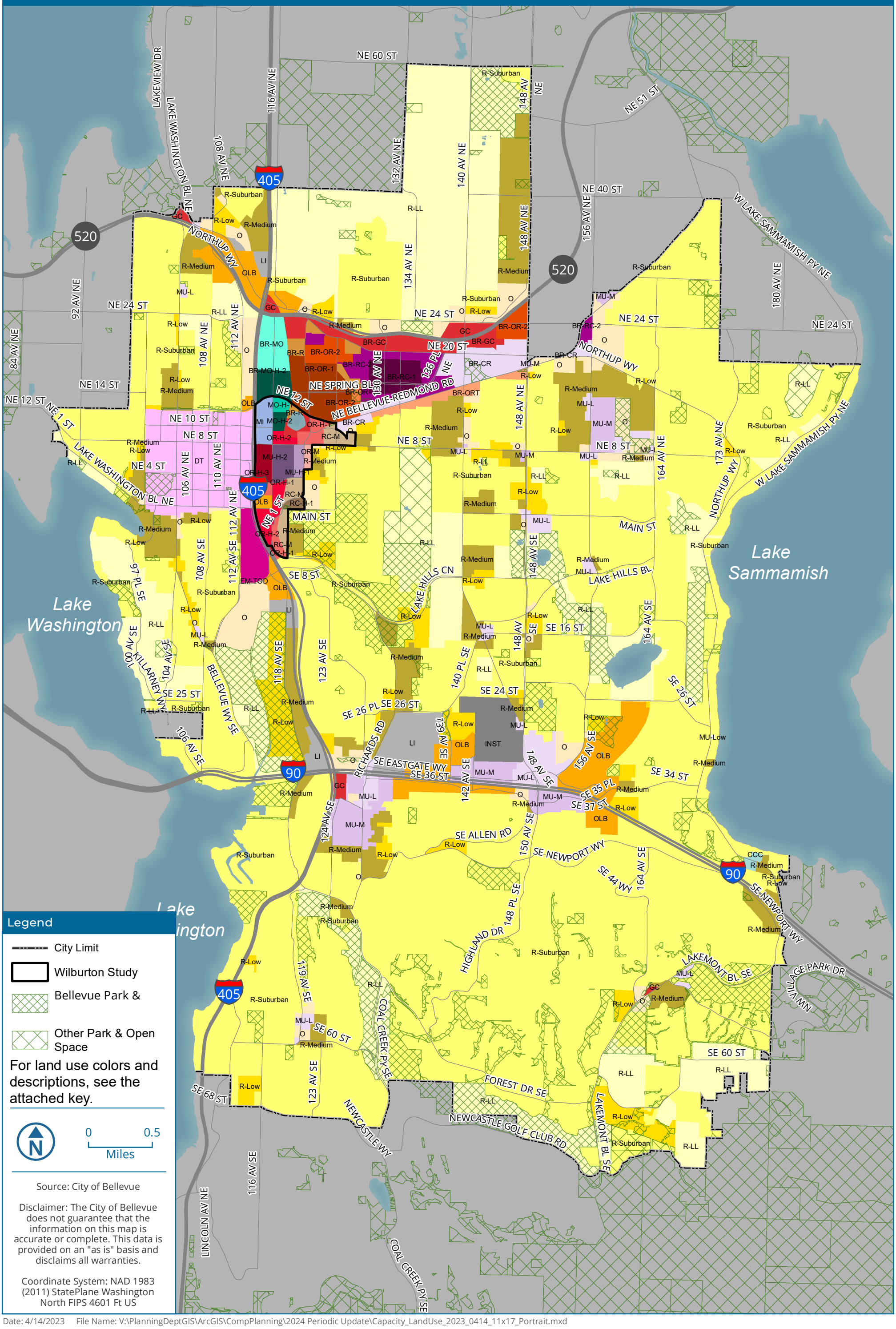
Source: City of Bellevue

Disclaimer: The City of Bellevue does not guarantee that the information on this map is accurate or complete. This data is provided on an "as is" basis and disclaims all warranties.

Coordinate System: NAD 1983 (2011) StatePlane Washington North FIPS 4601 Ft US

Date: 4/14/2023 File Name: V:\PlanningDeptGIS\ArcGIS\CompPlanning\2024 Periodic Update\Capacity_LandUse_2023_0414_11x17_Portrait.mxd

Alternative 1
Land Use Categories



Legend

- City Limit
- Wilburton Study
- Bellevue Park &
- Other Park & Open Space

For land use colors and descriptions, see the attached key.

N

0 0.5 Miles

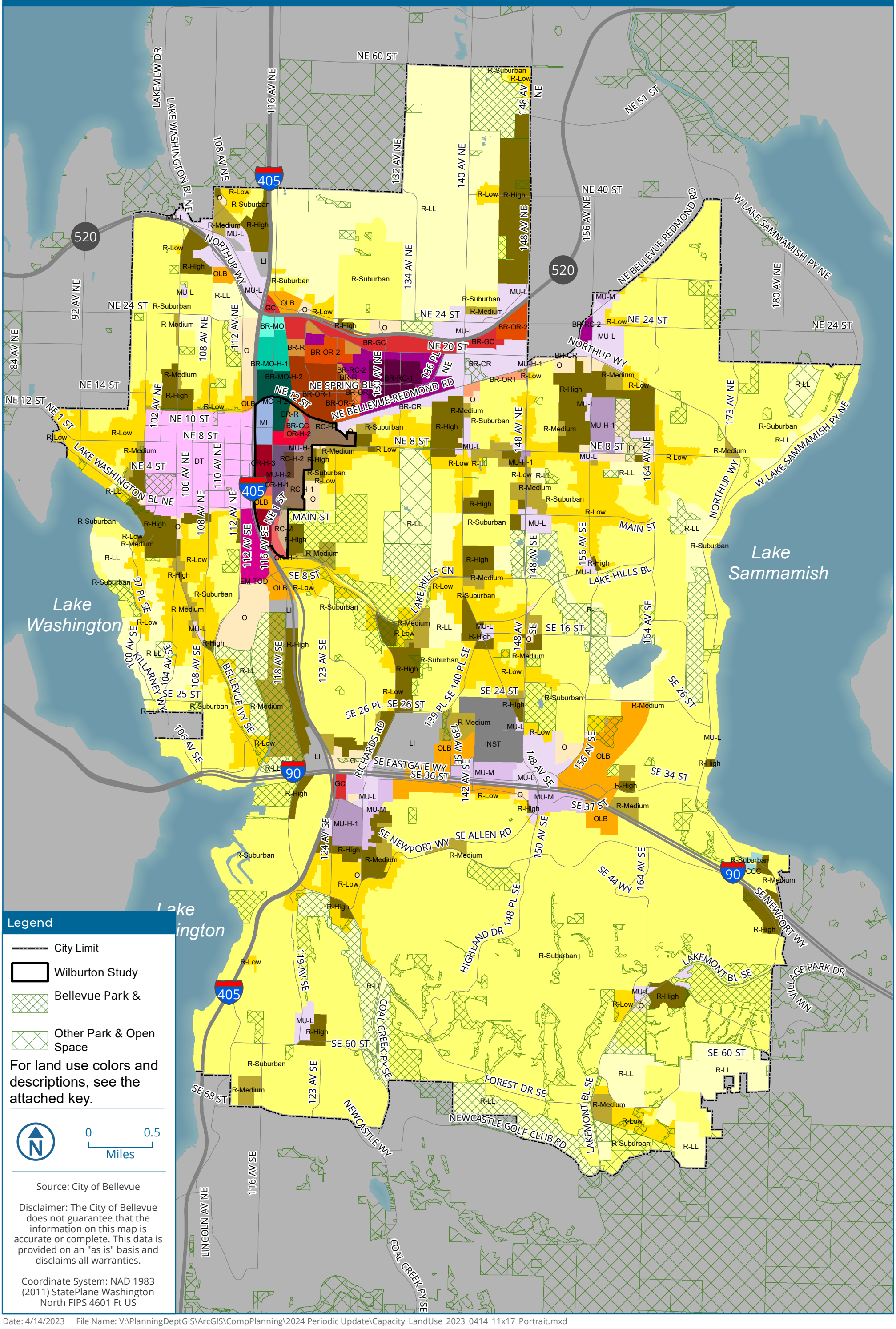
Source: City of Bellevue

Disclaimer: The City of Bellevue does not guarantee that the information on this map is accurate or complete. This data is provided on an "as is" basis and disclaims all warranties.

Coordinate System: NAD 1983 (2011) StatePlane Washington North FIPS 4601 Ft US

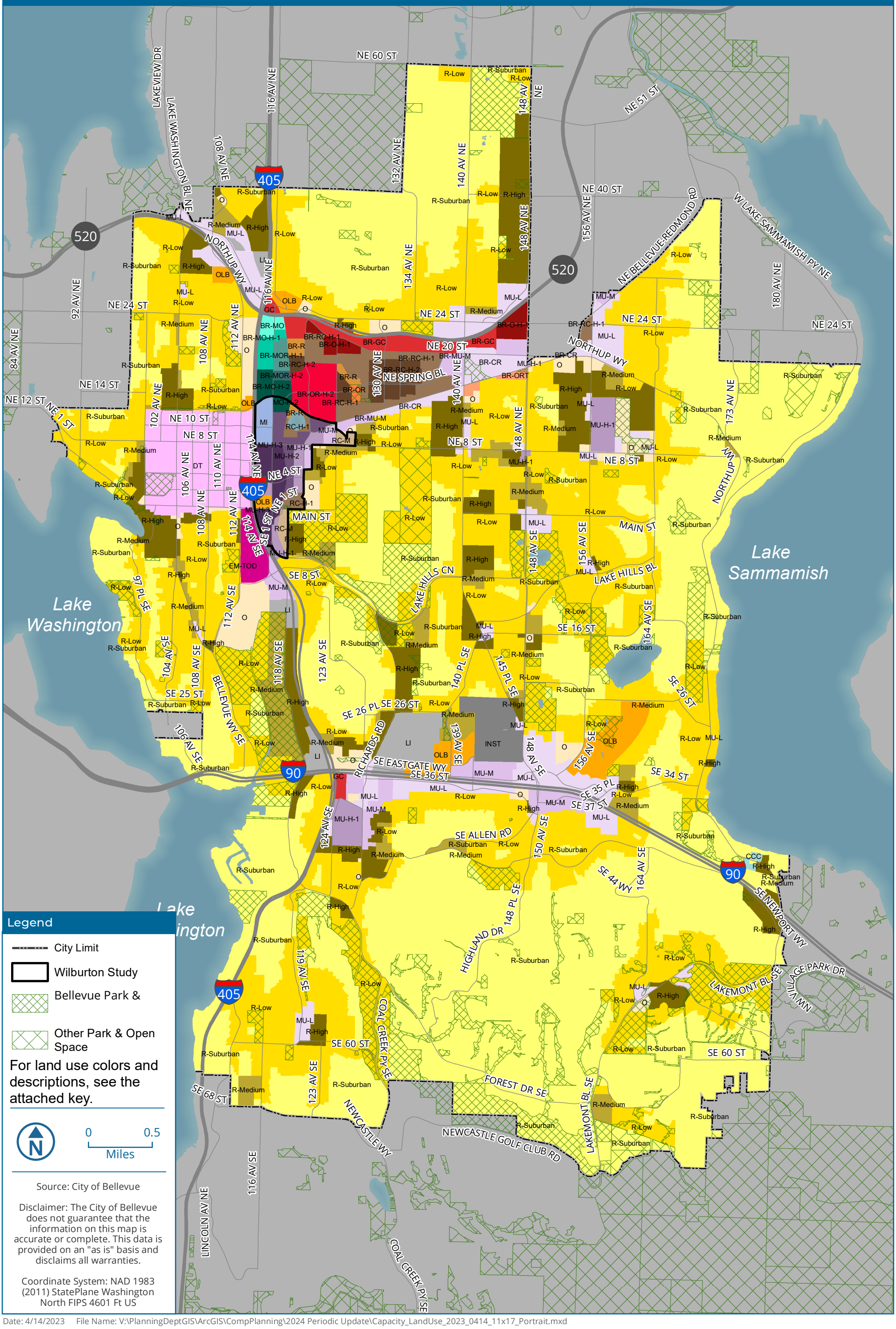
Date: 4/14/2023 File Name: V:\PlanningDeptGIS\ArcGIS\CompPlanning\2024 Periodic Update\Capacity_LandUse_2023_0414_11x17_Portrait.mxd

Alternative 2
Land Use Categories



Date: 4/14/2023 File Name: V:\PlanningDeptGIS\ArcGIS\CompPlanning\2024 Periodic Update\Capacity_LandUse_2023_0414_11x17_Portrait.mxd

Alternative 3
Land Use Categories



Source: City of Bellevue

Disclaimer: The City of Bellevue does not guarantee that the information on this map is accurate or complete. This data is provided on an "as is" basis and disclaims all warranties.

Coordinate System: NAD 1983 (2011) StatePlane Washington North FIPS 4601 Ft US

Date: 4/14/2023 File Name: V:\PlanningDeptGIS\ArcGIS\CompPlanning\2024 Periodic Update\Capacity_LandUse_2023_0414_11x17_Portrait.mxd

Land Use Map Key

for EIS Alternatives

Existing	EIS	Description
BR-GC	BR-GC	BelRed – General Commercial. A wide variety of business activities in buildings generally 1 or 2 stories.
BR-MO	BR-MO	BelRed – Medical Office. Medical office in buildings generally between 2 & 6 stories.
BR-MO-1		BelRed – Medical Office. Medical office in buildings generally between 4 & 12 stories.
	BR-MO-H-1	BelRed – Medical Office Highrise – 1. Medical office & life sciences with ground floor active uses in highrise towers up to around 15 stories.
	BR-MO-H-2	BelRed – Medical Office Highrise – 2. Medical office & life sciences with ground floor active uses in highrise towers up to around 24 stories.
	BR-MOR-H-1	BelRed – Medical Office/Residential Highrise – 1. Mostly medical office with some housing, retail & services, in highrise towers up to around 15 stories.
	BR-MOR-H-2	BelRed – Medical Office/Residential Highrise – 2. Mostly medical office with some housing, retail & services, in highrise towers up to around 24 stories.
BR-CR	BR-CR	BelRed – Commercial/Residential. Mix of housing, retail, office, & services in buildings generally between 4 & 6 stories.
	BR-MU-M	BelRed – Mixed Use – Midrise. Mix of housing, retail, office, & services in midrise buildings generally up to around 9 stories.
BR-ORT	BR-ORT	BelRed – Office/Residential Transition. Mix of housing & office in buildings generally between 2 & 4 stories such as townhomes & lowrise apartments.
BR-OR	BR-OR	BelRed – Office/Residential. Mostly office with some housing, retail, & services, in buildings generally between 2 & 6 stories.
BR-OR-2	BR-OR-2	BelRed – Office/Residential – 2. Mostly office, with some housing, retail, & services, in buildings generally between 2 & 11 stories.
BR-OR-1	BR-OR-1	BelRed – Office/Residential – 1. Mostly office, with some housing, retail, & services, in buildings generally between 12 & 14 stories.
	BR-OR-H-2	BelRed – Office/Residential – Highrise – 2. Mostly office with some housing, retail, & services, in highrise buildings generally up to around 24 stories.
	BR-O-H-1	BelRed – Office – Highrise -1. Mostly office with some retail, & services, in highrise buildings up to around 15 stories.
BR-R	BR-R	BelRed – Residential. Housing with limited retail & services in buildings generally between 2 & 4 stories.
BR-RC-3		BelRed – Residential/Commercial – 2. Mostly housing, with limited retail, office, & services, in buildings generally between 2 & 5 stories.
BR-RC-2	BR-RC-2	BelRed – Residential/Commercial – 2. Mostly housing, with limited retail, office, & services, in buildings generally between 2 & 11 stories.
BR-RC-1	BR-RC-1	BelRed – Residential/Commercial – 1. Mostly housing, with limited retail, office, & services, in buildings generally between 2 & 14 stories.
	BR-RC-H-1	BelRed – Residential/Commercial Highrise – 1. Mostly housing with limited retail, office, & services in highrise towers generally up to around 16 stories.
	BR-RC-H-2	BelRed – Residential/Commercial Highrise – 2. Residential highrise towers including ground floor active uses up to around 25 stories.
CCC	CCC	Camp & Conference Center. Cabins & congregate buildings on large lots for limited stays.
DT	DT	Downtown. Mix of office, commercial & residential uses in highrise & midrise buildings. Downtown is designed to have higher heights in the center & lower heights on the northern, western & southern edges.
EG-TOD		Eastgate-Transit Oriented Development. Mix of residential & commercial uses with buildings generally between 4 & 15 stories.
EM-TOD	EM-TOD	East Main – Transit Oriented Development. Mix of residential, hotel & commercial uses in buildings between 4 & 6 stories with ground floor active uses.
GC	GC	General Commercial. Retail, restaurant & office uses Mostly in single-story buildings with surface parking.
	INST	Institutional. Classroom, Office & Dormitories in a campus setting.
LI	LI	Light Industrial. Manufacturing uses in 1 to 3 story buildings.
MI	MI	Medical Institutions. Developed as a campus with taller buildings near the center.
	MO-H-1	Medical Office Highrise – 1. Highrise towers up to around 16 stories, consisting Mostly of medical office uses with some hotel, & ground floor active uses.
	MO-H-2	Medical Office Highrise – 2. Highrise towers up to around 25 stories, consisting Mostly of medical office uses with some hotel, & ground floor active uses.
	MU-H-1	Mixed Use – Highrise – 1. Highrise towers up to around 16 stories, consisting Mostly of a mix of residential & office uses, with some hotel & medical uses, & ground floor active uses
	MU-H-2	Mixed Use – Highrise – 2. Highrise towers up to around 25 stories, consisting Mostly of a mix of residential & office uses, with some hotel & medical uses, & ground floor active uses.
	MU-H-3	Mixed Use – Highrise – 3. Highrise towers up to around 45 stories, consisting Mostly of a mix of residential & office uses, with some hotel & medical uses, & ground floor active uses.
CB NB	MU-L	Mixed Use – Lowrise. A mix of residential & commercial use in lowrise buildings between 2 & 4 stories.
NMU	MU-M	Mixed Use – Midrise. Mostly of a mix of residential & office uses, with some hotel & medical uses, & ground floor active uses in midrise buildings up to around 7-10 stories.
O PO	O	Office. Office uses in 1 & 2 story buildings with surface parking.
OLB OLB-2 OLB-OS	OLB	Office Limited Business. Office uses in 1 to 4 story buildings mixed with open space.
	OR-M	Office/Residential – Midrise. Midrise buildings up to around 7-10 stories, consisting Mostly of office uses, with some hotel, residential & medical uses, & ground floor active uses.
	OR-H-1	Office/Residential – Highrise – 1. Highrise towers up to around 16 stories, consisting Mostly of office uses, with some hotel, residential & medical uses, & ground floor active uses.
	OR-H-2	Office/Residential – Highrise – 2. Highrise towers up to around 25 stories, consisting of Mostly office uses, with some hotel, residential & medical uses, & ground floor active uses.
	OR-H-3	Office/Residential – Highrise – 3. Highrise towers up to around 45 stories, consisting of Mostly office uses, with some hotel, residential & medical uses, & ground floor active uses.
SF-L	R-LL	Residential – Large Lot. Mostly single-family homes on large lots with some duplexes & cottage housing types mixed in.
SF-M SF-H	R-Suburban	Residential – Suburban. Mix of single-family, duplexes, triplexes, & cottage housing
SF-UR MF-L MF-M	R-Low	Residential – Low. Mix of single-family, duplexes, triplexes, & small apartment buildings of 4 to 6 units
MF-H	R-Medium	Residential – Medium. Mix of small & large apartment buildings between 2 & 6 stories with some duplexes & townhomes.
	R-High	Residential – High. Mostly larger apartment buildings of 4 to 6 stories.
	RC-M	Residential/Commercial Midrise. Residential midrise buildings including ground floor active uses up to around 7-10 stories.
	RC-H-1	Residential/Commercial Highrise – 1. Residential highrise towers including ground floor active uses up to around 16 stories.
	RC-H-2	Residential/Commercial Highrise – 2. Residential highrise towers including ground floor active uses up to around 25 stories.

Notes:

- Not all land use designations are present in all of the alternatives.
- All Parks and other public spaces have a land use category associated with them. On these maps, existing parks are shown in hatched green and the underlaying land use is written on it.
- Building floors usually range from 10 to 12 feet: around 12 for commercial development and around 10 for residential development.

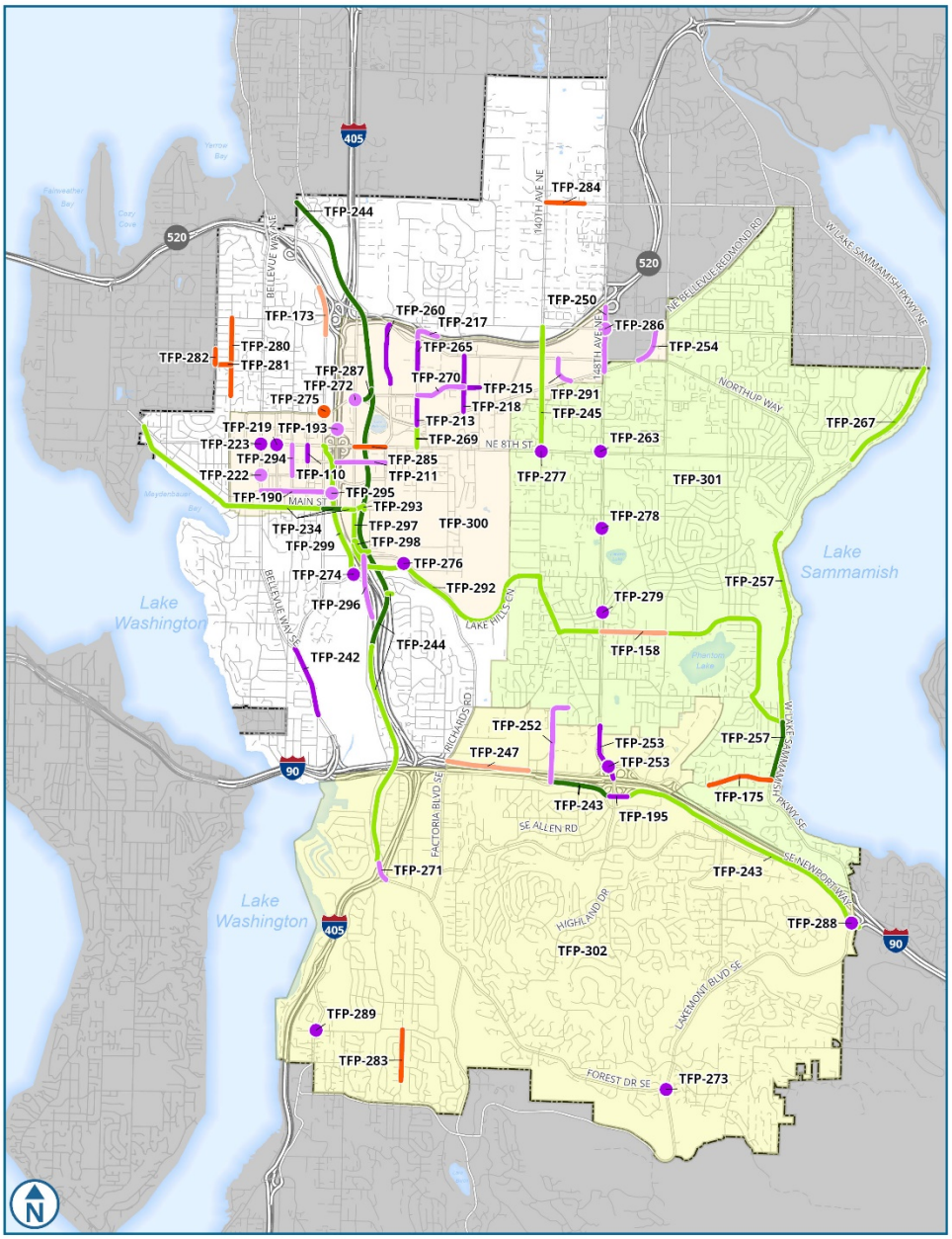
INTENTIONALLY BLANK

APPENDIX C Traffic Data

2022-2033

TRANSPORTATION FACILITIES PLAN

July 2022



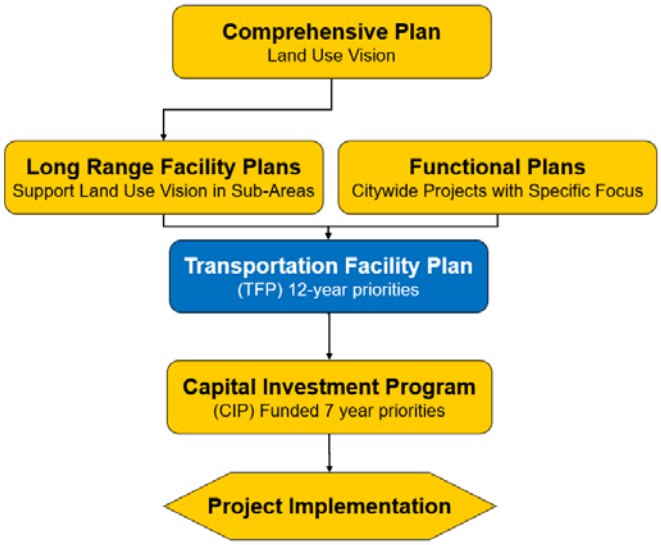
City of Bellevue
2022-2033
Transportation
Facilities Plan

As Adopted by the City Council on July 11, 2022
(Resolution No.10112)

INTRODUCTION

The Transportation Facilities Plan (TFP) is a 12-year transportation program; a listing of planned improvements balanced to projected revenues. This program is one phase in the City's multi-phased approach to planning for future transportation improvements – See Figure A, below, as well as the component descriptions that follow.

Figure A: Transportation Planning Process



- **Comprehensive Plan/Long-range transportation facility plans.** The City's Comprehensive Plan outlines Bellevue's long-term (20+ years) land use and transportation visions. Long-range transportation plans are prepared for various subareas of the City or for specific components of the transportation system. These plans include a wide range of improvement projects designed to meet the mobility goals of the plan area. Examples are the Bel-Red Plan (adopted 2009),

the Eastgate I-90 Land Use & Transportation Project study (completed in 2012) Pedestrian and Bicycle Transportation Plan (update adopted 2009), and the Bellevue Transit Plan (update adopted in 2014). Key projects from these plans and studies are included in the Comprehensive Transportation Project List, which was an element of the Bellevue Comprehensive Plan at the time the list of candidate projects for this TFP was assembled. (In December 2021, the City Council adopted several amendments to the Comprehensive Plan, including elimination of the Comprehensive Transportation Project List; future project needs are now identified in the City's Transportation Improvement Program, which is required by state law and updated annually.)

- The **Transportation Facilities Plan (TFP)**, reflecting a comprehensive, citywide study, collects the priority projects identified in the long-range plans, as well as other emerging transportation facility needs and opportunities. The TFP serves as an implementation plan constrained by identified City and other revenues that are projected for the next 12 years.

- The **Capital Investment Program (CIP) Plan** reflects funding to implement the City's highest priority capital needs, such as Transportation, Parks and Utility facilities for a seven-year period. The CIP is adopted by the Bellevue City Council every two years through the biennial budget update process. Transportation projects funded in the CIP represent projects identified in the TFP that are likely to be needed in the short term. It may also include projects, based on operational, safety and maintenance needs identified by City staff, the public or other sources, that were not included in the TFP.

BACKGROUND

In December 1989, the City Council passed Ordinance No. 4104 directing the City to develop and adopt a transportation funding program by joining public and private sources, including a mechanism to charge and collect transportation impact fees. The impact fees were to provide a portion of the funding for reasonable and necessary transportation system improvements to mitigate the cumulative impacts of growth and development on the transportation system. On July 23, 1990, the City Council adopted Bellevue's first TFP, the 1991-2002 TFP (Resolution No. 5292). That same day Council adopted the City's first Impact Fee Project List and Impact Fee Rate Schedule (Ordinance No. 4161). Subsequently, City Council adopted updated TFPs as follows:

- 1994 (the 1994-2005 Plan; Resolution No. 5802);
- 1996 (the 1996-2007 Plan; Resolution No. 6034);
- 1998 (the 1998-2009 *Interim* TFP; Ordinance No. 5110);

- 2001 (the 2001-2012 Plan; Ordinance No. 5311);
- 2004 (the 2004-2015 Plan; Ordinance No. 5524);
- 2006 (the 2006-2017 Plan, Resolution No. 7482);
- 2009 (the 2009-2020 Plan, Resolution No. 7896, amended by Resolution No.7914);
- 2013 (the 2013-2024 Plan, Resolution No. 8617, amended by Resolution No. 8623);
- 2015 (the 2016-2027 Plan, Resolution No. 9032), and
- 2019 (the 2019-2030 Plan, Resolution No 9637).

PURPOSE

By prioritizing transportation improvements for the City over the next twelve years, the TFP serves two important purposes:

- Intermediate-Range Planning Tool
- Basis for Impact Fee Program

Intermediate-Range Planning Tool

The TFP serves as a bridge between the long-range transportation facility plans (projects are listed in the Comprehensive Transportation Project list component of the Bellevue Comprehensive Plan as well as in functional plans, including the Pedestrian and Bicycle Transportation Plan and the Transit Master Plan) and the fully-financed transportation sections of the City's Capital Investment Program (CIP) Plan.

The CIP contains four transportation-related program areas: Roadways, Intersections, Walkways/Bikeways, and Minor Capital/Maintenance. Facility improvement projects included in the transportation program areas of the CIP are also included in the mid-range TFP.

Basis for Impact Fee Program

The City collects transportation impact fees from developers to pay for facilities needed to serve new growth and development. The impact fee ordinance (Chapter 22.16 of the Bellevue City Code) specifies the 12-year TFP as the comprehensive transportation capital facilities plan for the purpose of identifying facility improvements to meet future development needs. Through the Transportation Impact Fee Program, developers pay a portion of the project costs for the roadway and intersection capacity projects that have full implementation funding allocated to them within the TFP.

A SEPA checklist was prepared for the 2022-2033 TFP and a Determination of Non-Significance was issued on April 28, 2022. Projects in the TFP are evaluated for SEPA environmental impacts at time of implementation.

TFP DEVELOPMENT

REVENUE FORECAST

The TFP is a "financially constrained" plan, where the amount of estimated project costs identified in the TFP is balanced with projected revenues, consistent with the City's seven-year CIP plan. Not all projects in the TFP are allocated funding for the total estimated cost to fully implement the project, therefore, the TFP project descriptions identify those project elements that are funded by the constrained resources projected for the 12-year TFP period. Funding for transportation facilities comes from a variety of sources as outlined below.

Funding Sources. Over the next 12 years, the transportation projects in this Plan are projected to receive approximately $312.2 million in funding from a variety of sources, including:

- General CIP revenue, comprised of the portion of the City's sales tax, business & occupation tax and long-term debt dedicated to capital improvements.
- Transportation dedicated revenue, various taxes and fees, such as fuel taxes and real estate excise taxes. Combined with General CIP revenue, the two categories account for approximately 18 percent of the funding for projects included in the TFP.

  Note: For purposes of the TFP, the percentage of these two revenue categories is combined as neither category is a "project specific" revenue and adjustments are often made to balance project budgets once programmed in the CIP.

- TIFIA Loan – The City of Bellevue was approved for and executed a Transportation Infrastructure and Finance Innovation Act loan agreement with the U.S. Department of Transportation in June 2017. Loan proceeds are only eligible to be expended on five specific projects in the BelRed area. This loan is projected to provide approximately 29 percent of the transportation funding during this TFP Plan period.

- Neighborhood Safety, Connectivity and Congestion Levy – Voters in the City of Bellevue passed this levy in the November of 2016 general election. Levy revenue generated is divided into two distinct accounts for allocation, 1) dedicated for neighborhood congestion reduction project development, and 2) dedicated for neighborhood safety and connectivity projects. The latter category is further divided into multiple focus areas including neighborhood sidewalks, bicycle facilities, traffic safety or system operational improvements,

Intelligent Transportation Systems (ITS), and system maintenance. The TFP revenue forecast only includes the portion of levy funding allocated to actual transportation facilities; it does not include funding allocated to system operations improvements or maintenance work. Eligible levy revenue will provide approximately 19 percent of the funding during the Plan period.

- Impact fees and other developer contributions required from new development are projected to provide approximately 14 percent of the funding for new improvements.
- Grants and contributions from other agencies account for approximately 20 percent of projected transportation funding. The primary sources are the federal government, the state, and transit agencies.

Future revenue projections can be volatile and depend on many factors, such as the local and regional economies; state or local legislation affecting taxes or fees; and the relative investment priorities of both public agencies and private entities. With adjustments made for known changes, the amounts and percentages of the funding categories listed above were calculated based on the revenue allocations in the 2021-2027 CIP Plan, adopted in December 2020. Actual revenue collected from any source listed may vary significantly.

Impact fees are dependent on the amount of development activity and the costs of facilities needed to support this development. Because of the variations in annual development activities and the status of the economy, transportation impact fee revenue is difficult to forecast. Grant revenue is projected based on historical grant award averages, but past performance is no guarantee of future results. In projecting 12-year transportation revenue from WSDOT and local or regional agencies including Sound Transit, revenue is shown only for projects underway or committed based on existing agreements; no revenue from future cost sharing agreements has been assumed or projected.

Table 1 displays a summary of the revenue assumptions used to develop the 2022-2033 TFP. Note: the revenue categories and amounts listed in the table cover all 2022-2033 transportation capital expenditures. The sum therefore exceeds the total funding allocation to projects in the TFP since ongoing CIP programs and other "non-facility" capital investments are not included in the TFP.

Table 1: Summary of 2022-2033 Bellevue Transportation Capital Funding Package

Source	Revenue (Millions)
General CIP	$38.1
-Sales Tax -B & O Tax -Long-term Debt	
Transportation Dedicated	$166.7
-1990 Gas Tax -Transportation B & O Tax -¼% Real Estate Excise Tax	
TIFIA Loan	$90.6
Neighborhood Safety, Connectivity and Congestion Levy	$95.5
Impact Fees & Developer Contributions	$42.0
Grants & Outside Agency Contribution	$63.5
Total Projected Revenue	**$496.4**

Note 1: Amounts above include funding for actual expenditures through 2021 ($119.7M) for TFP projects budgeted in the adopted CIP and for which implementation has already begun.

Note 2: Capital revenue allocated to pay debt service for long-term debt issued to in part fund transportation projects is not reflected in the TFP revenue forecast amounts reflected above.

Table 2 displays the allocation of funding projected for the 2022-2033 planning period. Committed revenue reflects funding approved through the 2021-2027 CIP (including funds expended for CIP/TFP projects already begun). Constrained revenue covers continued funding commitments anticipated by the city which may or may not be included in the TFP. Unconstrained revenue is allocated to priority non-CIP projects in the TFP.

Table 2: Summary of 2022-2033 Transportation Funding Allocations

	(Millions)
Total Projected Revenue	**$496.4**
Less Committed Revenue	$76.1
-Allocations to Non-TFP CIP Projects and Ongoing Programs	
Less Constrained Revenue	$108.1
-Continuation of Ongoing CIP Programs (2028-2033)	
-Continuation of non-TFP Safety and Connectivity Levy Projects (2028-2033)	
Balance: Allocation to 2022-2033 TFP Projects	**$312.2**

Total TFP funding allocation above includes the portion of CIP-funded project costs that are projected to be expended prior to 2022, if a project's implementation had already begun. Project cost allocation for projects included in the 2021-2027 CIP have been inflated to year of expenditure values; cost allocations for all other TFP projects have been stated in 2022 dollar values. Actual allocations in future CIP updates will likely spread these project costs over the years 2028-2033 with additional inflationary adjustments by year.

Primarily due to revenue constraints, not every project is allocated TFP funding for its full implementation cost. Project locations, descriptions, and TFP funding allocations for facilities identified in the 2022-2033 TFP are listed in **Table 3**. An indication has been included within the project description of those projects for which only placeholder funding is allocated.

PROJECT PRIORITIZATION AND SELECTION

In developing the list of projects for the 2022-2033 TFP, Transportation Department staff worked closely with the Bellevue Transportation Commission and the public to identify and prioritize candidate TFP projects before selecting the new TFP project list. The TFP provides the first level of citywide prioritization of transportation improvement projects recommended by long-range transportation studies conducted for various subareas of the City. The 16 funded projects from the current 2021-2027 CIP Plan (adopted by the City Council in December 2020) and the Transportation Levy provides the foundation for the 2022-2033 TFP project list. The other 55 projects included in this TFP were prioritized and selected from the 32 projects included in the Comprehensive Transportation Project List, from ongoing work of the city's Congestion Reduction program, from ongoing work of the city's Neighborhood Sidewalk Program and from ongoing work of the Bicycle Rapid Implementation Program. Additional candidate projects, primarily developed to address emerging safety or congestion needs identified by City staff, or projects elevated through the public involvement component of the TFP update process, were also given thorough consideration.

The priorities for addressing long-range needs are guided by specific goals and policies in the Transportation Element of the Comprehensive Plan. Based on those goals and policies, the following criteria have been established for use in developing a preliminary ranking of candidate TFP projects, with weighting determined by the Transportation Commission.

Roadway/Intersection TFP Project Scoring Criteria

- **Safety** (vehicular, pedestrian, bicycle - 30%)

- **Level of Service** (i.e., congestion management - 20%)
- **Transit** (improving service, facilities and/or access - 20%)
- **Non-Motorized** (serving key locations and populations, providing connected facilities - 20%)
- **Plan Consistency & Outside Funding** (Integration with local and regional plans, likelihood of attracting non-local funds - 10%)

For the 2022-2033 TFP update process, pedestrian and bicycle project candidates included projects from the 2019-2030 TFP as well as projects identified via ongoing work of the Neighborhood Sidewalk Program and the Pedestrian-Bicycle Implementation Initiative (PBII) process.

In general, pedestrian and bicycle projects included in the 2022-2033 TFP are rated as "High" priority in the Pedestrian and Bicycle Plan and advance implementation targets identified in Pedestrian and Bicycle Plan policy PB-2:

POLICY PB-2. Work towards specific short and mid-term implementation objectives intended to be completed following the adoption of the 2009 plan update. Specifically:

1. Within 10 years, implement at least two completed, connected, and integrated north-south and at least two east-west bicycle routes that connects the boundaries of the city limits, and connects to the broader regional bicycle system.
2. Within 5 years, implement at least one completed and connected east-west and north-south bicycle route through Downtown Bellevue.
3. Within 10 years, reduce pedestrian/vehicle and bicycle/vehicle accidents by 25 percent from 2007 levels.
4. Within 10 years, construct 25 more miles of sidewalks along arterial streets including collector arterials above 2007 levels.
5. Within 10 years, increase trips by bicycle and foot by 10 percent over 2009 levels.

2022-2033 Transportation Facility Plan projects are illustrated in **Figure B1** (roadway, intersection, sidewalk and bicycle projects) and **B2** (transit projects). Project descriptions and funding allocations for improvements identified in the 2022-2033 TFP are listed in **Table 3.** Table 3 also indicates which projects are in the current 2021-2027 CIP Plan. In the final columns, the table indicates which projects are considered Impact Fee Projects – roadway and intersection capacity projects - and the portion of the project's total project cost estimate (TFP Funding Allocation) that will be used to calculate impact fees. In some cases, the impact fee project cost will exceed the TFP Funding Allocation due to the inclusion of debt service costs (required by Section 22.16.020.V of the Bellevue City Code) or other costs eligible to the Transportation Impact Fee Program.

Figure B1: Location of 2022-2033 Transportation Facilities Plan Roadway, Intersection, Sidewalk and Bicycle Projects

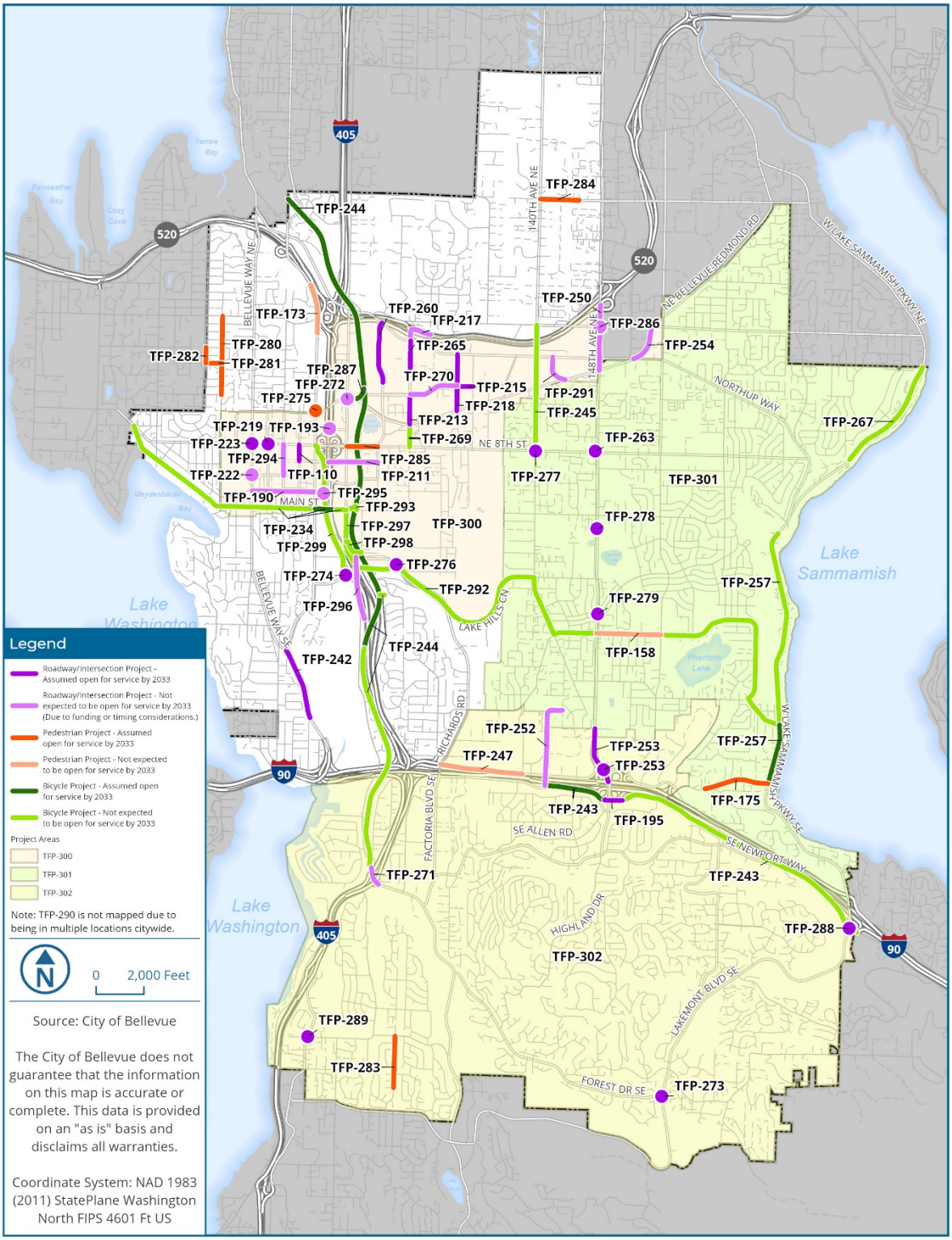
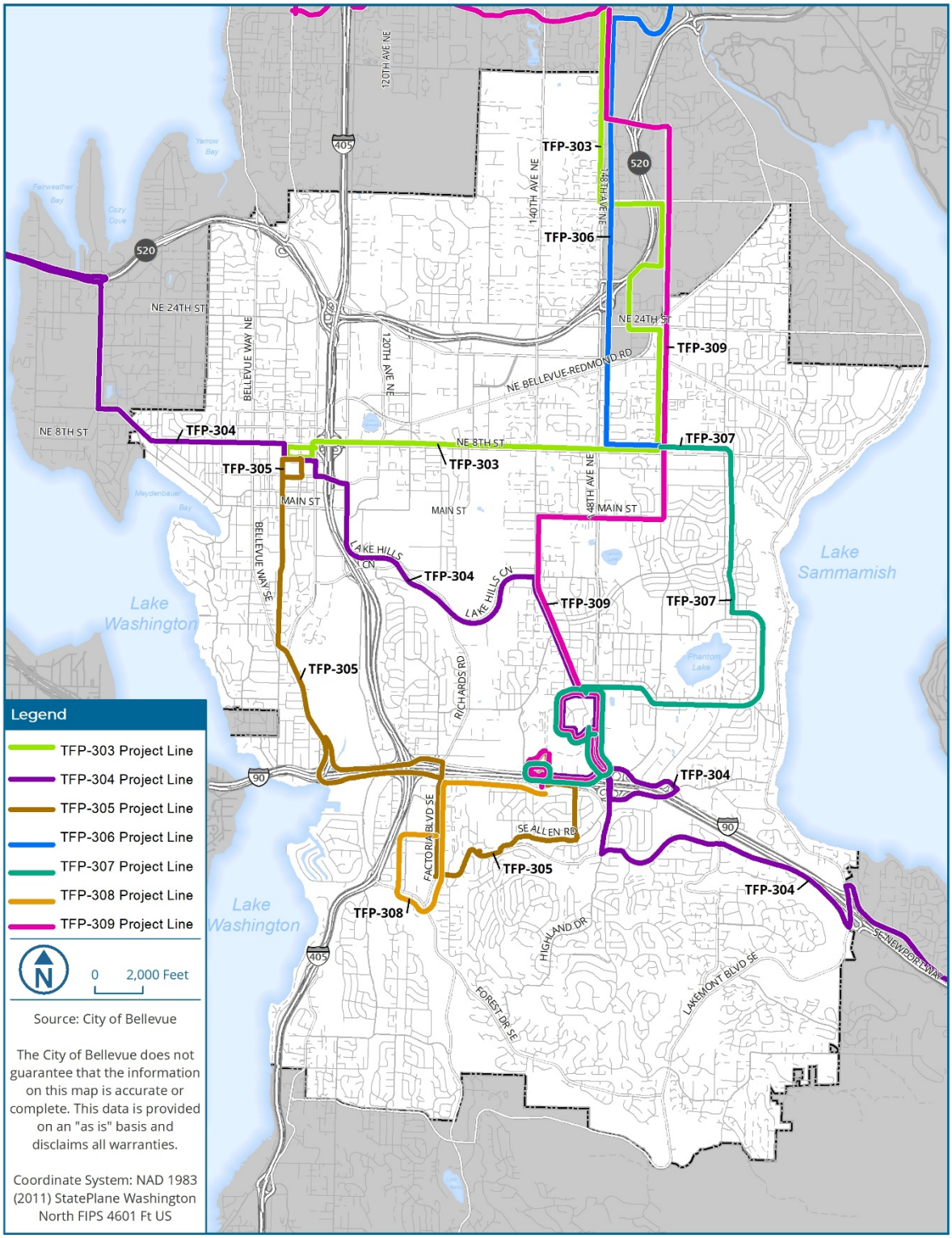


Figure B2: Location of 2022-2033 Transportation Facilities Plan Transit Projects



2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)
2022-2033 TFP Projects							
TFP-110	110th Avenue NE/NE 6th Street to NE 8th Street		This project will complete implementation of a five-lane roadway section with sidewalks where missing between NE 6th and NE 8th Streets. Project implementation will be coordinated with approved and potential future private development in the immediate vicinity.	*Roadway*	$1,682	IF	$1,682
TFP-158	SE 16th Street/148th Avenue SE to 156th Avenue SE		This project will add 5-foot-wide bicycle lanes outside of 11-foot-wide vehicle lanes on both sides of SE 16th Street. The project will construct new curb, gutter, and 6-foot-wide sidewalk and 4-foot-wide planter on the north side between 148th Avenue NE and 154th Avenue NE. This is a component of priority bicycle corridor EW-3 Lake to Lake Trail.	*Pedestrian* *Bicycle*	$1,000		
TFP-173	108th/112th Avenue NE/ north city limit to NE 12th Street	W/B-81	This project will add a 6-foot-wide sidewalk on the west side from NE 24th Street to the transportation trail to the north. A sidewalk will be constructed on the east side from NE 24th Street to connect to the existing sidewalk 450 feet south. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Pedestrian*	$300		
TFP-175	SE 34th Street/162nd Pl SE to West Lake Sammamish Pkwy		This project will design and construct a five foot bike lane, curb, gutter and six foot sidewalk on north side and curb, gutter and a wide curb lane, where feasible, on the south side of SE 34th Street from West Lake Sammamish Parkway to 162nd Place SE.	*Pedestrian*	$5,558		
TFP-190	NE 2nd Street/Bellevue Way to 112th Avenue NE		This project will widen roadway from three lanes with parking and turn pockets to five lanes, consistent with the Main Street & NE 2nd Street Design Report (2009). The funding allocation is a placeholder that may be used to advance project pre-design or support early implementation. Project implementation will be coordinated with approved and potential future private development in the immediate vicinity.	*Roadway*	$300		
TFP-193	NE 10th Street at I-405		This project will add a southbound off-ramp. This project would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation is a placeholder that may be used to support project predesign or early implementation.	*Roadway*	$300		
TFP-195	150th Avenue SE/SE 37th Street/I-90 off-ramp		Add a second eastbound right turn lane, extend the southbound left turn lane, extend the southbound through lane from the loop ramp to SE 38th Street, restrict the eastbound left turn movement, add a second westbound left turn lane and extend the westbound right turn lane. The project will also evaluate upgraded pedestrian and bicycle crossings along with gateway treatments.	*Roadway*	$5,050	IF	$5,050
TFP-211	NE 6th Street Extension		The project will extend NE 6th Street from the I-405 HOV interchange to 116th Avenue NE and, potentially, continuing at-grade to 120th Avenue NE. The facility will be designed to accommodate multiple uses, potentially including HOV, frequent transit bus service, non-motorized, and vehicle access to express toll lanes. Conceptual design alternatives have been completed to coordinate with WSDOT's I-405 improvements and Sound Transit's East Link route. The project connecting to 116th Avenue NE would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation is a placeholder that may be used for additional predesign or other early implementation efforts. The east terminus is to be further evaluated in conjunction with the Wilburton Vision implementation planning initiative.	*Roadway*	$500		
TFP-213	124th Avenue NE/NE 12th Street to NE Spring Boulevard	R-169	This project will complete design and construct improvements to 124th Avenue NE from NE 12th Street (BelRed Road) to NE Spring Boulevard. The roadway cross-section of this segment consists of five lanes, including two travel lanes in each direction with turn pockets or a center turn lane; curb, gutter and separated multi-use path on both sides; and illumination, landscaping, irrigation, storm drainage and water quality treatment, intersection, and signal system improvements. The project will be developed in coordination with potential private development in the immediate vicinity.	*Roadway* *Pedestrian* *Bicycle*	$21,350	IF	$27,281
TFP-215	NE Spring Blvd (Zone 4)/130th to 132nd Avenues NE	R-174	This project will complete the design of the roadway cross-section and construct transportation system improvements of a new arterial roadway connection between 130th and 132nd Avenues NE. The project includes a new traffic signal at 130th Avenue NE, modifies a signal at 132nd Avenue NE (to be built by Sound Transit) and will integrate vehicular traffic, pedestrian, and bicycle movements with the East Link Light Rail Transit (LRT) project. The roadway cross-section will include single westbound and eastbound travel lanes, outside the LRT alignment and 130th LRT station. Other improvements include sidewalks, bicycle facilities, illumination, landscaping and irrigation, storm drainage and water quality treatment, and other underground utilities. The project will be developed in coordination with potential public and/or private development in the immediate vicinity.	*Roadway* *Pedestrian* *Bicycle*	$13,700	IF	$17,624

2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)
TFP-217	124th Avenue NE at SR 520	R-192	This project will construct ramps to and from the east. This project would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Roadway*	$550		
TFP-218	130th Avenue NE/NE 20th Street to NE Bel-Red Road	R-170	This project provides multi-modal improvements along 130th Avenue NE between BelRed Road and NE 20th Street. The improvements include curb, gutter, sidewalk, landscaping, illumination, drainage, water quality treatment, bicycle facilities on both sides of the street, on-street parking at select locations, potential mid-block crossings, intersection improvements including turn lanes at NE Spring Blvd., potential traffic signal and intersection modifications at NE 20th Street and at BelRed Road; and, accommodation for a Sound Transit East Link light rail crossing at the NE Spring Blvd. alignment. The project will be developed in coordination with potential public and/or private development in the vicinity.	*Roadway* *Pedestrian* *Bicycle*	$27,100		
TFP-219	NE 8th Street/106th Avenue NE		This project will realign NE 8th Street to the south to extend the third westbound travel lane to the west of 106th Avenue NE and preserve the existing large sequoia tree. This realignment will allow NE 8th Street three through lanes westbound from I-405 to Bellevue Way. Project implementation will be coordinated with potential future private development in the immediate vicinity.	*Roadway*	$3,876	IF	$3,876
TFP-222	Bellevue Way/NE 4th Street		This project will add a southbound to westbound right-turn lane, and convert a northbound through lane to a create a second northbound to westbound left-turn lane, subject to further analysis. Project implementation will be coordinated with potential future private development in the immediate vicinity. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Roadway*	$300		
TFP-223	Bellevue Way/NE 8th Street		This project will add a southbound to westbound right-turn lane. Project implementation will be coordinated with potential future private development in the immediate vicinity.	*Roadway*	$2,376	IF	$2,376
TFP-234	Main Street/100th Avenue to 116th Avenue		This project will conduct a corridor study to identify, prepare preliminary designs, and potentially implement multimodal improvements to enhance the Main Street corridor through Downtown. Improvements to be considered may include mid-block crossings, intersection treatments, bicycle facilities, landscaping and lighting. This roadway segment is a component of priority bicycle corridor EW-3: Lake to Lake Trail. The segment between 108th Avenue and the east side of I-405 is separately being improved with an off-street multi-purpose path facility on the south side. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation of the remainding elements.	*Bicycle*	$500		
TFP-242	Bellevue Way HOV lane/107th Ave SE Segment A: Park&Ride to Winters House	R-184	This project will design and construct a new inside southbound HOV lane and a planter at the base of a retaining wall. Proposed funding would construct from the Winter's House to the future South Bellevue light rail station (formerly the South Bellevue park-and-ride lot). It would connect to the section of Bellevue Way, including an HOV lane that extends to I-90, which will be built by Sound Transit. The design phase will include a public engagement process to help ensure the informed consent of the local community and other stakeholders in the Bellevue Way SE corridor. Future project implementation may occur in phases or include interim facilities dependent upon funding availability and coordination with other capital investments in the area.	*Roadway*	$29,588	IF	$29,810
TFP-243	Mountains to Sound Greenway/142nd Place SE to Lakemont Boulevard	W/B-78	This project will advance the design and construction of priority segments of the Mountains to Sound Greenway Trail between 142nd Place SE and Lakemont Boulevard SE. This project will continue work initiated by the Mountains to Sound Greenway Trail Design Study, completed in 2012. Trail design will typically include a 12 foot wide, hard surface cross-section. Various trail corridor segments will include additional design elements that may include trailhead treatments, way-finding and signage; planted roadway medians, street trees, and/or landscaped trail buffers; bridges, crosswalks, and mid-block crossings; lighting, trail furniture, and public art; and natural storm drainage practices. Project implementation may occur in phases or include interim facilities dependent upon funding availability and coordination with other public capital investments or private developments along the project alignment. The funding allocation is full implementation of the segment from 142nd Place SE to 150th Avenue SE.	*Pedestrian* *Bicycle*	$11,300		

2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)
TFP-244	Eastrail Corridor multi-use path/southern city limits to northern city limits	G-103	This project will add a 10- to 14-foot-wide off-street path along the BNSF right-of-way from the southern city limits to the northern city limits. This project is an outside agency-led effort in which the City may choose to participate financially and is part of a planned regional trail that will connect Eastside communities from Renton to Woodinville. Approximately 7.5 miles of the trail is located within the city of Bellevue. The regional trail will include connections to pedestrian and non-motorized city facilities and be compliant with current trail standards. Potential trail connections include Newcastle Beach Park, Greenwich Crest, the I-90 Trail, Woodridge, Wilburton, Downtown Bellevue, BelRed, the West Tributary Trail, and the SR 520 Trail. Project identified as priority bicycle corridor NS-3: BNSF Trail Corridor. Funding allocation is to support City's scoping and development of projects connecting to or supporting the Eastrail mainline path, including coordination with the community and property owners and/or acquisition.	*Pedestrian* *Bicycle*	$3,000		
TFP-245	140th Avenue NE/NE 24th Street to NE 8th Street		This project will evaluate development of an off-street multi-use paved path along the east side of 140th Avenue NE between NE 24th Street and NE 8th Street, replacing a separated gravel path that exists on much of The segment; it may be a boardwalk for part of the Bel-Red Road to NE 20th Street segment. -the project will add a 10- to 14-foot-wide off-street path connecting the SR 520 Trail to 140th Avenue NE, if feasible. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Bicycle*	$300		
TFP-247	Eastgate Way/Richards Road to Sunset Corporate Campus		This project will complete the missing link in the sidewalk between Richards Road and 139th Avenue SE; may be implemented in coordination with adjacent development. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Pedestrian*	$700		
TFP-250	148th Avenue NE Master Plan		The project will evaluate and refine improvements to the 148th Avenue NE Master Plan. Potential improvements include the following: 1) a third northbound through lane on 148th Avenue NE from 350 feet south of Bel-Red Road to the SR 520 eastbound on-ramp, 2) a northbound right-turn lane, and eastbound and westbound dual left-turn lanes at 148th Avenue NE and Bel-Red Road, 3) eastbound and westbound dual left-turn lanes at NE 20th Street and 148th Avenue NE, 4) extend the northbound and westbound right-turn lanes at NE 24th Street and 148th Avenue, 5) eastbound and westbound dual left-turn lanes at NE 24th Street and 148th Avenue NE, 6) configure the northbound 3-lane approach on 148th Avenue NE at the SR 520 eastbound on-ramp to right turn only, through/optional HOV right turn, and through only, and 7) convert and extend southbound right-turn lane on 148th Ave NE between NE 24th and NE 20th into a BAT lane. Improvements at NE 24th Street will accommodate or implement a wide-lane east-west bicycle facility. The project may be phased with the initial phase focusing on the north end of the 148th Avenue NE corridor. Scope and cost may be modified based future analysis and coordination with the City of Redmond associated with the 148th Avenue NE Master Plan. Funding allocation will support work in coordination with Redmond to identify project phasing and conduct predesign work or early implementation.	*Roadway*	$300		
TFP-252	Bellevue College Connection: Kelsey Creek Rd/ Snoqualmie River Road/142nd Pl SE from 145th Place SE to SE 36th St	R-201	This project will design and construct a transitway connection through the Bellevue College campus to improve transit speed and reliability from SE 24th Street to SE 32nd Street along Snoqualmie River Road SE.This partnership between King County Metro Transit, Bellevue College and the City, will reconstruct campus and City roadways to support frequent transit bus service, construct sidewalks and accessible bus stops and modify the 142nd Place SE/SE 32nd Street intersection. It will include a separated, multi-use, (bike accessible) paved path connecting 145th Place SE to the Mountains to Sound Greenway Trail. It will provide weather protection on 142nd Place SE for transit users, pedestrians and cyclists. A Bellevue College Transit Center is envisioned to be developed along the corridor. The funding allocation is a placeholder that may be used to advance project design or early implementation.	*Transit* *Pedestrian* *Bicycle*	$1,832		
TFP-253	150th Avenue SE/Eastgate Way SE		This project will add a second northbound left turn lane with a short westbound receiving lane and a third southbound through lane starting north of Eastgate Way and extending across the I-90 overpass. The southbound left turn lane will also be extended.	*Roadway*	$6,550	IF	$6,550
TFP-254	Bel-Red Road/NE 20th Street to NE 24th Street		This project will widen the roadway to five lanes, including two travel lanes in each direction, with a center turn lane, and bicycle lanes. The funding allocation is a placeholder that may be used to support project pre-design or early implementation. Project implementation may be coordinated with the City of Redmond and with potential future private development in the immediate vicinity.	*Bicycle*	$300		

2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)
TFP-257	West Lake Sammamish Parkway/"South Central" & "Central" segment (phases 3 & 4)	R-194	This project will design and construct of the third and fourth phase of the West Lake Sammamish Parkway corridor improvements (two of five phases), between SE 34th Street and the NE 2nd block. Full funding allocation is intended to implement improvements on the segment from SE 34th to SE 26th Streets. The full West Lake Sammamish Parkway project, between I-90 and the north city limit, will ultimately provide a consistent 4-foot-wide shoulder on the east side, a 10.5-foot-wide northbound vehicle travel lane, a 10-foot-wide southbound vehicle travel lane, a 10-foot-wide multi-purpose trail (8 feet wide in areas adjacent to sensitive critical areas (approximately 2% of the corridor due to constricted space) on the west side separated by a 1.5-foot shy distance space and a 2 to 5-foot-wide landscaped buffer where space is available; a signal at SE 34th Street (if warranted); and signalized pedestrian crossings at SE 26th Street, Northup Way, NE 24th Street, and at five other locations along the parkway. The project will make storm drainage, water quality, and fish passage improvements throughout the corridor. This project will also provide a preliminary design analysis with cost estimates to determine the exact location and scope of the next phases of construction on West Lake Sammamish Parkway. Preliminary design activities will include coordination with the community and other stakeholders leading to a complete design.	*Pedestrian* *Bicycle*	$12,500		
TFP-260	120th Avenue NE (Stage 4)/NE 16th Street and to Northup Way	R-186	This project will widen 120th Avenue NE between NE 16th Street and Northup Way. The existing two-lane roadway will be widened to four lanes between NE 16th Street and the future NE 18th Street to include one northbound lane, two southbound lanes, and a center two-way left-turn lane. From the future NE 18th Street to Northup Way, the widening will consist of one northbound lane, one southbound lane and a center lane that will be channelized as a two-way left-turn lane or a center median depending on the land use and will be utilized as a left-turn pocket at the intersections. The project will add new roadside planters along the full length of the project that separate vehicle traffic from bicycle lanes and sidewalks. The project will also provide illumination, pedestrian crossings, a modified traffic signal system at the Northup Way intersection, intelligent transportation systems, signing, irrigation, and landscaping improvements. This project will install stormwater drainage, flow control and water quality facilities, reconstruct and relocate underground utilities, and realign and improve an existing culvert crossing to provide a new fish and wildlife passable roadway crossing structure. Construction of this project may be phased.	*Roadway* *Pedestrian* *Bicycle*	$29,800	IF	$29,800
TFP-265	124th Avenue NE/Ichigo Way (NE 18th Street) to Northup Way	R-191	This project will design and construct improvements to 124th Avenue NE between Ichigo Way (NE 18th Street) and Northup Way. The project will widen and raise the profile for 124th Avenue NE between Ichigo Way (NE 18th Street) and Northup Way and will consist of five lanes, including two travel lanes in each direction with turn pockets or a center turn lane, install curb, gutter, and sidewalk on both sides, maintaining existing signal at Metro driveway, and illumination, ITS, signing, landscaping, irrigation, storm drainage, and water quality treatment, retaining walls, culvert replacement, wetland buffer and critical area mitigation, landscaping, underground utilities, urban design treatments, and provisions for gateways as well as a multipurpose pathway on the west side between NE 16th Street and Ichigo Way and replaces existing City of Seattle transmission towers with mono-tube towers. The project will also support evaluating environmental and open-space enhancements/trail connections along with the West Tributary regional detention facilities. The project will be developed in coordination with potential public and/or private development in the vicinity.	*Roadway* *Pedestrian*	$40,500	IF	$56,549
TFP-267	West Lake Sammamish Parkway/"North" segment; (phase 5)		This project will design and construct the fifth phase of the West Lake Sammamish Parkway corridor improvements (last of five phases), between SE 34th Street and the NE 2nd block. The full West Lake Sammamish Parkway project, between I-90 and the north city limit, will ultimately provide a consistent 4-foot-wide shoulder on the east side, a 10.5-foot-wide northbound vehicle travel lane, a 10-foot-wide southbound vehicle travel lane, a 10-foot-wide multi-purpose trail (8 feet wide in areas adjacent to sensitive critical areas (approximately 2% of the corridor due to constricted space) on the west side separated by a 1.5-foot shy distance space and a 2 to 5-foot-wide landscaped buffer where space is available; a signal at SE 34th Street (if warranted); and signalized pedestrian crossings at SE 26th Street, Northup Way, NE 24th Street, and at five other locations along the parkway. The project will make storm drainage, water quality, and fish passage improvements throughout the corridor. This project will also provide a preliminary design analysis with cost estimates to determine the exact location and scope of the next phases of construction on West Lake Sammamish Parkway. Preliminary design activities will include coordination with the community and other stakeholders leading to a complete design. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Pedestrian* *Bicycle*	$300		

2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)
TFP-269	124th Avenue NE/NE 8th to 12th Streets		An interim project, finished in 2021, made Americans with Disabilities Act sidewalk and curb improvements and street lighting upgrades. This placeholder funding allocation may be used to determine and begin design on preferred pedestrian and bicycle facility improvements such as widening sidewalks, on-street bicycle lanes or a multi-purpose pathway on one or both sides. The project may also replace the lattice transmission line tower within the project limits with a new monopole.	*Pedestrian* *Bicycle*	$300		
TFP-270	Spring Blvd (Zone 3) - 124th Ave NE to 130th Ave NE		Multi-modal corridor incorporating east-west arterial capacity (2 or 4 through-lanes); sidewalks; bicycle facilities with regional trail connections; and "green" elements, including urban open spaces, tree canopy and landscaping features, and natural drainage features where feasible. The project will be developed in coordination with potential public and/or private development in the immediate vicinity. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Roadway* *Pedestrian* *Bicycle*	$600		
TFP-271	Coal Creek Parkway/120th Ave SE - I-405 - 119th Ave SE		Convert the three signalized intersections on Coal Creek Parkway at I-405 (2) and 119th Avenue SE and also the intersection of 120th Avenue SE to a series of roundabouts. This project would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Roadway*	$300		
TFP-272	NE 12th St / 116th Ave NE		Conduct a needs assessment to determine whether westbound to southbound dual left-turn lanes should be added or other revisions made at NE 12th St and 116th Ave NE. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Roadway*	$300		
TFP-273	Lakemont Blvd/Forest Dr		Install a new traffic signal and widen Lakemont Blvd for a northbound to westbound left turn lane.	*Roadway*	$1,751	IF	$1,751
TFP-274	SE 8th Street / 114th Avenue SE	R-207	This project will widen the intersection to add a second southbound left turn lane and dedicated space for bicycles in the northbound and southbound directions.	*Roadway* *Bicycle*	$3,410	IF	$3,410
TFP-275	112th Avenue NE at McCormick Park	R-208	This project will design and construct the frontage improvements on 112th Avenue NE at McCormick park in order to match this roadway section to the frontage improvements being made during construction of Fire Station 10. Improvements include some widening, installation of separated bike facilities, planter strip and corner improvements at McCormick Park (112th Avenue NE and NE 12th Street.) Bike facility improvements will tie into the multi-purpose path on NE 12th Street.	*Roadway* *Bicycle*	$1,000		
TFP-285	NE 8th Street/116th Ave to 120th Ave	W/B-56	This project will construct interim sidewalk on the south side of NE 8th Street.	*Pedestrian*	$664		
TFP-286	148th Avenue NE/NE 24th Street		This project initiates implementation of priority elements of the 148th Master Plan (see TFP-250) and will be implemented in coordination with the City of Redmond and private developers in the immediate vicinity. This project will widen the 148th Avenue NE/NE 24th Street intersection to accommodate dual eastbound and westbound left turn lanes and extend the northbound and westbound right turn lanes. The project will also modify the traffic signal and channelization on the northeast corner to accommodate a third northbound through lane which will extend north to the eastbound SR 520 on ramp. A private development is conditioned to construct the third northbound lane south of the intersection. Improvements at the intersection will accommodate a planned ped-bike path along the east side of 148th Ave NE, between NE 24th Street and the SR 520 path. Funding allocation represents only the City of Bellevue's share of the design phase cost. Implementation of the improvements may be phased.	*Roadway*	$1,348		
TFP-287	Eastrail to Spring Blvd Trail Link		This project will construct a trail linking the N-S Eastrail to the E-W ped-bike path that runs along Spring Blvd.	*Bicycle*	$6,124		
TFP-288	Lakemont Blvd/Newport Way SE		Un-split the southbound and northbound traffic signal phasing by changing the center lane on the southbound approach to a dedicated left turn lane instead of a shared left/through lane, subject to further analysis.	*Roadway*	$1,545	IF	$1,545
TFP-289	Lake Washington Blvd/SE 60th St		Replace existing offset four way stop with a traffic signal that improves the east-west alignment into the intersection.	*Roadway*	$2,678	IF	$2,678
TFP-290	Future Vision Zero road safety projects along Bellevue's High Injury Network corridors.	R-205	In Bellevue 83% of fatal and serious injury traffic collisions occur on 8% of the City's total street network. This density of fatal and serious injury traffic collisions comprise the city's High Injury Network (HIN). To strive to achieve Council's Vision Zero goal on Bellevue's roadways, the City will fund safety projects along HIN corridors. Based on a comprehensive Road Safety Assessment review of HIN corridors, the City will implement interim rapid build solutions (funded by CIP PW-R-205). Solutions will focus on systemic and spot countermeasures that involve minor infrastructure construction so that they can be more rapidly built. Additionally, the City will aim to create long-term visions for selected HIN corridors that will enhance the safety improvements seen in initial Vision Zero rapid build solutions.	*Pedestrian* *Bicycle*	$4,642		

2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)
TFP-291	143rd Place NE/ NE 20th Street to Bel-Red Road/NE 20th Place signal		This project will conduct a feasibility and/or pre-design study for the implementation of a new two-lane roadway connection with bike lanes and sidewalks between the NE 20th Street/143rd Place NE traffic signal and extending to the improved section of NE 20th Place north of its intersection with Bel-Red Road. Install signal, eastbound to northbound left turn pocket and pedestrian crossing at the existing Bel-Red Road and NE 20th Place intersection. New roadway segments may be implemented with future private development in the immediate vicinity.	*Roadway*	$1,872		
TFP-292	Lake to Lake Trail Corridor (EW-3)		Design and implement bicycle facility improvements that complete a continuous connection between Meydenbauer Bay and West Lake Sammamish Parkway along the EW-3 bicycle priority corridor. Consistent with multimodal level of service guidance, resulting facilities will achieve the Bicycle LOS target of LTS 1, providing a safe and comfortable route suitable for people of all ages and abilities. Funding allocation will support bicycle facility implementation on SE 8th Street from 114th Ave to Lake Hills Connector. Other examples of potential project locations include Lake Hills Connector, Lake Washington Blvd and SE 16th Street. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Bicycle*	$700		
TFP-293	Eastrail Connection at Main Street	G-103	This project will construct a trail at the Main Street alignment to connect the Eastrail west to 116th Ave, as well as another connection east to upper Main Street. Project may be implemented in phases. Scope of connection to 116th Ave may extend westward along south side of Main Street to connect with multiuse path to be constructed by WSDOT at I-405 crossing. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Bicycle*	$300		
TFP-294	108th Avenue NE Downtown Spine / NE 4th Street to NE 8th Street		This project will construct multimodal roadway enhancements along 108th Avenue NE. Design elements include enhanced floating transit platforms and related transit amenities for Bay 1 and Bay 12 of the Bellevue Transit Center, protected bike lanes, upgraded communications & signals, channelization, and pedestrian scale lighting. This project is based on the 2020 Downtown Spine Corridor Study. Some elements may be constructed in coordination with adjacent development. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Transit*	$300		
TFP-295	NE 2nd Street / 114th Avenue NE		This project will add a traffic signal and roadway/intersection expansion, realignment, and channelization improvements, including accommodation of a north-south multipurpose path crossing along the west side of 114th Avenue NE. Project implementation will be coordinated with potential private development in the immediate vicinity. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Roadway*	$300		
TFP-296	South Downtown I-405 Access: Lake Hills Connector southbound on-ramp		This project will build a new southbound on-ramp from the Lake Hills Connector to I-405 south. This project would likely be a regional or outside agency-led effort in which the City may choose to participate financially. The funding allocation is a placeholder that may be used to support project predesign or early implementation.	*Roadway*	$300		
TFP-297	116th Avenue NE/Main Street to SE 8th Street multipurpose path		Construct new multipurpose path on west side of 116th Ave from Main Street to SE 5th Street. Upgrade existing multipurpose path between SE 5th Street to SE 8th Street to current standards. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Bicycle*	$300		
TFP-298	SE 5th Street - 116th Avenue SE to 118th Avenue SE multipurpose path and signal		Install a new traffic signal at 116th Ave/SE 5th Street. Construct a multipurpose path on the south side of SE 5th Street from 116th Ave to the Eastrail. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Roadway* *Pedestrian* *Bicycle*	$300		
TFP-299	114th Avenue/NE 8th Street to SE 8th Street		Construct multipurpose path (12' wide + 2' shoulder on each side) on west side of 114th Ave from SE 8th Street to NE 8th Street. Project includes construction of a tunnel under Main Street, west of the Main Street bridge abutment wall, and will require reconstruction of the retaining walls on the north and south sides of Main Street at this location. The funding allocation is a placeholder that may be used to initiate project predesign or early implementation.	*Pedestrian* *Bicycle*	$300		
TFP-300	Growth Corridor Bicycle Network	W/B-85	Design and implement bicycle facility improvements in the Downtown, BelRed, and Wilburton neighborhood areas that provide residents, employees, and families with equitable access to the area's key destinations. Consistent with the planned Bicycle Network, examples of potential project locations include 100th Avenue NE, 106th Avenue NE, NE 1st and 2nd Streets, 116th Avenue NE, 120th Avenue NE, 140th Avenue NE, Bel-Red Rd, and Northup Way. Funding is an initial allocation for project development and early implementation.	*Bicycle*	$3,000		

2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)
TFP-301	East Bellevue Bicycle Network		Design and implement bicycle facility improvements in the Lake Hills, Crossroads, Northeast Bellevue, and West Lake Sammamish neighborhood areas that provide residents, employees, and families with equitable access to the area's key destinations. Consistent with the planned Bicycle Network, examples of potential project locations include 140th Avenue, 156th Avenue, 164th Avenue, Lake Hills Boulevard, Main Street, NE 8th Street, NE 24th Street, and neighborhood greenways. Funding is an initial allocation for project development and early implementation.	*Bicycle*	$1,500		
TFP-302	South Bellevue Bicycle Network		Design and implement bicycle facility improvements in the Eastgate, Factoria, Newport, Somerset, and Cougar Mountain/Lakemont neighborhood areas that provide residents, employees, and families with equitable access to the area's key destinations. Consistent with the planned Bicycle Network, examples of potential project locations include Coal Creek Parkway SE, Forest Drive SE, Lakemont Boulevard SE, SE Newport Way, and Somerset Boulevard SE. Funding is an initial allocation for project development and early implementation.	*Bicycle*	$1,500		
Congestion Reduction Levy Projects							
	Placeholder for Future Congestion Reduction Projects yet to be identified, scoped and costed	R-198	This line does not represent a specific congestion reduction project. Congestion reduction projects have dedicated levy and/or other CIP funding allocated to them. The projected amount of funding available within the TFP plan period, above and beyond the cost of the defined projects listed below in this section, will be reserved for allocation to future projects once identified and prioritized by the Congestion Reduction Program.		$15,925		
TFP-263	NE 8th Street/148th Avenue NE	R-198, 200	This project will widen all four approaches to provide a second left turn pocket serving each direction.	*Roadway*	$3,300	IF	$3,300
TFP-276	Lake Hills Connector/SE 8th St	R-198, 200	This project will add a second northbound left turn pocket to increase the queuing space for this movement and will convert the existing dedicated eastbound left turn lane to a westbound through lane to receive traffic from the new northbound left turn pocket.	*Roadway*	$1,900	IF	$1,900
TFP-277	NE 8th Street/140th Avenue NE	R-198, 200	This project will convert the existing southbound right turn lane to a through-right lane and will widen the south leg to create space for an approximately 250 foot receiving lane that will merge back into the existing through lane.	*Roadway*	$1,600	IF	$1,600
TFP-278	148th Avenue SE - Kelsey Creek Shopping Center	R-198, 200	This project will improve intersection delay at 148th Ave SE/Main St. and access to and from the shopping center from 148th Avenue SE by adding a new traffic signal and a southbound left turn lane accessing the south driveway and a left turn lane accessing southbound 148th Avenue SE from the driveway.	*Roadway*	$2,380	IF	$2,380
TFP-279	Lake Hills Blvd/148th Avenue SE	R-198, 200	This project will add a second westbound left turn pocket to increase the queuing space for this movement and to allow the eastbound and westbound through movements to run concurrently, reducing the overall intersection delay.	*Roadway*	$1,300	IF	$1,300
Neighborhood Sidewalk Program Projects							
	Placeholder for Future Neighborhood Sidewalk projects yet to be identified, scoped and costed	R-199, W/B-76	This line does not represent a specific Neighborhood Sidewalk project. Neighborhood Sidewalk projects have dedicated levy and/or other CIP funding allocated to them. The projected amount of funding available within the TFP plan period, above and beyond the cost of the defined projects listed below in this section, will be reserved for allocation to future projects once identified and prioritized by the Neighborhood Sidewalks Program.		$18,330		
TFP-280	100th Avenue NE/NE 14th to 24th Streets	R-199, W/B-76	This project will add a 10-foot-wide multipurpose path with a five-foot planter on the east side of 100th Avenue NE. Reduce roadway width to 21 feet. Raised intersections at NE 15th, NE 18th and NE 21st Streets. RRFB at NE 14th Street.	*Pedestrian*	$4,550		
TFP-281	NE 18th Street/98th to 100th Avenues NE	R-199, W/B-76	This project will add curb, gutter and six-foot-wide sidewalk on the north side of the street.	*Pedestrian*	$450		
TFP-282	98th Avenue NE/NE 18th to NE 20th Streets	R-199, W/B-76	This project will add curb, gutter and six-foot-wide sidewalk on the east side of the street. Parking bay accommodation between NE 18th and NE 19th Streets.	*Pedestrian*	$370		
TFP-283	123rd Avenue SE/SE 60th Street to SE 65th Place	R-199, W/B-76	This project will complete the missing segments of sidewalk along the west side of 123rd Avenue SE from SE 60th Street to SE 65th Place.	*Pedestrian*	$1,700		
TFP-284	NE 40th Street/140th Avenue NE to the 14500 block	R-199, W/B-76	This project will add sidewalk on the north side of the street between 140th Avenue NE and approximately the 14500 block on NE 40th Avenue.	*Pedestrian*	$1,600		

2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)
Transit Connection Projects							
	Transit Connections Reserve		This line does not represent a facility project. It represents a recommended funding "reserve" in support of the City's transit connections. Candidate connection projects for the allocation of a portion of the reserve are listed below. Projects in this category contains the following attributes: • Consistent with multimodal level of service guidance, improvements will strive to achieve the Transit LOS target speed of 14 MPH, • Examples of potential project elements include transit running way improvements like HOV (high-occupancy vehicle), BAT (business access and transit) lanes and spot improvements like queue jump lanes, turn restrictions, and transit signal priority.		$2,000		
TFP-303	Downtown – Crossroads Transit Connection	R-199, W/B-76	Evaluate, design, and implement transit speed and reliability improvements along Frequent Transit Network corridors connecting the Downtown and Crossroads activity centers. Consistent with the Transit Master Plan and the Downtown Transportation Plan, examples of potential project locations include intersections along NE 8th Street from 120th Avenue NE to 156th Avenue NE.	*Transit*			
TFP-304	Downtown – Eastgate Transit Connection		Evaluate, design, and implement transit speed and reliability improvements along Frequent Transit Network corridors connecting the Downtown and Eastgate activity centers. Consistent with the Transit Master Plan and the Downtown Transportation Plan, examples of potential project locations include Main Street from 108th to 116th Avenue and intersections along 116th Avenue SE, Lake Hills Boulevard, and 145th Place SE.	*Transit*			
TFP-305	Downtown – Factoria Transit Connection		Evaluate, design, and implement transit speed and reliability improvements along Frequent Transit Network corridors connecting the Downtown and Factoria activity centers. Consistent with the Transit Master Plan and the Downtown Transportation Plan, examples of potential project locations include Bellevue Way SE, Main Street from Bellevue Way to 108th Avenue, and the I-90 eastbound off-ramp at Factoria Boulevard SE.	*Transit*			
TFP-306	Crossroads – Overlake Transit Connection		Evaluate, design, and implement transit speed and reliability improvements along Frequent Transit Network corridors connecting the Crossroads and Overlake activity centers. Consistent with the Transit Master Plan and the Downtown Transportation Plan, examples of potential project locations include 156th Avenue NE from NE 8th Street to NE 24th Street.	*Transit*			
TFP-307	Crossroads – Eastgate Transit Connection		Evaluate, design, and implement transit speed and reliability improvements along Frequent Transit Network corridors connecting the Crossroads and Eastgate activity centers. Consistent with the Transit Master Plan and the Downtown Transportation Plan, examples of potential project locations include 148th Avenue SE from SE 24th Street to Lake Hills Boulevard.	*Transit*			
TFP-308	Eastgate – Factoria Transit Connection		Evaluate, design, and implement transit speed and reliability improvements along Frequent Transit Network corridors connecting the Eastgate and Factoria activity centers. Consistent with the Transit Master Plan and the Downtown Transportation Plan, examples of potential project locations include the intersection of SE 36th Street and 142nd Place SE.	*Transit*			
TFP-309	Eastgate – Overlake Transit Connection		Evaluate, design, and implement transit speed and reliability improvements along Frequent Transit Network corridors connecting the Downtown and Crossroads activity centers. Consistent with the Transit Master Plan and the Downtown Transportation Plan, examples of potential project locations include 148th Avenue NE from Bel-Red Road to NE 24th Street.	*Transit*			
				Totals:	**$312,151**		**$200,462**

2022-2033 Project #	Project Name, Location and Limits	CIP #	Project Description	Project Type	TFP Funding Allocation ($000s)*	IF = Impact Fee Project**	Impact Fee Project Cost*** ($000)

Notes:

* Allocations for projects included in the 2021-2027 CIP have been inflated to year of expenditure values; cost allocations for all other projects estimated in 2022 dollar values.

** Roadway capacity projects open for use by the end of 2033 are included in the Impact Fee Project List. There may be additional, completed TFP projects included on the Impact Fee Project List that are not listed here (Refer to Transportation Impact Fee Program Report, 2022 Update).

*** Impact Fee Project Cost may differ from TFP Funding Allocation due to the exclusion of ineligible Impact Fee Program costs or inclusion of additional eligible costs.

= Fully Funded Current 2021-2027 CIP Project

Bellevue Comprehensive Plan EIS Appendix - Mode Share

City of Bellevue Workers (Tour includes a workplace within the City of Bellevue)

	2019		2044 - No Action - 0.36 OpCost- 30 % Work From Home - 50 % Errands		2044 - Alt 1 - 30 % Work From Home - 50 % Errands		2044 - Alt 2 - 30 % Work From Home - 50 % Errands		2044 - Alt 3 - 30 % Work From Home - 50 % Errands		2044 - Alt 3 - 30 % Work From Home - 50 % Errands	
	All Purposes (includes sub-tours)		All Purposes (includes sub-tours)		All Purposes (includes sub-tours)		All Purposes (includes sub-tours)		All Purposes (includes sub-tours)		All Purposes (includes sub-tours)	
Mode	Tours	Mode Split	Tours	Mode Split	Tours	Mode Split	Tours	Mode Split	Tours	Mode Split	Tours	Mode Split
Walk	7,717	5.7%	15,230	7.4%	18,251	7.5%	18,729	7.7%	19,878	7.6%	19,878	7.6%
Bike	181	0.1%	260	0.1%	353	0.1%	363	0.1%	368	0.1%	374	0.1%
SOV	81,573	60.2%	85,144	41.4%	105,465	43.5%	106,182	43.6%	114,875	44.1%	115,842	44.3%
HOV 2 persons	21,986	16.2%	24,910	12.1%	30,395	12.5%	30,318	12.4%	32,419	12.4%	32,538	12.4%
HOV 3+ persons	11,763	8.7%	13,849	6.7%	16,936	7.0%	16,902	6.9%	18,043	6.9%	17,953	6.9%
Transit Walk Access	2,708	2.0%	51,205	24.9%	55,283	22.8%	54,911	22.5%	58,351	22.4%	58,295	22.3%
Transit Auto Access	9,519	7.0%	14,912	7.3%	16,027	6.6%	16,129	6.6%	16,636	6.4%	16,741	6.4%
School Bus	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**135,447**	**100%**	**205,509**	**100%**	**242,710**	**100%**	**243,532**	**100%**	**260,569**	**100%**	**261,620**	**100%**
Drive Alone	**81,573**	**60%**	**85,144**	**41%**	**105,465**	**43%**	**106,182**	**44%**	**114,875**	**44%**	**115,842**	**44%**
Non-Drive Alone	**53,874**	**40%**	**120,365**	**59%**	**137,245**	**57%**	**137,351**	**56%**	**145,695**	**56%**	**145,778**	**56%**

City of Bellevue Residents (Tour orginates or terminates in the City of Bellevue at a residence)

	2019		2044 - No Action - 0.36 OpCost- 30 % Work From Home - 50 % Errands		2044 - Alt 1 - 30 % Work From Home - 50 % Errands		2044 - Alt 2 - 30 % Work From Home - 50 % Errands		2044 - Alt 3 - 30 % Work From Home - 50 % Errands		2044 - Alt 3 - 30 % Work From Home - 50 % Errands	
	All Purposes		All Purposes		All Purposes		All Purposes		All Purposes		All Purposes	
Mode	Tours	Mode Split	Tours	Mode Split	Tours	Mode Split	Tours	Mode Split	Tours	Mode Split	Tours	Mode Split
Walk	31,530	13.5%	56,563	18.9%	68,029	20.4%	74,357	20.5%	81,680	20.7%	81,569	20.7%
Bike	1,619	0.7%	3,392	1.1%	3,984	1.2%	4,301	1.2%	4,842	1.2%	4,859	1.2%
SOV	76,763	32.8%	85,696	28.6%	96,705	29.0%	109,926	30.3%	122,863	31.2%	122,902	31.2%
HOV2	58,352	24.9%	69,871	23.3%	75,506	22.7%	81,216	22.4%	86,839	22.0%	86,975	22.1%
HOV3+	49,016	20.9%	48,301	16.1%	48,032	14.4%	48,291	13.3%	48,551	12.3%	48,534	12.3%
Transit Walk Access	4,664	2.0%	22,667	7.6%	27,331	8.2%	31,056	8.6%	35,005	8.9%	35,013	8.9%
Transit Auto Access	4,465	1.9%	5,470	1.8%	5,927	1.8%	6,470	1.8%	6,872	1.7%	6,836	1.7%
School_Bus	7,959	3.4%	7,568	2.5%	7,521	2.3%	7,204	2.0%	7,251	1.8%	7,248	1.8%
Total	**234,368**	**100%**	**299,528**	**100%**	**333,035**	**100%**	**362,822**	**100%**	**393,904**	**100%**	**393,937**	**100%**
Drive Alone	**76,763**	**33%**	**85,696**	**29%**	**96,705**	**29%**	**109,926**	**30%**	**122,863**	**31%**	**122,902**	**31%**
Non-Drive Alone	**157,605**	**67%**	**213,832**	**71%**	**236,330**	**71%**	**252,895**	**70%**	**271,040**	**69%**	**271,035**	**69%**

Bellevue Comprehensive Plan EIS Appendix - Corridor Travel Speed

Existing

Iteris

Peak 15min speed from Iteris 3rd week of Sep 2019

Corridor	From	To	PMA	Target Ratio	Speed Limit (mph)	Typical Urban Travel Speed (mph)	Observed Speed (mph)		Ratio to Target Speed		Existing Ratio to the TUTS	
							NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Bellevue Way	SR 520	NE 12th St	3	>0.9	35.00	14.00	19.60	24.40	1.40	1.74	Meet the Target	Meet the Target
Bellevue Way	NE 12th St	Main St	1a	>0.5	30.00	12.00	13.20	4.80	1.10	0.40	Meet the Target	**Do Not Meet the Target**
Bellevue Way	Main St	112th Ave SE	3	>0.9	30.00	12.00	26.90	10.80	2.24	0.90	Meet the Target	**Do Not Meet the Target**
Bellevue Way	112th Ave SE	I-90	3	>0.9	40.00	16.00	24.50	17.90	1.53	1.12	Meet the Target	Meet the Target
108th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	10.60	13.70	0.88	1.14	Meet the Target	Meet the Target
112th Ave NE	Northup Way	NE 12th St	3	>0.9	30.00	12.00	25.10	20.00	2.09	1.67	Meet the Target	Meet the Target
112th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	12.70	9.20	1.06	0.77	Meet the Target	Meet the Target
112th Ave SE	Main St	SE 8th St	1c	>0.5	35.00	14.00	31.19	6.50	2.23	0.46	Meet the Target	**Do Not Meet the Target**
112th Ave SE	SE 8th St	Bellevue Way	3	>0.9	35.00	14.00	31.19	6.50	2.23	0.46	Meet the Target	**Do Not Meet the Target**
116th Ave NE	Northup Way	NE 12th St	1b	>0.5	30.00	12.00	21.80	17.70	1.82	1.48	Meet the Target	Meet the Target
116th Ave NE	NE 12th St	Main St	1c	>0.5	30.00	12.00	15.60	8.40	1.30	0.70	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	Main St	SE 8th St	1c	>0.5	35.00	14.00	22.20	21.40	1.59	1.53	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	SE 8th St	Richards Road	3	>0.9	35.00	14.00	25.80	14.10	1.84	1.01	Meet the Target	Meet the Target
124th Ave NE	SR 520	NE 10th Pl	1b	>0.5	30.00	12.00	15.08	16.40	1.26	1.37	Meet the Target	Meet the Target
124th Ave NE	NE 10th Pl	NE 8th St	3	>0.9	30.00	12.00	15.08	16.40	1.26	1.37	Meet the Target	Meet the Target
124th Ave SE/SE 38th St	Factoria Blvd	Coal Creek Pkwy	2c	>0.75	35.00	14.00	17.25	18.47	1.23	1.32	Meet the Target	Meet the Target
Richards Road	Lake Hills Connector	SE 26th St	3	>0.9	35.00	14.00	21.00	11.60	1.50	0.83	Meet the Target	**Do Not Meet the Target**
Richards Road	SE 26th St	I-90	2b	>0.75	35.00	14.00	21.00	11.60	1.50	0.83	Meet the Target	Meet the Target
Factoria Blvd	I-90	Coal Creek Pkwy	2c	>0.75	35.00	14.00	13.70	14.30	0.98	1.02	Meet the Target	Meet the Target
Coal Creek Pkwy	I-405	SE 48th Ct	2c	>0.75	35.00	14.00	23.80	22.65	1.70	1.62	Meet the Target	Meet the Target
Coal Creek Pkwy	SE 48th Ct	Forest Drive SE	3	>0.9	35.00	14.00	23.80	22.65	1.70	1.62	Meet the Target	Meet the Target
Coal Creek Pkwy	Forest Drive SE	Newcastle	3	>0.9	40.00	16.00	35.00	20.40	2.19	1.28	Meet the Target	Meet the Target
Lake Washington Blvd	I-405	Renton	3	>0.9	25.00	10.00	24.50	26.50	2.45	2.65	Meet the Target	Meet the Target
140th Ave NE	Bellevue Northern City Limit	NE 24th St	3	>0.9	35.00	14.00	16.20	25.30	1.16	1.81	Meet the Target	Meet the Target
140th Ave NE	NE 24th St	SR 520	3	>0.9	30.00	12.00	15.00	9.80	1.25	0.82	Meet the Target	**Do Not Meet the Target**
140th Ave NE	SR 520	Bel-Red Rd	1b	>0.5	30.00	12.00	15.00	9.80	1.25	0.82	Meet the Target	Meet the Target
140th Ave NE	Bel-Red Rd	NE 14th St	1b	>0.5	30.00	12.00	20.60	5.20	1.72	0.43	Meet the Target	**Do Not Meet the Target**
140th Ave NE	NE 14th St	NE 8th St	3	>0.9	30.00	12.00	20.60	5.20	1.72	0.43	Meet the Target	**Do Not Meet the Target**
140th Ave	NE 8th St	SE 8th St	3	>0.9	30.00	12.00	19.10	11.90	1.59	0.99	Meet the Target	Meet the Target
140th Ave NE/145th Pl SE	SE 8th St	SE 24th St	3	>0.9	30.00	12.00	21.30	14.40	1.78	1.20	Meet the Target	Meet the Target
148th Ave NE	Bellevue Northern City Limit	SR 520	3	>0.9	35.00	14.00	16.90	18.20	1.21	1.30	Meet the Target	Meet the Target
148th Ave	SR 520	NE 15th Ct	1b	>0.5	35.00	14.00	21.40	12.20	1.53	0.87	Meet the Target	Meet the Target
148th Ave	NE 15th Ct	NE 8th St	3	>0.9	35.00	14.00	21.40	12.20	1.53	0.87	Meet the Target	**Do Not Meet the Target**
148th Ave	NE 8th St	SE 8th St	3	>0.9	35.00	14.00	24.50	14.80	1.75	1.06	Meet the Target	Meet the Target
148th Ave SE	SE 8th St	SE 24th St	3	>0.9	35.00	14.00	19.40	8.60	1.39	0.61	Meet the Target	**Do Not Meet the Target**
148th Ave SE	SE 24th St	SE 37th St	2b	>0.75	35.00	14.00	23.60	6.30	1.69	0.45	Meet the Target	**Do Not Meet the Target**
150th Ave SE	SE 37th St	SE 38th St	2b	>0.75	30.00	12.00	20.10	14.40	1.68	1.20	Meet the Target	Meet the Target
150th Ave SE	SE 38th St	Newport Way	3	>0.9	30.00	12.00	20.10	14.40	1.68	1.20	Meet the Target	Meet the Target
156th Ave NE	Bel-Red Rd	NE 20th St	1b	>0.5	30.00	12.00	21.70	17.90	1.81	1.49	Meet the Target	Meet the Target
156th Ave NE	NE 20th St	NE 8th St	2a	>0.75	30.00	12.00	21.70	17.90	1.81	1.49	Meet the Target	Meet the Target
156th Ave	NE 8th St	Lake Hills Blvd	3	>0.9	25.00	10.00	25.00	14.80	2.50	1.48	Meet the Target	Meet the Target
156th Ave SE	Lake Hills Blvd	SE 27th St	3	>0.9	30.00	12.00	23.90	15.70	1.99	1.31	Meet the Target	Meet the Target
156th Ave SE	SE 27th St	Eastgate Way	2b	>0.75	30.00	12.00	23.90	15.70	1.99	1.31	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	NE 24th St	Northup Way	3	>0.9	25.00	10.00	35.10	35.70	3.51	3.57	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	Northup Way	SE 34th St	3	>0.9	25.00	10.00	33.40	17.20	3.34	1.72	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	SE 34th St	I-90 (SE Newport Way)	3	>0.9	25.00	10.00	30.65	11.40	3.07	1.14	Meet the Target	Meet the Target
Lakemont Blvd	I-90	164th Ave SE	3	>0.9	40.00	16.00	31.00	21.80	1.94	1.36	Meet the Target	Meet the Target
Lakemont Blvd	164th Ave SE	Newcastle	3	>0.9	30.00	12.00	33.80	33.00	2.82	2.75	Meet the Target	Meet the Target
Northup Way	Bellevue Way	SR 520	3	>0.9	35.00	14.00	13.60	20.70	0.97	1.48	Meet the Target	Meet the Target
Northup Way	SR 520	124th Ave NE	1b	>0.5	35.00	14.00	13.60	20.70	0.97	1.48	Meet the Target	Meet the Target
NE 20th St	124th Ave NE	140th Ave NE	1b	>0.5	35.00	14.00	15.90	22.30	1.14	1.59	Meet the Target	Meet the Target
NE 20th St	140th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	15.20	19.40	1.09	1.39	Meet the Target	Meet the Target
Northup Way	156th Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	25.90	22.90	1.85	1.64	Meet the Target	Meet the Target
Northup Way	164th Ave NE	West Lake Sammamish Pkwy	3	>0.9	35.00	14.00	25.90	22.90	1.85	1.64	Meet the Target	Meet the Target
NE 24th St	140th Ave NE	SR 520	3	>0.9	35.00	14.00	11.40	16.50	0.81	1.18	**Do Not Meet the Target**	Meet the Target
NE 24th St	SR 520	148th Ave NE	ib	>0.9	35.00	14.00	11.40	16.50	0.81	1.18	Meet the Target	Meet the Target
NE 24th St	Bel-Red Rd	156th Ave NE	1b	>0.5	30.00	12.00	17.90	21.20	1.49	1.77	Meet the Target	Meet the Target
NE 24th St	156th Ave NE	164th Ave NE	3	>0.9	30.00	12.00	17.90	21.20	1.49	1.77	Meet the Target	Meet the Target
NE Spring Boulevard	NE 12th St	NE 20th St	1b	>0.5	25.00	10.00						
NE 12th St	Bellevue Way	116th Ave NE	1a	>0.5	30.00	12.00	17.90	16.00	1.49	1.33	Meet the Target	Meet the Target
NE 12th St	116th Ave NE	124th Ave NE	1b	>0.5	30.00	12.00	22.00	21.60	1.83	1.80	Meet the Target	Meet the Target
Bel-Red Rd	124th Ave NE	148th Ave NE	1b	>0.5	35.00	14.00	20.10	26.20	1.44	1.87	Meet the Target	Meet the Target
Bel-Red Rd	148th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	17.60	14.60	1.26	1.04	Meet the Target	Meet the Target
Bel-Red Rd	156th Ave NE	164th Ave NE	3	>0.9	35.00	14.00	28.50	25.50	2.04	1.82	Meet the Target	Meet the Target
Bel-Red Rd	164th Ave NE	Redmond	3	>0.9	30.00	12.00	17.40	34.80	1.45	2.90	Meet the Target	Meet the Target
NE 10th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	8.10	17.80	0.68	1.48	Meet the Target	Meet the Target
NE 8th St	Medina	100th Ave NE	3	>0.9	30.00	12.00	20.60	21.70	1.72	1.81	Meet the Target	Meet the Target
NE 8th St	100th Ave NE	I-405	1a	>0.5	30.00	12.00	10.40	10.20	0.87	0.85	Meet the Target	Meet the Target
NE 8th St	I-405	123rd Ave NE	1c	>0.5	30.00	12.00	19.00	15.80	1.58	1.32	Meet the Target	Meet the Target
NE 8th St	123rd Ave NE	124th Ave NE	3	>0.9	30.00	12.00	19.00	15.80	1.58	1.32	Meet the Target	Meet the Target
NE 8th St	124th Ave NE	148th Ave NE	3	>0.9	35.00	14.00	17.40	25.70	1.24	1.84	Meet the Target	Meet the Target
NE 8th St	148th Ave NE	153rd Ave NE	3	>0.9	35.00	14.00	20.65	22.45	1.48	1.60	Meet the Target	Meet the Target
NE 8th St	153rd Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	20.65	22.45	1.48	1.60	Meet the Target	Meet the Target
NE 8th St	164 Ave NE	Northup Way	3	>0.9	25.00	10.00	24.90	25.20	2.49	2.52	Meet the Target	Meet the Target
NE 4th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	5.18	5.17	0.43	0.43	**Do Not Meet the Target**	**Do Not Meet the Target**
Main St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	16.50	14.80	1.38	1.23	Meet the Target	Meet the Target
SE 8th St	112th Ave SE	Lake Hills Connector	1c	>0.5	35.00	14.00	8.20	10.70	0.59	0.76	Meet the Target	Meet the Target
Lake Hills Connector/SE 8th St	Richards Road	148th Ave SE	3	>0.9	30.00	12.00	25.35	27.95	2.11	2.33	Meet the Target	Meet the Target
Lake Hills Blvd	148th Ave SE	156th Ave SE	3	>0.9	30.00	12.00	25.00	23.60	2.08	1.97	Meet the Target	Meet the Target
SE 26th St/Kamber Rd	Richards Road	140th Ave SE	2b	>0.75	35.00	14.00	24.30	18.20	1.74	1.30	Meet the Target	Meet the Target
Eastgate Way	Richards Road	139th Ave SE	2b	>0.75	35.00	14.00	24.40	9.70	1.74	0.69	Meet the Target	**Do Not Meet the Target**
Eastgate Way	139th Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	20.00	23.00	1.43	1.64	Meet the Target	Meet the Target
Eastgate Way	150th Ave SE	161st Ave SE	2b	>0.75	30.00	12.00	18.00	14.70	1.50	1.23	Meet the Target	Meet the Target
SE 36th St	Factoria Blvd	142nd Ave SE	2	>0.75	35.00	14.00	20.30	13.70	1.45	0.98	Meet the Target	Meet the Target
SE 36th St	142nd Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	18.70	22.00	1.34	1.57	Meet the Target	Meet the Target
Newport Way	Factoria Blvd	133rd Ave SE	2c	>0.75	30.00	12.00	22.90	20.80	1.91	1.73	Meet the Target	Meet the Target
Newport Way	133rd Ave SE	SE Allen Rd	3	>0.9	30.00	12.00	22.90	20.80	1.91	1.73	Meet the Target	Meet the Target
Newport Way	SE Allen Rd	150th Ave SE	3	>0.9	30.00	12.00	23.90	22.65	1.99	1.89	Meet the Target	Meet the Target
							20.63	**17.33**			2	13

Bellevue Comprehensive Plan EIS Appendix - Corridor Travel Speed

Corridor	From	To	PMA	Target Ratio	Speed Limit (mph)	Typical Urban Travel Speed (mph)	No Action* (Full Development on 2044 Network)					
							Postprocessed Speed (mph)		Ratio to Target Speed		PP Speed Ratio to the TUTS	
							NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Bellevue Way	SR 520	NE 12th St	3	>0.9	35.00	14.00	19.09	24.39	1.36	1.74	Meet the Target	Meet the Target
Bellevue Way	NE 12th St	Main St	1a	>0.5	30.00	12.00	13.20	4.76	1.10	0.40	Meet the Target	Do Not Meet the Target
Bellevue Way	Main St	112th Ave SE	3	>0.9	30.00	12.00	26.89	9.81	2.24	0.82	Meet the Target	Do Not Meet the Target
Bellevue Way	112th Ave SE	I-90	3	>0.9	40.00	16.00	24.54	20.91	1.53	1.31	Meet the Target	Meet the Target
108th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	10.50	13.61	0.88	1.13	Meet the Target	Meet the Target
112th Ave NE	Northup Way	NE 12th St	3	>0.9	30.00	12.00	24.71	20.10	2.06	1.67	Meet the Target	Meet the Target
112th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	12.52	9.13	1.04	0.76	Meet the Target	Meet the Target
112th Ave SE	Main St	SE 8th St	1c	>0.5	35.00	14.00	31.02	5.72	2.22	0.41	Meet the Target	Do Not Meet the Target
112th Ave SE	SE 8th St	Bellevue Way	3	>0.9	35.00	14.00	31.16	6.31	2.23	0.45	Meet the Target	Do Not Meet the Target
116th Ave NE	Northup Way	NE 12th St	1b	>0.5	30.00	12.00	21.67	17.51	1.81	1.46	Meet the Target	Meet the Target
116th Ave NE	NE 12th St	Main St	1c	>0.5	30.00	12.00	15.58	8.21	1.30	0.68	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	Main St	SE 8th St	1c	>0.5	35.00	14.00	22.53	16.29	1.61	1.16	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	SE 8th St	Richards Road	3	>0.9	35.00	14.00	25.83	14.59	1.84	1.04	Meet the Target	Meet the Target
124th Ave NE	SR 520	NE 10th Pl	1b	>0.5	30.00	12.00	14.31	15.73	1.19	1.31	Meet the Target	Meet the Target
124th Ave NE	NE 10th Pl	NE 8th St	3	>0.9	30.00	12.00	14.56	14.29	1.21	1.19	Meet the Target	Meet the Target
124th Ave SE/SE 38th St	Factoria Blvd	Coal Creek Pkwy	2c	>0.75	35.00	14.00	17.12	20.13	1.22	1.44	Meet the Target	Meet the Target
Richards Road	Lake Hills Connector	SE 26th St	3	>0.9	35.00	14.00	21.40	11.48	1.53	0.82	Meet the Target	Do Not Meet the Target
Richards Road	SE 26th St	I-90	2b	>0.75	35.00	14.00	21.50	11.51	1.54	0.82	Meet the Target	Meet the Target
Factoria Blvd	I-90	Coal Creek Pkwy	2c	>0.75	35.00	14.00	14.07	15.92	1.01	1.14	Meet the Target	Meet the Target
Coal Creek Pkwy	I-405	SE 48th Ct	2c	>0.75	35.00	14.00	23.46	22.13	1.68	1.58	Meet the Target	Meet the Target
Coal Creek Pkwy	SE 48th Ct	Forest Drive SE	3	>0.9	35.00	14.00	23.63	24.45	1.69	1.75	Meet the Target	Meet the Target
Coal Creek Pkwy	Forest Drive SE	Newcastle	3	>0.9	40.00	16.00	35.33	22.28	2.21	1.39	Meet the Target	Meet the Target
Lake Washington Blvd	I-405	Renton	3	>0.9	25.00	10.00	24.50	28.73	2.45	2.87	Meet the Target	Meet the Target
140th Ave NE	Bellevue Northern City Limit	NE 24th St	3	>0.9	35.00	14.00	15.87	25.28	1.13	1.81	Meet the Target	Meet the Target
140th Ave NE	NE 24th St	SR 520	3	>0.9	30.00	12.00	15.15	9.84	1.26	0.82	Meet the Target	Do Not Meet the Target
140th Ave NE	SR 520	Bel-Red Rd	1b	>0.5	30.00	12.00	15.15	9.95	1.26	0.83	Meet the Target	Meet the Target
140th Ave NE	Bel-Red Rd	NE 14th St	1b	>0.5	30.00	12.00	19.82	5.23	1.65	0.44	Meet the Target	Do Not Meet the Target
140th Ave NE	NE 14th St	NE 8th St	3	>0.9	30.00	12.00	20.52	5.17	1.71	0.43	Meet the Target	Do Not Meet the Target
140th Ave	NE 8th St	SE 8th St	3	>0.9	30.00	12.00	18.32	10.93	1.53	0.91	Meet the Target	Meet the Target
140th Ave NE/145th Pl SE	SE 8th St	SE 24th St	3	>0.9	30.00	12.00	21.30	14.69	1.78	1.22	Meet the Target	Meet the Target
148th Ave NE	Bellevue Northern City Limit	SR 520	3	>0.9	35.00	14.00	16.36	18.47	1.17	1.32	Meet the Target	Meet the Target
148th Ave	SR 520	NE 15th Ct	1b	>0.5	35.00	14.00	22.04	13.04	1.57	0.93	Meet the Target	Meet the Target
148th Ave	NE 15th Ct	NE 8th St	3	>0.9	35.00	14.00	20.79	11.72	1.49	0.84	Meet the Target	Do Not Meet the Target
148th Ave	NE 8th St	SE 8th St	3	>0.9	35.00	14.00	24.01	13.74	1.72	0.98	Meet the Target	Meet the Target
148th Ave SE	SE 8th St	SE 24th St	3	>0.9	35.00	14.00	19.03	8.54	1.36	0.61	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 24th St	SE 37th St	2b	>0.75	35.00	14.00	24.48	6.74	1.75	0.48	Meet the Target	Do Not Meet the Target
150th Ave SE	SE 37th St	SE 38th St	2b	>0.75	30.00	12.00	20.20	14.72	1.68	1.23	Meet the Target	Meet the Target
150th Ave SE	SE 38th St	Newport Way	3	>0.9	30.00	12.00	20.16	15.95	1.68	1.33	Meet the Target	Meet the Target
156th Ave NE	Bel-Red Rd	NE 20th St	1b	>0.5	30.00	12.00	21.70	17.72	1.81	1.48	Meet the Target	Meet the Target
156th Ave NE	NE 20th St	NE 8th St	2a	>0.75	30.00	12.00	21.70	17.49	1.81	1.46	Meet the Target	Meet the Target
156th Ave	NE 8th St	Lake Hills Blvd	3	>0.9	25.00	10.00	24.25	13.91	2.42	1.39	Meet the Target	Meet the Target
156th Ave SE	Lake Hills Blvd	SE 27th St	3	>0.9	30.00	12.00	24.13	15.53	2.01	1.29	Meet the Target	Meet the Target
156th Ave SE	SE 27th St	Eastgate Way	2b	>0.75	30.00	12.00	23.91	15.71	1.99	1.31	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	NE 24th St	Northup Way	3	>0.9	25.00	10.00	35.10	35.70	3.51	3.57	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	Northup Way	SE 34th St	3	>0.9	25.00	10.00	33.52	17.24	3.35	1.72	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	SE 34th St	I-90 (SE Newport Way)	3	>0.9	25.00	10.00	30.12	12.57	3.01	1.26	Meet the Target	Meet the Target
Lakemont Blvd	I-90	164th Ave SE	3	>0.9	40.00	16.00	31.05	21.29	1.94	1.33	Meet the Target	Meet the Target
Lakemont Blvd	164th Ave SE	Newcastle	3	>0.9	30.00	12.00	34.01	32.15	2.83	2.68	Meet the Target	Meet the Target
Northup Way	Bellevue Way	SR 520	3	>0.9	35.00	14.00	14.28	21.60	1.02	1.54	Meet the Target	Meet the Target
Northup Way	SR 520	124th Ave NE	1b	>0.5	35.00	14.00	12.25	18.49	0.87	1.32	Meet the Target	Meet the Target
NE 20th St	124th Ave NE	140th Ave NE	1b	>0.5	35.00	14.00	15.69	21.81	1.12	1.56	Meet the Target	Meet the Target
NE 20th St	140th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	15.36	19.22	1.10	1.37	Meet the Target	Meet the Target
Northup Way	156th Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	25.33	22.91	1.81	1.64	Meet the Target	Meet the Target
Northup Way	164th Ave NE	West Lake Sammamish Pkwy	3	>0.9	35.00	14.00	26.20	22.94	1.87	1.64	Meet the Target	Meet the Target
NE 24th St	140th Ave NE	SR 520	3	>0.9	35.00	14.00	12.57	16.44	0.90	1.17	Do Not Meet the Target	Meet the Target
NE 24th St	SR 520	148th Ave NE	ib	>0.9	35.00	14.00	11.46	16.41	0.82	1.17	Meet the Target	Meet the Target
NE 24th St	Bel-Red Rd	156th Ave NE	1b	>0.5	30.00	12.00	17.88	21.19	1.49	1.77	Meet the Target	Meet the Target
NE 24th St	156th Ave NE	164th Ave NE	3	>0.9	30.00	12.00	18.21	20.35	1.52	1.70	Meet the Target	Meet the Target
NE Spring Boulevard	NE 12th St	NE 20th St	1b	>0.5	25.00	10.00						
NE 12th St	Bellevue Way	116th Ave NE	1a	>0.5	30.00	12.00	16.91	14.50	1.41	1.21	Meet the Target	Meet the Target
NE 12th St	116th Ave NE	124th Ave NE	1b	>0.5	30.00	12.00	20.03	18.20	1.67	1.52	Meet the Target	Meet the Target
Bel-Red Rd	124th Ave NE	148th Ave NE	1b	>0.5	35.00	14.00	19.33	25.51	1.38	1.82	Meet the Target	Meet the Target
Bel-Red Rd	148th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	17.78	14.62	1.27	1.04	Meet the Target	Meet the Target
Bel-Red Rd	156th Ave NE	164th Ave NE	3	>0.9	35.00	14.00	28.61	25.49	2.04	1.82	Meet the Target	Meet the Target
Bel-Red Rd	164th Ave NE	Redmond	3	>0.9	30.00	12.00	17.52	34.80	1.46	2.90	Meet the Target	Meet the Target
NE 10th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	7.68	17.64	0.64	1.47	Meet the Target	Meet the Target
NE 8th St	Medina	100th Ave NE	3	>0.9	30.00	12.00	20.58	21.45	1.72	1.79	Meet the Target	Meet the Target
NE 8th St	100th Ave NE	I-405	1a	>0.5	30.00	12.00	10.36	10.19	0.86	0.85	Meet the Target	Meet the Target
NE 8th St	I-405	123rd Ave NE	1c	>0.5	30.00	12.00	17.91	14.43	1.49	1.20	Meet the Target	Meet the Target
NE 8th St	123rd Ave NE	124th Ave NE	3	>0.9	30.00	12.00	17.76	14.79	1.48	1.23	Meet the Target	Meet the Target
NE 8th St	124th Ave NE	148th Ave NE	3	>0.9	35.00	14.00	17.10	25.04	1.22	1.79	Meet the Target	Meet the Target
NE 8th St	148th Ave NE	153rd Ave NE	3	>0.9	35.00	14.00	20.68	22.43	1.48	1.60	Meet the Target	Meet the Target
NE 8th St	153rd Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	20.66	22.45	1.48	1.60	Meet the Target	Meet the Target
NE 8th St	164 Ave NE	Northup Way	3	>0.9	25.00	10.00	24.94	25.20	2.49	2.52	Meet the Target	Meet the Target
NE 4th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	5.17	5.17	0.43	0.43	Do Not Meet the Target	Do Not Meet the Target
Main St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	16.92	14.79	1.41	1.23	Meet the Target	Meet the Target
SE 8th St	112th Ave SE	Lake Hills Connector	1c	>0.5	35.00	14.00	8.21	10.70	0.59	0.76	Meet the Target	Meet the Target
Lake Hills Connector/SE 8th St	Richards Road	148th Ave SE	3	>0.9	30.00	12.00	25.48	27.94	2.12	2.33	Meet the Target	Meet the Target
Lake Hills Blvd	148th Ave SE	156th Ave SE	3	>0.9	30.00	12.00	25.23	23.38	2.10	1.95	Meet the Target	Meet the Target
SE 26th St/Kamber Rd	Richards Road	140th Ave SE	2b	>0.75	35.00	14.00	25.09	18.16	1.79	1.30	Meet the Target	Meet the Target
Eastgate Way	Richards Road	139th Ave SE	2b	>0.75	35.00	14.00	25.47	9.90	1.82	0.71	Meet the Target	Do Not Meet the Target
Eastgate Way	139th Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	20.03	24.56	1.43	1.75	Meet the Target	Meet the Target
Eastgate Way	150th Ave SE	161st Ave SE	2b	>0.75	30.00	12.00	18.07	14.97	1.51	1.25	Meet the Target	Meet the Target
SE 36th St	Factoria Blvd	142nd Ave SE	2	>0.75	35.00	14.00	22.08	13.70	1.58	0.98	Meet the Target	Meet the Target
SE 36th St	142nd Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	20.24	22.57	1.45	1.61	Meet the Target	Meet the Target
Newport Way	Factoria Blvd	133rd Ave SE	2c	>0.75	30.00	12.00	23.09	20.89	1.92	1.74	Meet the Target	Meet the Target
Newport Way	133rd Ave SE	SE Allen Rd	3	>0.9	30.00	12.00	23.09	20.87	1.92	1.74	Meet the Target	Meet the Target
Newport Way	SE Allen Rd	150th Ave SE	3	>0.9	30.00	12.00	23.94	22.68	2.00	1.89	Meet the Target	Meet the Target
							20.59	**17.24**			2	13

* The model includes system tolling and 30% WFH assumptions

Bellevue Comprehensive Plan EIS Appendix - Corridor Travel Speed

Corridor	From	To	PMA	Target Ratio	Speed Limit (mph)	Typical Urban Travel Speed (mph)	Alt 1* (Full Development on 2044 Network)					
							Postprocessed Speed (mph)		Ratio to Target Speed		PP Speed Ratio to the TUTS	
							NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Bellevue Way	SR 520	NE 12th St	3	>0.9	35.00	14.00	19.12	24.40	1.37	1.74	Meet the Target	Meet the Target
Bellevue Way	NE 12th St	Main St	1a	>0.5	30.00	12.00	13.20	4.77	1.10	0.40	Meet the Target	Do Not Meet the Target
Bellevue Way	Main St	112th Ave SE	3	>0.9	30.00	12.00	26.93	9.27	2.24	0.77	Meet the Target	Do Not Meet the Target
Bellevue Way	112th Ave SE	I-90	3	>0.9	40.00	16.00	23.78	17.70	1.49	1.11	Meet the Target	Meet the Target
108th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	10.55	13.58	0.88	1.13	Meet the Target	Meet the Target
112th Ave NE	Northup Way	NE 12th St	3	>0.9	30.00	12.00	23.67	20.05	1.97	1.67	Meet the Target	Meet the Target
112th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	12.33	8.88	1.03	0.74	Meet the Target	Meet the Target
112th Ave SE	Main St	SE 8th St	1c	>0.5	35.00	14.00	30.85	4.72	2.20	0.34	Meet the Target	Do Not Meet the Target
112th Ave SE	SE 8th St	Bellevue Way	3	>0.9	35.00	14.00	31.13	6.19	2.22	0.44	Meet the Target	Do Not Meet the Target
116th Ave NE	Northup Way	NE 12th St	1b	>0.5	30.00	12.00	20.86	17.03	1.74	1.42	Meet the Target	Meet the Target
116th Ave NE	NE 12th St	Main St	1c	>0.5	30.00	12.00	14.44	7.30	1.20	0.61	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	Main St	SE 8th St	1c	>0.5	35.00	14.00	21.51	13.11	1.54	0.94	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	SE 8th St	Richards Road	3	>0.9	35.00	14.00	25.08	11.72	1.79	0.84	Meet the Target	Do Not Meet the Target
124th Ave NE	SR 520	NE 10th Pl	1b	>0.5	30.00	12.00	12.68	14.25	1.06	1.19	Meet the Target	Meet the Target
124th Ave NE	NE 10th Pl	NE 8th St	3	>0.9	30.00	12.00	12.32	12.41	1.03	1.03	Meet the Target	Meet the Target
124th Ave SE/SE 38th St	Factoria Blvd	Coal Creek Pkwy	2c	>0.75	35.00	14.00	17.11	18.73	1.22	1.34	Meet the Target	Meet the Target
Richards Road	Lake Hills Connector	SE 26th St	3	>0.9	35.00	14.00	20.96	10.41	1.50	0.74	Meet the Target	Do Not Meet the Target
Richards Road	SE 26th St	I-90	2b	>0.75	35.00	14.00	21.06	10.47	1.50	0.75	Meet the Target	Do Not Meet the Target
Factoria Blvd	I-90	Coal Creek Pkwy	2c	>0.75	35.00	14.00	13.57	14.60	0.97	1.04	Meet the Target	Meet the Target
Coal Creek Pkwy	I-405	SE 48th Ct	2c	>0.75	35.00	14.00	22.84	21.65	1.63	1.55	Meet the Target	Meet the Target
Coal Creek Pkwy	SE 48th Ct	Forest Drive SE	3	>0.9	35.00	14.00	23.80	23.91	1.70	1.71	Meet the Target	Meet the Target
Coal Creek Pkwy	Forest Drive SE	Newcastle	3	>0.9	40.00	16.00	35.61	20.32	2.23	1.27	Meet the Target	Meet the Target
Lake Washington Blvd	I-405	Renton	3	>0.9	25.00	10.00	24.50	27.44	2.45	2.74	Meet the Target	Meet the Target
140th Ave NE	Bellevue Northern City Limit	NE 24th St	3	>0.9	35.00	14.00	15.30	25.26	1.09	1.80	Meet the Target	Meet the Target
140th Ave NE	NE 24th St	SR 520	3	>0.9	30.00	12.00	14.98	9.81	1.25	0.82	Meet the Target	Do Not Meet the Target
140th Ave NE	SR 520	Bel-Red Rd	1b	>0.5	30.00	12.00	15.07	9.93	1.26	0.83	Meet the Target	Meet the Target
140th Ave NE	Bel-Red Rd	NE 14th St	1b	>0.5	30.00	12.00	18.89	4.84	1.57	0.40	Meet the Target	Do Not Meet the Target
140th Ave NE	NE 14th St	NE 8th St	3	>0.9	30.00	12.00	19.85	4.99	1.65	0.42	Meet the Target	Do Not Meet the Target
140th Ave	NE 8th St	SE 8th St	3	>0.9	30.00	12.00	18.03	10.15	1.50	0.85	Meet the Target	Do Not Meet the Target
140th Ave NE/145th Pl SE	SE 8th St	SE 24th St	3	>0.9	30.00	12.00	21.09	13.95	1.76	1.16	Meet the Target	Meet the Target
148th Ave NE	Bellevue Northern City Limit	SR 520	3	>0.9	35.00	14.00	15.95	18.53	1.14	1.32	Meet the Target	Meet the Target
148th Ave	SR 520	NE 15th Ct	1b	>0.5	35.00	14.00	21.36	12.92	1.53	0.92	Meet the Target	Meet the Target
148th Ave	NE 15th Ct	NE 8th St	3	>0.9	35.00	14.00	20.76	11.38	1.48	0.81	Meet the Target	Do Not Meet the Target
148th Ave	NE 8th St	SE 8th St	3	>0.9	35.00	14.00	23.90	12.53	1.71	0.89	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 8th St	SE 24th St	3	>0.9	35.00	14.00	18.57	8.20	1.33	0.59	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 24th St	SE 37th St	2b	>0.75	35.00	14.00	23.99	6.46	1.71	0.46	Meet the Target	Do Not Meet the Target
150th Ave SE	SE 37th St	SE 38th St	2b	>0.75	30.00	12.00	20.18	14.60	1.68	1.22	Meet the Target	Meet the Target
150th Ave SE	SE 38th St	Newport Way	3	>0.9	30.00	12.00	20.15	15.36	1.68	1.28	Meet the Target	Meet the Target
156th Ave NE	Bel-Red Rd	NE 20th St	1b	>0.5	30.00	12.00	21.68	17.24	1.81	1.44	Meet the Target	Meet the Target
156th Ave NE	NE 20th St	NE 8th St	2a	>0.75	30.00	12.00	21.49	16.79	1.79	1.40	Meet the Target	Meet the Target
156th Ave	NE 8th St	Lake Hills Blvd	3	>0.9	25.00	10.00	23.91	12.61	2.39	1.26	Meet the Target	Meet the Target
156th Ave SE	Lake Hills Blvd	SE 27th St	3	>0.9	30.00	12.00	24.06	15.19	2.01	1.27	Meet the Target	Meet the Target
156th Ave SE	SE 27th St	Eastgate Way	2b	>0.75	30.00	12.00	23.91	15.69	1.99	1.31	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	NE 24th St	Northup Way	3	>0.9	25.00	10.00	35.10	35.70	3.51	3.57	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	Northup Way	SE 34th St	3	>0.9	25.00	10.00	33.53	16.48	3.35	1.65	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	SE 34th St	I-90 (SE Newport Way)	3	>0.9	25.00	10.00	29.84	11.62	2.98	1.16	Meet the Target	Meet the Target
Lakemont Blvd	I-90	164th Ave SE	3	>0.9	40.00	16.00	31.01	21.02	1.94	1.31	Meet the Target	Meet the Target
Lakemont Blvd	164th Ave SE	Newcastle	3	>0.9	30.00	12.00	33.97	32.09	2.83	2.67	Meet the Target	Meet the Target
Northup Way	Bellevue Way	SR 520	3	>0.9	35.00	14.00	14.14	19.18	1.01	1.37	Meet the Target	Meet the Target
Northup Way	SR 520	124th Ave NE	1b	>0.5	35.00	14.00	10.91	17.43	0.78	1.24	Meet the Target	Meet the Target
NE 20th St	124th Ave NE	140th Ave NE	1b	>0.5	35.00	14.00	14.93	21.50	1.07	1.54	Meet the Target	Meet the Target
NE 20th St	140th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	14.98	19.03	1.07	1.36	Meet the Target	Meet the Target
Northup Way	156th Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	24.29	22.55	1.74	1.61	Meet the Target	Meet the Target
Northup Way	164th Ave NE	West Lake Sammamish Pkwy	3	>0.9	35.00	14.00	25.63	22.92	1.83	1.64	Meet the Target	Meet the Target
NE 24th St	140th Ave NE	SR 520	3	>0.9	35.00	14.00	12.34	16.27	0.88	1.16	Do Not Meet the Target	Meet the Target
NE 24th St	SR 520	148th Ave NE	ib	>0.9	35.00	14.00	11.41	16.23	0.81	1.16	Meet the Target	Meet the Target
NE 24th St	Bel-Red Rd	156th Ave NE	1b	>0.5	30.00	12.00	17.76	21.20	1.48	1.77	Meet the Target	Meet the Target
NE 24th St	156th Ave NE	164th Ave NE	3	>0.9	30.00	12.00	18.10	20.63	1.51	1.72	Meet the Target	Meet the Target
NE Spring Boulevard	NE 12th St	NE 20th St	1b	>0.5	25.00	10.00						
NE 12th St	Bellevue Way	116th Ave NE	1a	>0.5	30.00	12.00	17.18	13.85	1.43	1.15	Meet the Target	Meet the Target
NE 12th St	116th Ave NE	124th Ave NE	1b	>0.5	30.00	12.00	17.86	16.19	1.49	1.35	Meet the Target	Meet the Target
Bel-Red Rd	124th Ave NE	148th Ave NE	1b	>0.5	35.00	14.00	18.16	25.39	1.30	1.81	Meet the Target	Meet the Target
Bel-Red Rd	148th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	17.71	14.60	1.27	1.04	Meet the Target	Meet the Target
Bel-Red Rd	156th Ave NE	164th Ave NE	3	>0.9	35.00	14.00	28.61	25.51	2.04	1.82	Meet the Target	Meet the Target
Bel-Red Rd	164th Ave NE	Redmond	3	>0.9	30.00	12.00	17.52	34.80	1.46	2.90	Meet the Target	Meet the Target
NE 10th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	7.91	16.85	0.66	1.40	Meet the Target	Meet the Target
NE 8th St	Medina	100th Ave NE	3	>0.9	30.00	12.00	20.57	21.62	1.71	1.80	Meet the Target	Meet the Target
NE 8th St	100th Ave NE	I-405	1a	>0.5	30.00	12.00	10.35	10.17	0.86	0.85	Meet the Target	Meet the Target
NE 8th St	I-405	123rd Ave NE	1c	>0.5	30.00	12.00	15.50	11.23	1.29	0.94	Meet the Target	Meet the Target
NE 8th St	123rd Ave NE	124th Ave NE	3	>0.9	30.00	12.00	16.31	15.00	1.36	1.25	Meet the Target	Meet the Target
NE 8th St	124th Ave NE	148th Ave NE	3	>0.9	35.00	14.00	15.97	24.69	1.14	1.76	Meet the Target	Meet the Target
NE 8th St	148th Ave NE	153rd Ave NE	3	>0.9	35.00	14.00	20.63	22.43	1.47	1.60	Meet the Target	Meet the Target
NE 8th St	153rd Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	20.65	22.45	1.47	1.60	Meet the Target	Meet the Target
NE 8th St	164 Ave NE	Northup Way	3	>0.9	25.00	10.00	24.94	25.20	2.49	2.52	Meet the Target	Meet the Target
NE 4th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	5.19	5.14	0.43	0.43	Do Not Meet the Target	Do Not Meet the Target
Main St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	17.07	14.71	1.42	1.23	Meet the Target	Meet the Target
SE 8th St	112th Ave SE	Lake Hills Connector	1c	>0.5	35.00	14.00	8.19	10.64	0.58	0.76	Meet the Target	Meet the Target
Lake Hills Connector/SE 8th St	Richards Road	148th Ave SE	3	>0.9	30.00	12.00	25.47	27.95	2.12	2.33	Meet the Target	Meet the Target
Lake Hills Blvd	148th Ave SE	156th Ave SE	3	>0.9	30.00	12.00	25.41	22.99	2.12	1.92	Meet the Target	Meet the Target
SE 26th St/Kamber Rd	Richards Road	140th Ave SE	2b	>0.75	35.00	14.00	24.95	18.08	1.78	1.29	Meet the Target	Meet the Target
Eastgate Way	Richards Road	139th Ave SE	2b	>0.75	35.00	14.00	25.39	9.71	1.81	0.69	Meet the Target	Do Not Meet the Target
Eastgate Way	139th Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	20.07	24.29	1.43	1.73	Meet the Target	Meet the Target
Eastgate Way	150th Ave SE	161st Ave SE	2b	>0.75	30.00	12.00	18.04	14.98	1.50	1.25	Meet the Target	Meet the Target
SE 36th St	Factoria Blvd	142nd Ave SE	2	>0.75	35.00	14.00	22.04	13.67	1.57	0.98	Meet the Target	Meet the Target
SE 36th St	142nd Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	20.36	22.87	1.45	1.63	Meet the Target	Meet the Target
Newport Way	Factoria Blvd	133rd Ave SE	2c	>0.75	30.00	12.00	23.00	20.86	1.92	1.74	Meet the Target	Meet the Target
Newport Way	133rd Ave SE	SE Allen Rd	3	>0.9	30.00	12.00	23.01	20.85	1.92	1.74	Meet the Target	Meet the Target
Newport Way	SE Allen Rd	150th Ave SE	3	>0.9	30.00	12.00	23.94	22.67	1.99	1.89	Meet the Target	Meet the Target
							20.24	**16.70**			2	17

* The model includes system tolling and 30% WFH assumptions

Bellevue Comprehensive Plan EIS Appendix - Corridor Travel Speed

Corridor	From	To	PMA	Target Ratio	Speed Limit (mph)	Typical Urban Travel Speed (mph)	Alt 2* (Full Development on 2044 Network)					
							Postprocessed Speed (mph)		Ratio to Target Speed		PP Speed Ratio to the TUTS	
							NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Bellevue Way	SR 520	NE 12th St	3	>0.9	35.00	14.00	18.93	24.39	1.35	1.74	Meet the Target	Meet the Target
Bellevue Way	NE 12th St	Main St	1a	>0.5	30.00	12.00	13.19	4.73	1.10	0.39	Meet the Target	Do Not Meet the Target
Bellevue Way	Main St	112th Ave SE	3	>0.9	30.00	12.00	26.78	8.99	2.23	0.75	Meet the Target	Do Not Meet the Target
Bellevue Way	112th Ave SE	I-90	3	>0.9	40.00	16.00	21.98	17.04	1.37	1.07	Meet the Target	Meet the Target
108th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	10.49	13.54	0.87	1.13	Meet the Target	Meet the Target
112th Ave NE	Northup Way	NE 12th St	3	>0.9	30.00	12.00	23.34	19.93	1.95	1.66	Meet the Target	Meet the Target
112th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	12.16	8.66	1.01	0.72	Meet the Target	Meet the Target
112th Ave SE	Main St	SE 8th St	1c	>0.5	35.00	14.00	30.56	4.48	2.18	0.32	Meet the Target	Do Not Meet the Target
112th Ave SE	SE 8th St	Bellevue Way	3	>0.9	35.00	14.00	31.08	6.14	2.22	0.44	Meet the Target	Do Not Meet the Target
116th Ave NE	Northup Way	NE 12th St	1b	>0.5	30.00	12.00	18.30	13.68	1.53	1.14	Meet the Target	Meet the Target
116th Ave NE	NE 12th St	Main St	1c	>0.5	30.00	12.00	13.90	6.48	1.16	0.54	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	Main St	SE 8th St	1c	>0.5	35.00	14.00	20.71	12.22	1.48	0.87	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	SE 8th St	Richards Road	3	>0.9	35.00	14.00	24.69	10.46	1.76	0.75	Meet the Target	Do Not Meet the Target
124th Ave NE	SR 520	NE 10th Pl	1b	>0.5	30.00	12.00	12.77	13.46	1.06	1.12	Meet the Target	Meet the Target
124th Ave NE	NE 10th Pl	NE 8th St	3	>0.9	30.00	12.00	12.47	11.68	1.04	0.97	Meet the Target	Meet the Target
124th Ave SE/SE 38th St	Factoria Blvd	Coal Creek Pkwy	2c	>0.75	35.00	14.00	16.92	19.09	1.21	1.36	Meet the Target	Meet the Target
Richards Road	Lake Hills Connector	SE 26th St	3	>0.9	35.00	14.00	20.71	10.24	1.48	0.73	Meet the Target	Do Not Meet the Target
Richards Road	SE 26th St	I-90	2b	>0.75	35.00	14.00	20.84	10.45	1.49	0.75	Meet the Target	Do Not Meet the Target
Factoria Blvd	I-90	Coal Creek Pkwy	2c	>0.75	35.00	14.00	13.60	14.79	0.97	1.06	Meet the Target	Meet the Target
Coal Creek Pkwy	I-405	SE 48th Ct	2c	>0.75	35.00	14.00	22.77	21.27	1.63	1.52	Meet the Target	Meet the Target
Coal Creek Pkwy	SE 48th Ct	Forest Drive SE	3	>0.9	35.00	14.00	23.41	24.06	1.67	1.72	Meet the Target	Meet the Target
Coal Creek Pkwy	Forest Drive SE	Newcastle	3	>0.9	40.00	16.00	35.38	20.68	2.21	1.29	Meet the Target	Meet the Target
Lake Washington Blvd	I-405	Renton	3	>0.9	25.00	10.00	24.49	27.38	2.45	2.74	Meet the Target	Meet the Target
140th Ave NE	Bellevue Northern City Limit	NE 24th St	3	>0.9	35.00	14.00	15.35	25.12	1.10	1.79	Meet the Target	Meet the Target
140th Ave NE	NE 24th St	SR 520	3	>0.9	30.00	12.00	14.94	9.67	1.25	0.81	Meet the Target	Do Not Meet the Target
140th Ave NE	SR 520	Bel-Red Rd	1b	>0.5	30.00	12.00	15.06	9.78	1.26	0.82	Meet the Target	Meet the Target
140th Ave NE	Bel-Red Rd	NE 14th St	1b	>0.5	30.00	12.00	19.39	4.46	1.62	0.37	Meet the Target	Do Not Meet the Target
140th Ave NE	NE 14th St	NE 8th St	3	>0.9	30.00	12.00	19.87	4.63	1.66	0.39	Meet the Target	Do Not Meet the Target
140th Ave	NE 8th St	SE 8th St	3	>0.9	30.00	12.00	17.46	9.49	1.46	0.79	Meet the Target	Do Not Meet the Target
140th Ave NE/145th Pl SE	SE 8th St	SE 24th St	3	>0.9	30.00	12.00	20.94	13.67	1.74	1.14	Meet the Target	Meet the Target
148th Ave NE	Bellevue Northern City Limit	SR 520	3	>0.9	35.00	14.00	16.00	18.50	1.14	1.32	Meet the Target	Meet the Target
148th Ave	SR 520	NE 15th Ct	1b	>0.5	35.00	14.00	21.17	12.43	1.51	0.89	Meet the Target	Meet the Target
148th Ave	NE 15th Ct	NE 8th St	3	>0.9	35.00	14.00	20.88	10.84	1.49	0.77	Meet the Target	Do Not Meet the Target
148th Ave	NE 8th St	SE 8th St	3	>0.9	35.00	14.00	23.35	11.65	1.67	0.83	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 8th St	SE 24th St	3	>0.9	35.00	14.00	18.29	8.17	1.31	0.58	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 24th St	SE 37th St	2b	>0.75	35.00	14.00	23.99	6.50	1.71	0.46	Meet the Target	Do Not Meet the Target
150th Ave SE	SE 37th St	SE 38th St	2b	>0.75	30.00	12.00	20.19	14.57	1.68	1.21	Meet the Target	Meet the Target
150th Ave SE	SE 38th St	Newport Way	3	>0.9	30.00	12.00	20.13	15.18	1.68	1.27	Meet the Target	Meet the Target
156th Ave NE	Bel-Red Rd	NE 20th St	1b	>0.5	30.00	12.00	21.62	16.55	1.80	1.38	Meet the Target	Meet the Target
156th Ave NE	NE 20th St	NE 8th St	2a	>0.75	30.00	12.00	21.38	16.16	1.78	1.35	Meet the Target	Meet the Target
156th Ave	NE 8th St	Lake Hills Blvd	3	>0.9	25.00	10.00	23.75	11.84	2.38	1.18	Meet the Target	Meet the Target
156th Ave SE	Lake Hills Blvd	SE 27th St	3	>0.9	30.00	12.00	24.07	15.01	2.01	1.25	Meet the Target	Meet the Target
156th Ave SE	SE 27th St	Eastgate Way	2b	>0.75	30.00	12.00	23.91	15.69	1.99	1.31	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	NE 24th St	Northup Way	3	>0.9	25.00	10.00	35.10	35.70	3.51	3.57	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	Northup Way	SE 34th St	3	>0.9	25.00	10.00	33.51	16.20	3.35	1.62	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	SE 34th St	I-90 (SE Newport Way)	3	>0.9	25.00	10.00	29.79	11.53	2.98	1.15	Meet the Target	Meet the Target
Lakemont Blvd	I-90	164th Ave SE	3	>0.9	40.00	16.00	30.97	20.25	1.94	1.27	Meet the Target	Meet the Target
Lakemont Blvd	164th Ave SE	Newcastle	3	>0.9	30.00	12.00	33.93	31.51	2.83	2.63	Meet the Target	Meet the Target
Northup Way	Bellevue Way	SR 520	3	>0.9	35.00	14.00	13.97	17.16	1.00	1.23	Meet the Target	Meet the Target
Northup Way	SR 520	124th Ave NE	1b	>0.5	35.00	14.00	9.24	17.39	0.66	1.24	Meet the Target	Meet the Target
NE 20th St	124th Ave NE	140th Ave NE	1b	>0.5	35.00	14.00	14.73	21.32	1.05	1.52	Meet the Target	Meet the Target
NE 20th St	140th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	14.79	18.84	1.06	1.35	Meet the Target	Meet the Target
Northup Way	156th Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	23.41	22.59	1.67	1.61	Meet the Target	Meet the Target
Northup Way	164th Ave NE	West Lake Sammamish Pkwy	3	>0.9	35.00	14.00	25.63	22.92	1.83	1.64	Meet the Target	Meet the Target
NE 24th St	140th Ave NE	SR 520	3	>0.9	35.00	14.00	11.96	16.01	0.85	1.14	Do Not Meet the Target	Meet the Target
NE 24th St	SR 520	148th Ave NE	ib	>0.9	35.00	14.00	11.41	15.87	0.82	1.13	Meet the Target	Meet the Target
NE 24th St	Bel-Red Rd	156th Ave NE	1b	>0.5	30.00	12.00	17.43	21.19	1.45	1.77	Meet the Target	Meet the Target
NE 24th St	156th Ave NE	164th Ave NE	3	>0.9	30.00	12.00	16.30	19.12	1.36	1.59	Meet the Target	Meet the Target
NE Spring Boulevard	NE 12th St	NE 20th St	1b	>0.5	25.00	10.00						
NE 12th St	Bellevue Way	116th Ave NE	1a	>0.5	30.00	12.00	16.89	12.76	1.41	1.06	Meet the Target	Meet the Target
NE 12th St	116th Ave NE	124th Ave NE	1b	>0.5	30.00	12.00	16.58	15.96	1.38	1.33	Meet the Target	Meet the Target
Bel-Red Rd	124th Ave NE	148th Ave NE	1b	>0.5	35.00	14.00	17.67	24.88	1.26	1.78	Meet the Target	Meet the Target
Bel-Red Rd	148th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	17.65	14.54	1.26	1.04	Meet the Target	Meet the Target
Bel-Red Rd	156th Ave NE	164th Ave NE	3	>0.9	35.00	14.00	28.56	25.45	2.04	1.82	Meet the Target	Meet the Target
Bel-Red Rd	164th Ave NE	Redmond	3	>0.9	30.00	12.00	17.48	34.80	1.46	2.90	Meet the Target	Meet the Target
NE 10th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	7.81	16.51	0.65	1.38	Meet the Target	Meet the Target
NE 8th St	Medina	100th Ave NE	3	>0.9	30.00	12.00	20.58	21.51	1.71	1.79	Meet the Target	Meet the Target
NE 8th St	100th Ave NE	I-405	1a	>0.5	30.00	12.00	10.26	10.15	0.86	0.85	Meet the Target	Meet the Target
NE 8th St	I-405	123rd Ave NE	1c	>0.5	30.00	12.00	14.26	12.00	1.19	1.00	Meet the Target	Meet the Target
NE 8th St	123rd Ave NE	124th Ave NE	3	>0.9	30.00	12.00	15.41	13.99	1.28	1.17	Meet the Target	Meet the Target
NE 8th St	124th Ave NE	148th Ave NE	3	>0.9	35.00	14.00	15.50	23.89	1.11	1.71	Meet the Target	Meet the Target
NE 8th St	148th Ave NE	153rd Ave NE	3	>0.9	35.00	14.00	20.60	22.42	1.47	1.60	Meet the Target	Meet the Target
NE 8th St	153rd Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	20.65	22.45	1.47	1.60	Meet the Target	Meet the Target
NE 8th St	164 Ave NE	Northup Way	3	>0.9	25.00	10.00	24.94	25.20	2.49	2.52	Meet the Target	Meet the Target
NE 4th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	5.18	5.13	0.43	0.43	Do Not Meet the Target	Do Not Meet the Target
Main St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	17.04	14.73	1.42	1.23	Meet the Target	Meet the Target
SE 8th St	112th Ave SE	Lake Hills Connector	1c	>0.5	35.00	14.00	8.16	10.61	0.58	0.76	Meet the Target	Meet the Target
Lake Hills Connector/SE 8th St	Richards Road	148th Ave SE	3	>0.9	30.00	12.00	25.36	27.93	2.11	2.33	Meet the Target	Meet the Target
Lake Hills Blvd	148th Ave SE	156th Ave SE	3	>0.9	30.00	12.00	24.75	22.54	2.06	1.88	Meet the Target	Meet the Target
SE 26th St/Kamber Rd	Richards Road	140th Ave SE	2b	>0.75	35.00	14.00	24.74	17.59	1.77	1.26	Meet the Target	Meet the Target
Eastgate Way	Richards Road	139th Ave SE	2b	>0.75	35.00	14.00	25.17	9.78	1.80	0.70	Meet the Target	Do Not Meet the Target
Eastgate Way	139th Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	20.07	24.01	1.43	1.72	Meet the Target	Meet the Target
Eastgate Way	150th Ave SE	161st Ave SE	2b	>0.75	30.00	12.00	18.06	15.10	1.50	1.26	Meet the Target	Meet the Target
SE 36th St	Factoria Blvd	142nd Ave SE	2	>0.75	35.00	14.00	21.70	13.59	1.55	0.97	Meet the Target	Meet the Target
SE 36th St	142nd Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	21.00	23.14	1.50	1.65	Meet the Target	Meet the Target
Newport Way	Factoria Blvd	133rd Ave SE	2c	>0.75	30.00	12.00	23.01	20.85	1.92	1.74	Meet the Target	Meet the Target
Newport Way	133rd Ave SE	SE Allen Rd	3	>0.9	30.00	12.00	23.02	20.85	1.92	1.74	Meet the Target	Meet the Target
Newport Way	SE Allen Rd	150th Ave SE	3	>0.9	30.00	12.00	23.94	22.67	1.99	1.89	Meet the Target	Meet the Target
							19.99	**16.40**			2	17

* The model includes system tolling and 30% WFH assumptions

Bellevue Comprehensive Plan EIS Appendix - Corridor Travel Speed

Corridor	From	To	PMA	Target Ratio	Speed Limit (mph)	Typical Urban Travel Speed (mph)	Alt 3* (Full Development on 2044 Network)					
							Postprocessed Speed (mph)		Ratio to Target Speed		PP Speed Ratio to the TUTS	
							NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Bellevue Way	SR 520	NE 12th St	3	>0.9	35.00	14.00	18.69	24.38	1.33	1.74	Meet the Target	Meet the Target
Bellevue Way	NE 12th St	Main St	1a	>0.5	30.00	12.00	13.19	4.72	1.10	0.39	Meet the Target	Do Not Meet the Target
Bellevue Way	Main St	112th Ave SE	3	>0.9	30.00	12.00	26.80	8.77	2.23	0.73	Meet the Target	Do Not Meet the Target
Bellevue Way	112th Ave SE	I-90	3	>0.9	40.00	16.00	21.38	16.57	1.34	1.04	Meet the Target	Meet the Target
108th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	10.42	13.49	0.87	1.12	Meet the Target	Meet the Target
112th Ave NE	Northup Way	NE 12th St	3	>0.9	30.00	12.00	22.98	19.89	1.92	1.66	Meet the Target	Meet the Target
112th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	12.07	8.62	1.01	0.72	Meet the Target	Meet the Target
112th Ave SE	Main St	SE 8th St	1c	>0.5	35.00	14.00	30.51	4.27	2.18	0.30	Meet the Target	Do Not Meet the Target
112th Ave SE	SE 8th St	Bellevue Way	3	>0.9	35.00	14.00	31.04	6.08	2.22	0.43	Meet the Target	Do Not Meet the Target
116th Ave NE	Northup Way	NE 12th St	1b	>0.5	30.00	12.00	17.81	13.01	1.48	1.08	Meet the Target	Meet the Target
116th Ave NE	NE 12th St	Main St	1c	>0.5	30.00	12.00	13.52	6.39	1.13	0.53	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	Main St	SE 8th St	1c	>0.5	35.00	14.00	20.61	11.95	1.47	0.85	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	SE 8th St	Richards Road	3	>0.9	35.00	14.00	23.76	10.22	1.70	0.73	Meet the Target	Do Not Meet the Target
124th Ave NE	SR 520	NE 10th Pl	1b	>0.5	30.00	12.00	12.34	13.56	1.03	1.13	Meet the Target	Meet the Target
124th Ave NE	NE 10th Pl	NE 8th St	3	>0.9	30.00	12.00	10.33	11.24	0.86	0.94	Do Not Meet the Target	Meet the Target
124th Ave SE/SE 38th St	Factoria Blvd	Coal Creek Pkwy	2c	>0.75	35.00	14.00	16.67	16.71	1.19	1.19	Meet the Target	Meet the Target
Richards Road	Lake Hills Connector	SE 26th St	3	>0.9	35.00	14.00	19.91	10.14	1.42	0.72	Meet the Target	Do Not Meet the Target
Richards Road	SE 26th St	I-90	2b	>0.75	35.00	14.00	19.99	10.42	1.43	0.74	Meet the Target	Do Not Meet the Target
Factoria Blvd	I-90	Coal Creek Pkwy	2c	>0.75	35.00	14.00	12.27	12.90	0.88	0.92	Meet the Target	Meet the Target
Coal Creek Pkwy	I-405	SE 48th Ct	2c	>0.75	35.00	14.00	21.34	20.22	1.52	1.44	Meet the Target	Meet the Target
Coal Creek Pkwy	SE 48th Ct	Forest Drive SE	3	>0.9	35.00	14.00	23.37	23.46	1.67	1.68	Meet the Target	Meet the Target
Coal Creek Pkwy	Forest Drive SE	Newcastle	3	>0.9	40.00	16.00	35.51	19.83	2.22	1.24	Meet the Target	Meet the Target
Lake Washington Blvd	I-405	Renton	3	>0.9	25.00	10.00	24.48	26.39	2.45	2.64	Meet the Target	Meet the Target
140th Ave NE	Bellevue Northern City Limit	NE 24th St	3	>0.9	35.00	14.00	14.64	24.91	1.05	1.78	Meet the Target	Meet the Target
140th Ave NE	NE 24th St	SR 520	3	>0.9	30.00	12.00	14.58	9.43	1.21	0.79	Meet the Target	Do Not Meet the Target
140th Ave NE	SR 520	Bel-Red Rd	1b	>0.5	30.00	12.00	14.87	9.45	1.24	0.79	Meet the Target	Meet the Target
140th Ave NE	Bel-Red Rd	NE 14th St	1b	>0.5	30.00	12.00	17.04	3.98	1.42	0.33	Meet the Target	Do Not Meet the Target
140th Ave NE	NE 14th St	NE 8th St	3	>0.9	30.00	12.00	18.86	4.38	1.57	0.37	Meet the Target	Do Not Meet the Target
140th Ave	NE 8th St	SE 8th St	3	>0.9	30.00	12.00	16.74	8.69	1.39	0.72	Meet the Target	Do Not Meet the Target
140th Ave NE/145th Pl SE	SE 8th St	SE 24th St	3	>0.9	30.00	12.00	20.43	13.44	1.70	1.12	Meet the Target	Meet the Target
148th Ave NE	Bellevue Northern City Limit	SR 520	3	>0.9	35.00	14.00	15.68	18.42	1.12	1.32	Meet the Target	Meet the Target
148th Ave	SR 520	NE 15th Ct	1b	>0.5	35.00	14.00	20.34	11.87	1.45	0.85	Meet the Target	Meet the Target
148th Ave	NE 15th Ct	NE 8th St	3	>0.9	35.00	14.00	20.50	10.38	1.46	0.74	Meet the Target	Do Not Meet the Target
148th Ave	NE 8th St	SE 8th St	3	>0.9	35.00	14.00	22.38	10.71	1.60	0.76	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 8th St	SE 24th St	3	>0.9	35.00	14.00	17.78	7.95	1.27	0.57	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 24th St	SE 37th St	2b	>0.75	35.00	14.00	23.43	6.21	1.67	0.44	Meet the Target	Do Not Meet the Target
150th Ave SE	SE 37th St	SE 38th St	2b	>0.75	30.00	12.00	20.04	14.14	1.67	1.18	Meet the Target	Meet the Target
150th Ave SE	SE 38th St	Newport Way	3	>0.9	30.00	12.00	20.00	14.47	1.67	1.21	Meet the Target	Meet the Target
156th Ave NE	Bel-Red Rd	NE 20th St	1b	>0.5	30.00	12.00	21.55	16.72	1.80	1.39	Meet the Target	Meet the Target
156th Ave NE	NE 20th St	NE 8th St	2a	>0.75	30.00	12.00	21.33	15.74	1.78	1.31	Meet the Target	Meet the Target
156th Ave	NE 8th St	Lake Hills Blvd	3	>0.9	25.00	10.00	22.86	10.95	2.29	1.09	Meet the Target	Meet the Target
156th Ave SE	Lake Hills Blvd	SE 27th St	3	>0.9	30.00	12.00	23.97	14.57	2.00	1.21	Meet the Target	Meet the Target
156th Ave SE	SE 27th St	Eastgate Way	2b	>0.75	30.00	12.00	23.91	15.68	1.99	1.31	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	NE 24th St	Northup Way	3	>0.9	25.00	10.00	35.10	35.70	3.51	3.57	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	Northup Way	SE 34th St	3	>0.9	25.00	10.00	33.42	15.31	3.34	1.53	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	SE 34th St	I-90 (SE Newport Way)	3	>0.9	25.00	10.00	29.77	10.91	2.98	1.09	Meet the Target	Meet the Target
Lakemont Blvd	I-90	164th Ave SE	3	>0.9	40.00	16.00	30.92	19.90	1.93	1.24	Meet the Target	Meet the Target
Lakemont Blvd	164th Ave SE	Newcastle	3	>0.9	30.00	12.00	33.77	31.36	2.81	2.61	Meet the Target	Meet the Target
Northup Way	Bellevue Way	SR 520	3	>0.9	35.00	14.00	13.73	16.98	0.98	1.21	Meet the Target	Meet the Target
Northup Way	SR 520	124th Ave NE	1b	>0.5	35.00	14.00	8.77	14.76	0.63	1.05	Meet the Target	Meet the Target
NE 20th St	124th Ave NE	140th Ave NE	1b	>0.5	35.00	14.00	13.80	20.14	0.99	1.44	Meet the Target	Meet the Target
NE 20th St	140th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	14.47	18.36	1.03	1.31	Meet the Target	Meet the Target
Northup Way	156th Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	22.89	22.28	1.64	1.59	Meet the Target	Meet the Target
Northup Way	164th Ave NE	West Lake Sammamish Pkwy	3	>0.9	35.00	14.00	24.96	22.88	1.78	1.63	Meet the Target	Meet the Target
NE 24th St	140th Ave NE	SR 520	3	>0.9	35.00	14.00	10.99	15.45	0.79	1.10	Do Not Meet the Target	Meet the Target
NE 24th St	SR 520	148th Ave NE	ib	>0.9	35.00	14.00	11.06	15.26	0.79	1.09	Meet the Target	Meet the Target
NE 24th St	Bel-Red Rd	156th Ave NE	1b	>0.5	30.00	12.00	17.44	21.19	1.45	1.77	Meet the Target	Meet the Target
NE 24th St	156th Ave NE	164th Ave NE	3	>0.9	30.00	12.00	15.99	19.44	1.33	1.62	Meet the Target	Meet the Target
NE Spring Boulevard	NE 12th St	NE 20th St	1b	>0.5	25.00	10.00						
NE 12th St	Bellevue Way	116th Ave NE	1a	>0.5	30.00	12.00	16.58	12.16	1.38	1.01	Meet the Target	Meet the Target
NE 12th St	116th Ave NE	124th Ave NE	1b	>0.5	30.00	12.00	15.39	13.92	1.28	1.16	Meet the Target	Meet the Target
Bel-Red Rd	124th Ave NE	148th Ave NE	1b	>0.5	35.00	14.00	16.87	23.96	1.21	1.71	Meet the Target	Meet the Target
Bel-Red Rd	148th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	17.48	14.49	1.25	1.03	Meet the Target	Meet the Target
Bel-Red Rd	156th Ave NE	164th Ave NE	3	>0.9	35.00	14.00	28.43	25.44	2.03	1.82	Meet the Target	Meet the Target
Bel-Red Rd	164th Ave NE	Redmond	3	>0.9	30.00	12.00	17.33	34.80	1.44	2.90	Meet the Target	Meet the Target
NE 10th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	7.70	16.27	0.64	1.36	Meet the Target	Meet the Target
NE 8th St	Medina	100th Ave NE	3	>0.9	30.00	12.00	20.56	21.29	1.71	1.77	Meet the Target	Meet the Target
NE 8th St	100th Ave NE	I-405	1a	>0.5	30.00	12.00	10.25	10.14	0.85	0.85	Meet the Target	Meet the Target
NE 8th St	I-405	123rd Ave NE	1c	>0.5	30.00	12.00	13.24	9.53	1.10	0.79	Meet the Target	Meet the Target
NE 8th St	123rd Ave NE	124th Ave NE	3	>0.9	30.00	12.00	15.35	14.57	1.28	1.21	Meet the Target	Meet the Target
NE 8th St	124th Ave NE	148th Ave NE	3	>0.9	35.00	14.00	14.69	23.77	1.05	1.70	Meet the Target	Meet the Target
NE 8th St	148th Ave NE	153rd Ave NE	3	>0.9	35.00	14.00	20.60	22.40	1.47	1.60	Meet the Target	Meet the Target
NE 8th St	153rd Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	20.64	22.44	1.47	1.60	Meet the Target	Meet the Target
NE 8th St	164 Ave NE	Northup Way	3	>0.9	25.00	10.00	24.93	25.20	2.49	2.52	Meet the Target	Meet the Target
NE 4th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	5.19	5.11	0.43	0.43	Do Not Meet the Target	Do Not Meet the Target
Main St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	16.98	14.62	1.42	1.22	Meet the Target	Meet the Target
SE 8th St	112th Ave SE	Lake Hills Connector	1c	>0.5	35.00	14.00	8.13	10.55	0.58	0.75	Meet the Target	Meet the Target
Lake Hills Connector/SE 8th St	Richards Road	148th Ave SE	3	>0.9	30.00	12.00	25.24	27.91	2.10	2.33	Meet the Target	Meet the Target
Lake Hills Blvd	148th Ave SE	156th Ave SE	3	>0.9	30.00	12.00	24.54	21.82	2.05	1.82	Meet the Target	Meet the Target
SE 26th St/Kamber Rd	Richards Road	140th Ave SE	2b	>0.75	35.00	14.00	24.23	16.99	1.73	1.21	Meet the Target	Meet the Target
Eastgate Way	Richards Road	139th Ave SE	2b	>0.75	35.00	14.00	24.33	9.31	1.74	0.66	Meet the Target	Do Not Meet the Target
Eastgate Way	139th Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	20.15	22.80	1.44	1.63	Meet the Target	Meet the Target
Eastgate Way	150th Ave SE	161st Ave SE	2b	>0.75	30.00	12.00	18.03	14.99	1.50	1.25	Meet the Target	Meet the Target
SE 36th St	Factoria Blvd	142nd Ave SE	2	>0.75	35.00	14.00	20.82	13.53	1.49	0.97	Meet the Target	Meet the Target
SE 36th St	142nd Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	18.50	22.31	1.32	1.59	Meet the Target	Meet the Target
Newport Way	Factoria Blvd	133rd Ave SE	2c	>0.75	30.00	12.00	22.15	20.79	1.85	1.73	Meet the Target	Meet the Target
Newport Way	133rd Ave SE	SE Allen Rd	3	>0.9	30.00	12.00	22.16	20.79	1.85	1.73	Meet the Target	Meet the Target
Newport Way	SE Allen Rd	150th Ave SE	3	>0.9	30.00	12.00	23.87	22.64	1.99	1.89	Meet the Target	Meet the Target
							19.56	**15.97**			3	17

* The model includes system tolling and 30% WFH assumptions

Bellevue Comprehensive Plan EIS Appendix - Corridor Travel Speed

Corridor	From	To	PMA	Target Ratio	Speed Limit (mph)	Typical Urban Travel Speed (mph)	Alt 3A* (Full Development on 2044 Network)					
							Postprocessed Speed (mph)		Ratio to Target Speed		PP Speed Ratio to the TUTS	
							NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Bellevue Way	SR 520	NE 12th St	3	>0.9	35.00	14.00	18.68	24.38	1.33	1.74	Meet the Target	Meet the Target
Bellevue Way	NE 12th St	Main St	1a	>0.5	30.00	12.00	13.19	4.72	1.10	0.39	Meet the Target	Do Not Meet the Target
Bellevue Way	Main St	112th Ave SE	3	>0.9	30.00	12.00	26.77	8.76	2.23	0.73	Meet the Target	Do Not Meet the Target
Bellevue Way	112th Ave SE	I-90	3	>0.9	40.00	16.00	21.52	16.54	1.35	1.03	Meet the Target	Meet the Target
108th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	10.44	13.49	0.87	1.12	Meet the Target	Meet the Target
112th Ave NE	Northup Way	NE 12th St	3	>0.9	30.00	12.00	22.87	19.87	1.91	1.66	Meet the Target	Meet the Target
112th Ave NE	NE 12th St	Main St	1a	>0.5	30.00	12.00	12.11	8.58	1.01	0.72	Meet the Target	Meet the Target
112th Ave SE	Main St	SE 8th St	1c	>0.5	35.00	14.00	30.42	4.24	2.17	0.30	Meet the Target	Do Not Meet the Target
112th Ave SE	SE 8th St	Bellevue Way	3	>0.9	35.00	14.00	31.06	6.09	2.22	0.43	Meet the Target	Do Not Meet the Target
116th Ave NE	Northup Way	NE 12th St	1b	>0.5	30.00	12.00	18.01	13.33	1.50	1.11	Meet the Target	Meet the Target
116th Ave NE	NE 12th St	Main St	1c	>0.5	30.00	12.00	13.53	6.44	1.13	0.54	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	Main St	SE 8th St	1c	>0.5	35.00	14.00	20.62	11.84	1.47	0.85	Meet the Target	Meet the Target
116th Ave NE/Lake Hills Connector	SE 8th St	Richards Road	3	>0.9	35.00	14.00	23.77	10.35	1.70	0.74	Meet the Target	Do Not Meet the Target
124th Ave NE	SR 520	NE 10th Pl	1b	>0.5	30.00	12.00	12.32	13.53	1.03	1.13	Meet the Target	Meet the Target
124th Ave NE	NE 10th Pl	NE 8th St	3	>0.9	30.00	12.00	9.60	10.21	0.80	0.85	Do Not Meet the Target	Do Not Meet the Target
124th Ave SE/SE 38th St	Factoria Blvd	Coal Creek Pkwy	2c	>0.75	35.00	14.00	16.70	16.60	1.19	1.19	Meet the Target	Meet the Target
Richards Road	Lake Hills Connector	SE 26th St	3	>0.9	35.00	14.00	19.86	10.09	1.42	0.72	Meet the Target	Do Not Meet the Target
Richards Road	SE 26th St	I-90	2b	>0.75	35.00	14.00	20.01	10.53	1.43	0.75	Meet the Target	Meet the Target
Factoria Blvd	I-90	Coal Creek Pkwy	2c	>0.75	35.00	14.00	12.25	12.85	0.87	0.92	Meet the Target	Meet the Target
Coal Creek Pkwy	I-405	SE 48th Ct	2c	>0.75	35.00	14.00	21.21	20.27	1.52	1.45	Meet the Target	Meet the Target
Coal Creek Pkwy	SE 48th Ct	Forest Drive SE	3	>0.9	35.00	14.00	23.41	23.47	1.67	1.68	Meet the Target	Meet the Target
Coal Creek Pkwy	Forest Drive SE	Newcastle	3	>0.9	40.00	16.00	35.65	20.03	2.23	1.25	Meet the Target	Meet the Target
Lake Washington Blvd	I-405	Renton	3	>0.9	25.00	10.00	24.48	26.38	2.45	2.64	Meet the Target	Meet the Target
140th Ave NE	Bellevue Northern City Limit	NE 24th St	3	>0.9	35.00	14.00	14.58	24.89	1.04	1.78	Meet the Target	Meet the Target
140th Ave NE	NE 24th St	SR 520	3	>0.9	30.00	12.00	14.56	9.41	1.21	0.78	Meet the Target	Do Not Meet the Target
140th Ave NE	SR 520	Bel-Red Rd	1b	>0.5	30.00	12.00	14.87	9.47	1.24	0.79	Meet the Target	Meet the Target
140th Ave NE	Bel-Red Rd	NE 14th St	1b	>0.5	30.00	12.00	17.15	4.11	1.43	0.34	Meet the Target	Do Not Meet the Target
140th Ave NE	NE 14th St	NE 8th St	3	>0.9	30.00	12.00	18.74	4.36	1.56	0.36	Meet the Target	Do Not Meet the Target
140th Ave	NE 8th St	SE 8th St	3	>0.9	30.00	12.00	16.64	8.93	1.39	0.74	Meet the Target	Do Not Meet the Target
140th Ave NE/145th Pl SE	SE 8th St	SE 24th St	3	>0.9	30.00	12.00	20.44	13.35	1.70	1.11	Meet the Target	Meet the Target
148th Ave NE	Bellevue Northern City Limit	SR 520	3	>0.9	35.00	14.00	15.60	18.41	1.11	1.32	Meet the Target	Meet the Target
148th Ave	SR 520	NE 15th Ct	1b	>0.5	35.00	14.00	20.09	11.91	1.43	0.85	Meet the Target	Meet the Target
148th Ave	NE 15th Ct	NE 8th St	3	>0.9	35.00	14.00	20.40	10.44	1.46	0.75	Meet the Target	Do Not Meet the Target
148th Ave	NE 8th St	SE 8th St	3	>0.9	35.00	14.00	22.35	10.88	1.60	0.78	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 8th St	SE 24th St	3	>0.9	35.00	14.00	17.72	8.04	1.27	0.57	Meet the Target	Do Not Meet the Target
148th Ave SE	SE 24th St	SE 37th St	2b	>0.75	35.00	14.00	23.35	6.25	1.67	0.45	Meet the Target	Do Not Meet the Target
150th Ave SE	SE 37th St	SE 38th St	2b	>0.75	30.00	12.00	20.06	14.17	1.67	1.18	Meet the Target	Meet the Target
150th Ave SE	SE 38th St	Newport Way	3	>0.9	30.00	12.00	20.02	14.57	1.67	1.21	Meet the Target	Meet the Target
156th Ave NE	Bel-Red Rd	NE 20th St	1b	>0.5	30.00	12.00	21.57	16.63	1.80	1.39	Meet the Target	Meet the Target
156th Ave NE	NE 20th St	NE 8th St	2a	>0.75	30.00	12.00	21.40	15.78	1.78	1.32	Meet the Target	Meet the Target
156th Ave	NE 8th St	Lake Hills Blvd	3	>0.9	25.00	10.00	22.77	11.16	2.28	1.12	Meet the Target	Meet the Target
156th Ave SE	Lake Hills Blvd	SE 27th St	3	>0.9	30.00	12.00	23.89	14.63	1.99	1.22	Meet the Target	Meet the Target
156th Ave SE	SE 27th St	Eastgate Way	2b	>0.75	30.00	12.00	23.91	15.69	1.99	1.31	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	NE 24th St	Northup Way	3	>0.9	25.00	10.00	35.10	35.70	3.51	3.57	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	Northup Way	SE 34th St	3	>0.9	25.00	10.00	33.40	15.62	3.34	1.56	Meet the Target	Meet the Target
West Lake Sammamish Pkwy	SE 34th St	I-90 (SE Newport Way)	3	>0.9	25.00	10.00	29.80	11.15	2.98	1.11	Meet the Target	Meet the Target
Lakemont Blvd	I-90	164th Ave SE	3	>0.9	40.00	16.00	30.96	19.95	1.94	1.25	Meet the Target	Meet the Target
Lakemont Blvd	164th Ave SE	Newcastle	3	>0.9	30.00	12.00	33.77	31.24	2.81	2.60	Meet the Target	Meet the Target
Northup Way	Bellevue Way	SR 520	3	>0.9	35.00	14.00	13.81	16.99	0.99	1.21	Meet the Target	Meet the Target
Northup Way	SR 520	124th Ave NE	1b	>0.5	35.00	14.00	8.90	15.09	0.64	1.08	Meet the Target	Meet the Target
NE 20th St	124th Ave NE	140th Ave NE	1b	>0.5	35.00	14.00	13.86	20.23	0.99	1.44	Meet the Target	Meet the Target
NE 20th St	140th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	14.47	18.32	1.03	1.31	Meet the Target	Meet the Target
Northup Way	156th Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	22.96	22.47	1.64	1.61	Meet the Target	Meet the Target
Northup Way	164th Ave NE	West Lake Sammamish Pkwy	3	>0.9	35.00	14.00	25.13	22.87	1.80	1.63	Meet the Target	Meet the Target
NE 24th St	140th Ave NE	SR 520	3	>0.9	35.00	14.00	10.91	15.32	0.78	1.09	Do Not Meet the Target	Meet the Target
NE 24th St	SR 520	148th Ave NE	ib	>0.9	35.00	14.00	11.09	15.24	0.79	1.09	Meet the Target	Meet the Target
NE 24th St	Bel-Red Rd	156th Ave NE	1b	>0.5	30.00	12.00	17.29	21.18	1.44	1.77	Meet the Target	Meet the Target
NE 24th St	156th Ave NE	164th Ave NE	3	>0.9	30.00	12.00	16.05	19.19	1.34	1.60	Meet the Target	Meet the Target
NE Spring Boulevard	NE 12th St	NE 20th St	1b	>0.5	25.00	10.00						
NE 12th St	Bellevue Way	116th Ave NE	1a	>0.5	30.00	12.00	16.69	12.33	1.39	1.03	Meet the Target	Meet the Target
NE 12th St	116th Ave NE	124th Ave NE	1b	>0.5	30.00	12.00	16.14	14.90	1.35	1.24	Meet the Target	Meet the Target
Bel-Red Rd	124th Ave NE	148th Ave NE	1b	>0.5	35.00	14.00	16.85	24.11	1.20	1.72	Meet the Target	Meet the Target
Bel-Red Rd	148th Ave NE	156th Ave NE	1b	>0.5	35.00	14.00	17.47	14.53	1.25	1.04	Meet the Target	Meet the Target
Bel-Red Rd	156th Ave NE	164th Ave NE	3	>0.9	35.00	14.00	28.46	25.44	2.03	1.82	Meet the Target	Meet the Target
Bel-Red Rd	164th Ave NE	Redmond	3	>0.9	30.00	12.00	17.37	34.80	1.45	2.90	Meet the Target	Meet the Target
NE 10th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	7.72	16.18	0.64	1.35	Meet the Target	Meet the Target
NE 8th St	Medina	100th Ave NE	3	>0.9	30.00	12.00	20.56	21.29	1.71	1.77	Meet the Target	Meet the Target
NE 8th St	100th Ave NE	I-405	1a	>0.5	30.00	12.00	10.23	10.13	0.85	0.84	Meet the Target	Meet the Target
NE 8th St	I-405	123rd Ave NE	1c	>0.5	30.00	12.00	14.49	11.45	1.21	0.95	Meet the Target	Meet the Target
NE 8th St	123rd Ave NE	124th Ave NE	3	>0.9	30.00	12.00	15.30	13.56	1.27	1.13	Meet the Target	Meet the Target
NE 8th St	124th Ave NE	148th Ave NE	3	>0.9	35.00	14.00	14.64	23.32	1.05	1.67	Meet the Target	Meet the Target
NE 8th St	148th Ave NE	153rd Ave NE	3	>0.9	35.00	14.00	20.62	22.39	1.47	1.60	Meet the Target	Meet the Target
NE 8th St	153rd Ave NE	164th Ave NE	2a	>0.75	35.00	14.00	20.65	22.44	1.47	1.60	Meet the Target	Meet the Target
NE 8th St	164 Ave NE	Northup Way	3	>0.9	25.00	10.00	24.94	25.20	2.49	2.52	Meet the Target	Meet the Target
NE 4th St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	5.19	5.11	0.43	0.43	Do Not Meet the Target	Do Not Meet the Target
Main St	Bellevue Way	116th Ave NE	1	>0.5	30.00	12.00	16.95	14.64	1.41	1.22	Meet the Target	Meet the Target
SE 8th St	112th Ave SE	Lake Hills Connector	1c	>0.5	35.00	14.00	8.15	10.56	0.58	0.75	Meet the Target	Meet the Target
Lake Hills Connector/SE 8th St	Richards Road	148th Ave SE	3	>0.9	30.00	12.00	25.28	27.92	2.11	2.33	Meet the Target	Meet the Target
Lake Hills Blvd	148th Ave SE	156th Ave SE	3	>0.9	30.00	12.00	24.68	21.84	2.06	1.82	Meet the Target	Meet the Target
SE 26th St/Kamber Rd	Richards Road	140th Ave SE	2b	>0.75	35.00	14.00	24.21	17.04	1.73	1.22	Meet the Target	Meet the Target
Eastgate Way	Richards Road	139th Ave SE	2b	>0.75	35.00	14.00	24.60	9.29	1.76	0.66	Meet the Target	Do Not Meet the Target
Eastgate Way	139th Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	20.14	23.06	1.44	1.65	Meet the Target	Meet the Target
Eastgate Way	150th Ave SE	161st Ave SE	2b	>0.75	30.00	12.00	18.03	14.92	1.50	1.24	Meet the Target	Meet the Target
SE 36th St	Factoria Blvd	142nd Ave SE	2	>0.75	35.00	14.00	20.84	13.56	1.49	0.97	Meet the Target	Meet the Target
SE 36th St	142nd Ave SE	150th Ave SE	2b	>0.75	35.00	14.00	18.69	22.36	1.33	1.60	Meet the Target	Meet the Target
Newport Way	Factoria Blvd	133rd Ave SE	2c	>0.75	30.00	12.00	22.21	20.79	1.85	1.73	Meet the Target	Meet the Target
Newport Way	133rd Ave SE	SE Allen Rd	3	>0.9	30.00	12.00	22.23	20.80	1.85	1.73	Meet the Target	Meet the Target
Newport Way	SE Allen Rd	150th Ave SE	3	>0.9	30.00	12.00	23.88	22.65	1.99	1.89	Meet the Target	Meet the Target
							19.58	**16.01**			3	17

* The model includes system tolling and 30% WFH assumptions

Bellevue Comprehensive Plan EIS Appendix - State Facilities

	Maximum Volume for LOS Standard	Existing		No Action		Alt 1		Alt 2		Alt 3		Alt 3A	
		AADT	Ratio	AADT	Ratio	AADT	Ratio	AADT	Ratio	AADT	Ratio	AADT	Ratio
I-405 north of SR 520	213,780	211,000	0.99	228,000	1.07	232,000	1.09	233,000	1.09	235,000	1.10	235,000	1.10
I-405 between SR 520 and I-90	192,410	205,000	1.07	238,000	1.24	240,000	1.25	242,000	1.26	244,000	1.27	244,000	1.27
I-405 south of I-90	129,780	150,000	1.16	181,000	1.39	184,000	1.42	185,000	1.42	186,000	1.44	187,000	1.44
SR 520 west of I-405	129,780	74,000	0.57	78,000	0.60	83,000	0.64	85,000	0.65	86,000	0.66	87,000	0.67
SR 520 east of I-405	126,690	105,000	0.83	121,000	0.95	126,000	0.99	129,000	1.02	132,000	1.04	132,000	1.04
I-90 west of I-405	172,410	148,000	0.86	145,000	0.84	147,000	0.85	149,000	0.86	150,000	0.87	150,000	0.87
I-90 east of I-405	213,095	152,000	0.71	156,000	0.73	157,000	0.74	160,000	0.75	161,000	0.76	162,000	0.76

Bellevue Comprehensive Plan EIS Appendix - System Intersection V/C

			2019 Base Year Observed		No Action* (Full Development on 2044 Network)		Alt 1* (Full Development on 2044 Network)		Alt 2* (Full Development on 2044 Network)		Alt 3* (Full Development on 2044 Network)		Alt 3A* (Full Development on 2044 Network)	
Downtown					* The model includes system tolling and 30% WFH assumptions									
NS Street	**EW Street**	**PMA**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**
100th Ave NE	NE 8th St	1a	0.8	Meet Target	0.91	Meet Target	0.86	Meet Target	0.92	Meet Target	0.95	Meet Target	0.95	Meet Target
Bellevue Wy NE	NE 12th St	1a	0.65	Meet Target	0.97	Meet Target	0.93	Meet Target	1	Meet Target	1.05	Do Not Meet Target	1.06	Do Not Meet Target
Bellevue Wy NE	NE 8th St	1a	0.66	Meet Target	0.8	Meet Target	0.73	Meet Target	0.77	Meet Target	0.77	Meet Target	0.78	Meet Target
Bellevue Wy NE	NE 4th St	1a	0.59	Meet Target	0.57	Meet Target	0.54	Meet Target	0.59	Meet Target	0.61	Meet Target	0.63	Meet Target
Bellevue Wy	Main St	1a	0.93	Meet Target	0.97	Meet Target	1.01	Do Not Meet Target	1.03	Do Not Meet Target	1.06	Do Not Meet Target	1.06	Do Not Meet Target
108th Ave NE	NE 12th St	1a	0.51	Meet Target	0.67	Meet Target	0.67	Meet Target	0.7	Meet Target	0.74	Meet Target	0.74	Meet Target
108th Ave NE	NE 8th St	1a	0.66	Meet Target	0.79	Meet Target	0.78	Meet Target	0.82	Meet Target	0.87	Meet Target	0.83	Meet Target
108th Ave NE	NE 4th St	1a	0.79	Meet Target	0.85	Meet Target	0.82	Meet Target	0.85	Meet Target	0.87	Meet Target	0.87	Meet Target
108th Ave	Main St	1a	0.36	Meet Target	0.36	Meet Target	0.37	Meet Target	0.39	Meet Target	0.43	Meet Target	0.43	Meet Target
112th Ave NE	NE 12th St	1a	0.75	Meet Target	0.99	Meet Target	1.07	Do Not Meet Target	1.16	Do Not Meet Target	1.21	Do Not Meet Target	1.21	Do Not Meet Target
112th Ave NE	NE 8th St	1a	1	Meet Target	1.19	Do Not Meet Target	1.27	Do Not Meet Target	1.38	Do Not Meet Target	1.41	Do Not Meet Target	1.43	Do Not Meet Target
112th Ave	Main St	1a	0.98	Meet Target	0.97	Meet Target	1.07	Do Not Meet Target	1.09	Do Not Meet Target	1.11	Do Not Meet Target	1.13	Do Not Meet Target
112th Ave NE	NE 4th St	1a	0.67	Meet Target	0.79	Meet Target	0.76	Meet Target	0.81	Meet Target	0.81	Meet Target	0.81	Meet Target
Bellevue Way NE	NE 10th St	1a	0.46	Meet Target	0.63	Meet Target	0.64	Meet Target	0.67	Meet Target	0.68	Meet Target	0.69	Meet Target
110th Ave NE	NE 8th St	1a	0.64	Meet Target	0.88	Meet Target	0.86	Meet Target	0.9	Meet Target	0.93	Meet Target	0.9	Meet Target
108th Ave NE	NE 2nd St	1a	0.45	Meet Target	0.44	Meet Target	0.4	Meet Target	0.45	Meet Target	0.46	Meet Target	0.46	Meet Target
106th Ave NE	NE 8th St	1a	0.69	Meet Target	0.71	Meet Target	0.72	Meet Target	0.74	Meet Target	0.76	Meet Target	0.76	Meet Target
110th Ave NE	NE 12th St	1a	0.41	Meet Target	0.59	Meet Target	0.61	Meet Target	0.62	Meet Target	0.65	Meet Target	0.64	Meet Target
106th Ave NE	NE 12th St	1a	0.4	Meet Target	0.56	Meet Target	0.55	Meet Target	0.6	Meet Target	0.64	Meet Target	0.65	Meet Target
106th Ave NE	NE 4th St	1a	0.5	Meet Target	0.58	Meet Target	0.55	Meet Target	0.57	Meet Target	0.59	Meet Target	0.59	Meet Target
112th Ave NE	NE 2nd St	1a	0.47	Meet Target	0.67	Meet Target	0.75	Meet Target	0.8	Meet Target	0.8	Meet Target	0.83	Meet Target
110th Ave NE	NE 10th St	1a	0.47	Meet Target	0.62	Meet Target	0.59	Meet Target	0.6	Meet Target	0.61	Meet Target	0.6	Meet Target
108th Ave NE	NE 10th St	1a	0.38	Meet Target	0.59	Meet Target	0.55	Meet Target	0.58	Meet Target	0.6	Meet Target	0.6	Meet Target
106th Ave NE	NE 10th St	1a	0.37	Meet Target	0.52	Meet Target	0.51	Meet Target	0.54	Meet Target	0.56	Meet Target	0.55	Meet Target
112th Ave NE	NE 6th St	1a	0.72	Meet Target	0.83	Meet Target	0.93	Meet Target	0.97	Meet Target	0.96	Meet Target	0.97	Meet Target
112th Ave NE	NE 10th St	1a	0.72	Meet Target	1.08	Do Not Meet Target	1.23	Do Not Meet Target	1.37	Do Not Meet Target	1.38	Do Not Meet Target	1.38	Do Not Meet Target
110th Ave NE	NE 4th St	1a	0.61	Meet Target	0.62	Meet Target	0.63	Meet Target	0.68	Meet Target	0.69	Meet Target	0.7	Meet Target
Bellevue Way NE	NE 2nd St	1a	0.69	Meet Target	0.47	Meet Target	0.5	Meet Target	0.53	Meet Target	0.53	Meet Target	0.53	Meet Target
102nd Ave NE	NE 8th St	1a	0.4	Meet Target	0.53	Meet Target	0.51	Meet Target	0.53	Meet Target	0.53	Meet Target	0.53	Meet Target
I-405 SB Ramps	NE 4th St	1a	0.6	Meet Target	0.54	Meet Target	0.57	Meet Target	0.61	Meet Target	0.6	Meet Target	0.61	Meet Target
Intersections not meeting the target			0		2		5		5		6		6	
Area Target			*1.00*		*1.00*		*1.00*		*1.00*		*1.00*		*1.00*	

Bellevue Comprehensive Plan EIS Appendix - System Intersection V/C

			2019 Base Year Observed		No Action* (Full Development on 2044 Network)		Alt 1* (Full Development on 2044 Network)		Alt 2* (Full Development on 2044 Network)		Alt 3* (Full Development on 2044 Network)		Alt 3A* (Full Development on 2044 Network)	
BelRed					* The model includes system tolling and 30% WFH assumptions									
NS Street	**EW Street**	**PMA**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**
116th Ave NE	NE 12th St	1b	0.8	Meet Target	1.24	Do Not Meet Target	1.57	Do Not Meet Target	1.9	Do Not Meet Target	1.97	Do Not Meet Target	1.93	Do Not Meet Target
120th Ave NE	NE 12th St	1b	0.57	Meet Target	0.77	Meet Target	0.8	Meet Target	0.86	Meet Target	0.89	Meet Target	0.89	Meet Target
124th Ave NE	Bel-Red Rd	1b	0.82	Meet Target	0.89	Meet Target	1.04	Do Not Meet Target	1.09	Do Not Meet Target	1.15	Do Not Meet Target	1.12	Do Not Meet Target
130th Ave NE	Bel-Red Rd	1b	0.57	Meet Target	0.68	Meet Target	0.71	Meet Target	0.74	Meet Target	0.79	Meet Target	0.77	Meet Target
140th Ave NE	NE 20th St	1b	0.71	Meet Target	0.73	Meet Target	0.81	Meet Target	0.83	Meet Target	0.94	Meet Target	0.94	Meet Target
140th Ave NE	Bel-Red Rd	1b	0.79	Meet Target	0.85	Meet Target	0.86	Meet Target	0.93	Meet Target	1.04	Do Not Meet Target	1.04	Do Not Meet Target
148th Ave NE	NE 20th St	1b	0.93	Meet Target	1.01	Do Not Meet Target	1	Meet Target	1.02	Do Not Meet Target	1.07	Do Not Meet Target	1.07	Do Not Meet Target
148th Ave NE	Bel-Red Rd	1b	0.98	Meet Target	1.1	Do Not Meet Target	1.15	Do Not Meet Target	1.18	Do Not Meet Target	1.25	Do Not Meet Target	1.25	Do Not Meet Target
Bel-Red Rd	NE 24th St	1b	0.64	Meet Target	0.57	Meet Target	0.58	Meet Target	0.64	Meet Target	0.65	Meet Target	0.66	Meet Target
156th Ave NE	Bel-Red Rd	1b	0.74	Meet Target	0.63	Meet Target	0.67	Meet Target	0.68	Meet Target	0.71	Meet Target	0.7	Meet Target
156th Ave NE	NE 24th St	1b	0.83	Meet Target	0.85	Meet Target	0.89	Meet Target	0.96	Meet Target	0.95	Meet Target	0.96	Meet Target
130th Ave NE	Northup Wy	1b	0.6	Meet Target	0.74	Meet Target	0.79	Meet Target	0.84	Meet Target	0.95	Meet Target	0.94	Meet Target
148th Ave NE	NE 24th St	1b	0.92	Meet Target	0.98	Meet Target	1	Meet Target	1.03	Do Not Meet Target	1.1	Do Not Meet Target	1.1	Do Not Meet Target
124th Ave NE	Northup Wy	1b	0.54	Meet Target	1.18	Do Not Meet Target	1.32	Do Not Meet Target	1.38	Do Not Meet Target	1.48	Do Not Meet Target	1.45	Do Not Meet Target
120th Ave NE	Northup Wy	1b	0.31	Meet Target	0.42	Meet Target	0.46	Meet Target	0.56	Meet Target	0.6	Meet Target	0.6	Meet Target
Spring Blvd	NE 12th St	1b	0.42	Meet Target	0.49	Meet Target	0.6	Meet Target	0.62	Meet Target	0.7	Meet Target	0.68	Meet Target
130th Ave NE	Spring Blvd	1b		No Data	0.32	Meet Target	0.35	Meet Target	0.35	Meet Target	0.4	Meet Target	0.39	Meet Target
132nd Ave NE	Spring Blvd	1b	0.19	Meet Target	0.39	Meet Target	0.43	Meet Target	0.45	Meet Target	0.55	Meet Target	0.53	Meet Target
132nd Ave NE	Bel-Red Rd	1b	0.57	Meet Target	0.77	Meet Target	0.8	Meet Target	0.86	Meet Target	0.94	Meet Target	0.93	Meet Target
134th Ave NE	Bel-Red Rd	1b	0.55	Meet Target	0.67	Meet Target	0.69	Meet Target	0.75	Meet Target	0.81	Meet Target	0.8	Meet Target
132nd Ave NE	NE 20th St	1b	0.53	Meet Target	0.54	Meet Target	0.6	Meet Target	0.63	Meet Target	0.7	Meet Target	0.68	Meet Target
124th Ave NE	Spring Blvd	1b	0.2	Meet Target	0.54	Meet Target	0.69	Meet Target	0.68	Meet Target	0.71	Meet Target	0.71	Meet Target
120th Ave NE	Spring Blvd	1b	0.2	Meet Target	0.31	Meet Target	0.41	Meet Target	0.43	Meet Target	0.48	Meet Target	0.48	Meet Target
136th Pl NE	Northup Way/NE 20th St	1b	0.49	Meet Target	0.6	Meet Target	0.67	Meet Target	0.68	Meet Target	0.76	Meet Target	0.76	Meet Target
148th Ave NE	SR 520 Ramps	1b	0.71	Meet Target	0.62	Meet Target	0.62	Meet Target	0.65	Meet Target	0.66	Meet Target	0.66	Meet Target
120th Ave NE	Bel-Red Rd	1b	0.39	Meet Target	0.4	Meet Target	0.43	Meet Target	0.42	Meet Target	0.46	Meet Target	0.47	Meet Target
Bel-Red Rd	NE 20th St	1b	0.54	Meet Target	0.59	Meet Target	0.64	Meet Target	0.66	Meet Target	0.67	Meet Target	0.66	Meet Target
156th Ave NE	Northup Wy	1b	0.85	Meet Target	0.81	Meet Target	0.87	Meet Target	0.92	Meet Target	0.94	Meet Target	0.94	Meet Target
Intersections not meeting the target			0		4		4		6		7		7	
Area Target			*1.00*		*1.00*		*1.00*		*1.00*		*1.00*		*1.00*	

Bellevue Comprehensive Plan EIS Appendix - System Intersection V/C

Wilburton/East Main

* The model includes system tolling and 30% WFH assumptions

NS Street	EW Street	PMA	2019 Base Year Observed v/c	2019 Base Year Observed Performance	No Action* (Full Development on 2044 Network) v/c	No Action* Performance	Alt 1* (Full Development on 2044 Network) v/c	Alt 1* Performance	Alt 2* (Full Development on 2044 Network) v/c	Alt 2* Performance	Alt 3* (Full Development on 2044 Network) v/c	Alt 3* Performance	Alt 3A* (Full Development on 2044 Network) v/c	Alt 3A* Performance
116th Ave NE	NE 8th St	1c	0.73	Meet Target	0.82	Meet Target	1.12	Do Not Meet Target	1.15	Do Not Meet Target	1.23	Do Not Meet Target	1.4	Do Not Meet Target
116th Ave	Main St	1c	0.65	Meet Target	0.79	Meet Target	0.87	Meet Target	0.89	Meet Target	0.92	Meet Target	0.94	Meet Target
112th Ave SE	SE 8th St	1c	0.64	Meet Target	0.6	Meet Target	0.65	Meet Target	0.69	Meet Target	0.71	Meet Target	0.71	Meet Target
118th Ave SE	SE 8th St	1c	1.02	Do Not Meet Target	0.86	Meet Target	0.91	Meet Target	0.99	Meet Target	1.01	Do Not Meet Target	1	Meet Target
116th Ave SE	SE 1st St	1c	0.85	Meet Target	1.13	Do Not Meet Target	1.2	Do Not Meet Target	1.21	Do Not Meet Target	1.25	Do Not Meet Target	1.25	Do Not Meet Target
116th Ave NE	NE 4th St	1c	0.92	Meet Target	0.97	Meet Target	1.27	Do Not Meet Target	1.27	Do Not Meet Target	1.37	Do Not Meet Target	1.36	Do Not Meet Target
I-405 NB Off and On Ramps	SE 8th St	1c	0.71	Meet Target	0.71	Meet Target	0.73	Meet Target	0.75	Meet Target	0.77	Meet Target	0.76	Meet Target
I-405 SB Ramps	SE 8th St	1c	0.66	Meet Target	0.74	Meet Target	0.78	Meet Target	0.85	Meet Target	0.87	Meet Target	0.86	Meet Target
120th Ave NE	NE 8th St	1c	0.62	Meet Target	0.7	Meet Target	0.88	Meet Target	0.89	Meet Target	0.94	Meet Target	0.9	Meet Target
116th Ave NE	NE 10th St	1c	0.53	Meet Target	0.69	Meet Target	0.76	Meet Target	0.88	Meet Target	0.88	Meet Target	0.88	Meet Target
NE 1st St	Main St	1c	0.49	Meet Target	0.6	Meet Target	0.86	Meet Target	0.87	Meet Target	0.98	Meet Target	0.91	Meet Target
121St Ave SE	SE 8th St	1c	0.39	Meet Target	0.4	Meet Target	0.45	Meet Target	0.47	Meet Target	0.51	Meet Target	0.5	Meet Target
120th Ave NE	NE 4th St	1c	0.45	Meet Target	0.49	Meet Target	0.52	Meet Target	0.53	Meet Target	0.56	Meet Target	0.62	Meet Target
I-405 NB Ramps	NE 4th St	1c	0.51	Meet Target	0.58	Meet Target	0.64	Meet Target	0.64	Meet Target	0.65	Meet Target	0.67	Meet Target
I-405 NB Ramps	NE 10th St	1c	0.47	Meet Target	0.61	Meet Target	0.78	Meet Target	0.81	Meet Target	0.84	Meet Target	0.84	Meet Target
Lk Hills Connector	SE 7th Pl	1c	1.03	Do Not Meet Target	1	Meet Target	1.12	Do Not Meet Target	1.17	Do Not Meet Target	1.21	Do Not Meet Target	1.2	Do Not Meet Target
Intersections not meeting the target			2		1		4		4		5		4	
Area Target			*1.00*		*1.00*		*1.00*		*1.00*		*1.00*		*1.00*	

Bellevue Comprehensive Plan EIS Appendix - System Intersection V/C

Crossroads

* The model includes system tolling and 30% WFH assumptions

NS Street	EW Street	PMA	2019 Base Year Observed v/c	2019 Base Year Observed Performance	No Action* (Full Development on 2044 Network) v/c	No Action* Performance	Alt 1* (Full Development on 2044 Network) v/c	Alt 1* Performance	Alt 2* (Full Development on 2044 Network) v/c	Alt 2* Performance	Alt 3* (Full Development on 2044 Network) v/c	Alt 3* Performance	Alt 3A* (Full Development on 2044 Network) v/c	Alt 3A* Performance
156th Ave NE	NE 8th St	2a	0.75	Meet Target	0.74	Meet Target	0.8	Meet Target	0.8	Meet Target	0.83	Meet Target	0.82	Meet Target
164th Ave NE	Northup Wy	2a	0.74	Meet Target	0.73	Meet Target	0.75	Meet Target	0.76	Meet Target	0.81	Meet Target	0.8	Meet Target
164th Ave NE	NE 8th St	2a	0.68	Meet Target	0.69	Meet Target	0.73	Meet Target	0.74	Meet Target	0.79	Meet Target	0.78	Meet Target
Intersections not meeting the target			0		0		0		0		0		0	
Area Target			*0.90*		*0.90*		*0.90*		*0.90*		*0.90*		*0.90*	

Bellevue Comprehensive Plan EIS Appendix - System Intersection V/C

			2019 Base Year Observed		No Action* (Full Development on 2044 Network)		Alt 1* (Full Development on 2044 Network)		Alt 2* (Full Development on 2044 Network)		Alt 3* (Full Development on 2044 Network)		Alt 3A* (Full Development on 2044 Network)	
Eastgate					* The model includes system tolling and 30% WFH assumptions									
NS Street	**EW Street**	**PMA**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**
156th Ave SE	SE Eastgate Wy	2b	0.58	Meet Target	0.57	Meet Target	0.59	Meet Target	0.58	Meet Target	0.6	Meet Target	0.59	Meet Target
161st Ave SE	SE Eastgate Wy	2b	0.56	Meet Target	0.52	Meet Target	0.53	Meet Target	0.52	Meet Target	0.54	Meet Target	0.53	Meet Target
150th Ave SE	SE Eastgate Wy	2b	1.01	Do Not Meet Target	0.79	Meet Target	0.81	Meet Target	0.81	Meet Target	0.84	Meet Target	0.84	Meet Target
142nd Ave SE	SE 36th St	2b	0.89	Meet Target	0.89	Meet Target	0.9	Meet Target	0.93	Do Not Meet Target	1.01	Do Not Meet Target	1.01	Do Not Meet Target
150th Ave SE	I-90 EB Off-Ramp/37th St	2b	0.87	Meet Target	0.51	Meet Target	0.52	Meet Target	0.52	Meet Target	0.56	Meet Target	0.56	Meet Target
139th Ave SE	SE Eastgate Wy	2b	0.52	Meet Target	0.48	Meet Target	0.47	Meet Target	0.47	Meet Target	0.46	Meet Target	0.47	Meet Target
I-90 EB On-ramp	SE 37th St	2b	Unsignalized, not analyzed		Unsignalized, not analyzed		Unsignalized, not analyzed		Unsignalized, not analyzed		Unsignalized, not analyzed		Unsignalized, not analyzed	
148th Ave SE	SE 24th St	2b	0.87	Meet Target	0.83	Meet Target	0.83	Meet Target	0.8	Meet Target	0.8	Meet Target	0.8	Meet Target
Richards Rd	SE 26th St (Kamber Rd)	2b	0.81	Meet Target	0.74	Meet Target	0.77	Meet Target	0.79	Meet Target	0.85	Meet Target	0.85	Meet Target
Richards Rd	SE 32nd St	2b	0.61	Meet Target	0.61	Meet Target	0.67	Meet Target	0.66	Meet Target	0.67	Meet Target	0.67	Meet Target
150th Ave SE	SE 38th St	2b	0.8	Meet Target	0.73	Meet Target	0.75	Meet Target	0.75	Meet Target	0.82	Meet Target	0.81	Meet Target
139th Ave SE	Kamber Rd	2b	0.62	Meet Target	0.61	Meet Target	0.61	Meet Target	0.63	Meet Target	0.66	Meet Target	0.67	Meet Target
Intersections not meeting the target			1		0		0		1		1		1	
Area Target			*0.90*		*0.90*		*0.90*		*0.90*		*0.90*		*0.90*	

Bellevue Comprehensive Plan EIS Appendix - System Intersection V/C

			2019 Base Year Observed		No Action* (Full Development on 2044 Network)		Alt 1* (Full Development on 2044 Network)		Alt 2* (Full Development on 2044 Network)		Alt 3* (Full Development on 2044 Network)		Alt 3A* (Full Development on 2044 Network)	
Factoria					* The model includes system tolling and 30% WFH assumptions									
NS Street	**EW Street**	**PMA**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**
Coal Creek Pkwy	Forest Dr	2c	0.86	Meet Target	0.83	Meet Target	0.87	Meet Target	0.86	Meet Target	0.89	Meet Target	0.88	Meet Target
Richards rd	SE Eastgate Wy	2c	0.79	Meet Target	0.7	Meet Target	0.75	Meet Target	0.76	Meet Target	0.82	Meet Target	0.82	Meet Target
Factoria Blvd SE	SE Newport Wy	2c	0.77	Meet Target	0.74	Meet Target	0.77	Meet Target	0.76	Meet Target	0.8	Meet Target	0.81	Meet Target
Factoria Blvd SE	Coal Creek Pkwy	2c	0.73	Meet Target	0.68	Meet Target	0.72	Meet Target	0.72	Meet Target	0.8	Meet Target	0.8	Meet Target
Factoria Blvd SE	SE 36th St (I-90 EB Off-ramp	2c	0.88	Meet Target	0.78	Meet Target	0.84	Meet Target	0.84	Meet Target	0.91	Do Not Meet Target	0.91	Do Not Meet Target
I-405 NB Ramps	Coal Creek Pkwy	2c	0.71	Meet Target	0.72	Meet Target	0.73	Meet Target	0.73	Meet Target	0.74	Meet Target	0.74	Meet Target
I-405 SB Ramps	Coal Creek Pkwy	2c	0.81	Meet Target	1.14	Do Not Meet Target	1.2	Do Not Meet Target	1.2	Do Not Meet Target	1.24	Do Not Meet Target	1.26	Do Not Meet Target
Factoria Blvd SE	SE 38th St	2c	0.85	Meet Target	0.72	Meet Target	0.78	Meet Target	0.78	Meet Target	0.81	Meet Target	0.82	Meet Target
124th Ave SE	Coal Creek Pkwy	2c	0.74	Meet Target	0.74	Meet Target	0.78	Meet Target	0.78	Meet Target	0.85	Meet Target	0.85	Meet Target
Intersections not meeting the target			0		1		1		1		2		2	
Area Target			*0.90*		*0.90*		*0.90*		*0.90*		*0.90*		*0.90*	

Bellevue Comprehensive Plan EIS Appendix - System Intersection V/C

			2019 Base Year Observed		No Action* (Full Development on 2044 Network)		Alt 1* (Full Development on 2044 Network)		Alt 2* (Full Development on 2044 Network)		Alt 3* (Full Development on 2044 Network)		Alt 3A* (Full Development on 2044 Network)	
Residential					* The model includes system tolling and 30% WFH assumptions									
NS Street	**EW Street**	**PMA**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**	**v/c**	**Performance**
112th Ave SE	Bellevue Wy SE	3	0.77	Meet Target	0.98	Do Not Meet Target	1.05	Do Not Meet Target	1.07	Do Not Meet Target	1.08	Do Not Meet Target	1.08	Do Not Meet Target
124th Ave NE	NE 8th St	3	0.53	Meet Target	0.74	Meet Target	0.82	Meet Target	0.88	Do Not Meet Target	0.91	Do Not Meet Target	0.92	Do Not Meet Target
140th Ave NE	NE 8th St	3	0.79	Meet Target	0.77	Meet Target	0.81	Meet Target	0.86	Do Not Meet Target	0.92	Do Not Meet Target	0.91	Do Not Meet Target
140th Ave	Main St	3	0.6	Meet Target	0.62	Meet Target	0.63	Meet Target	0.62	Meet Target	0.64	Meet Target	0.63	Meet Target
140th Ave SE	SE 8th St	3	0.82	Meet Target	0.85	Meet Target	0.87	Do Not Meet Target	0.89	Do Not Meet Target	0.91	Do Not Meet Target	0.92	Do Not Meet Target
145th Pl SE	Lk Hills Blvd	3	0.6	Meet Target	0.6	Meet Target	0.61	Meet Target	0.63	Meet Target	0.64	Meet Target	0.64	Meet Target
145th Pl SE	SE 16th St	3	0.67	Meet Target	0.65	Meet Target	0.68	Meet Target	0.7	Meet Target	0.72	Meet Target	0.72	Meet Target
148th Ave NE	NE 8th St	3	0.99	Do Not Meet Target	0.94	Do Not Meet Target	0.96	Do Not Meet Target	1.01	Do Not Meet Target	1.05	Do Not Meet Target	1.06	Do Not Meet Target
148th Ave	Main St	3	0.95	Do Not Meet Target	0.95	Do Not Meet Target	0.99	Do Not Meet Target	0.99	Do Not Meet Target	1.02	Do Not Meet Target	1.02	Do Not Meet Target
148th Ave SE	Lk Hills Blvd	3	0.97	Do Not Meet Target	0.85	Meet Target	0.86	Do Not Meet Target	0.88	Do Not Meet Target	0.88	Do Not Meet Target	0.86	Do Not Meet Target
148th Ave SE	SE 16th St	3	0.88	Do Not Meet Target	0.86	Do Not Meet Target	0.88	Do Not Meet Target	0.89	Do Not Meet Target	0.9	Do Not Meet Target	0.9	Do Not Meet Target
140th Ave NE	NE 24th St	3	0.84	Meet Target	0.74	Meet Target	0.78	Meet Target	0.85	Meet Target	0.96	Do Not Meet Target	0.97	Do Not Meet Target
148th Ave SE	SE 8th St	3	0.79	Meet Target	0.76	Meet Target	0.77	Meet Target	0.79	Meet Target	0.83	Meet Target	0.84	Meet Target
Bellevue Wy NE	NE 24th St	3	0.67	Meet Target	0.72	Meet Target	0.69	Meet Target	0.7	Meet Target	0.73	Meet Target	0.73	Meet Target
Bellevue Wy NE	Northup Wy	3	0.6	Meet Target	0.65	Meet Target	0.67	Meet Target	0.67	Meet Target	0.67	Meet Target	0.67	Meet Target
164th Ave NE	NE 24th St	3	0.69	Meet Target	0.66	Meet Target	0.67	Meet Target	0.69	Meet Target	0.72	Meet Target	0.71	Meet Target
108th Ave NE	Northup Wy	3	0.66	Meet Target	0.67	Meet Target	0.7	Meet Target	0.75	Meet Target	0.74	Meet Target	0.75	Meet Target
148th Ave NE	NE 40th St	3	0.65	Meet Target	0.69	Meet Target	0.68	Meet Target	0.71	Meet Target	0.74	Meet Target	0.74	Meet Target
156th Ave	Main St	3	0.69	Meet Target	0.7	Meet Target	0.73	Meet Target	0.74	Meet Target	0.77	Meet Target	0.77	Meet Target
Lk Wash Blvd NE	NE10th & NE 1st St (5-Way)	3	0.64	Meet Target	0.73	Meet Target	0.73	Meet Target	0.74	Meet Target	0.77	Meet Target	0.77	Meet Target
SE Allen Rd/Somerset Blvd (‡	SE Newport Wy	3	0.63	Meet Target	0.56	Meet Target	0.6	Meet Target	0.6	Meet Target	0.64	Meet Target	0.65	Meet Target
116th Ave NE	Northup Wy	3	0.73	Meet Target	0.77	Meet Target	0.85	Meet Target	0.95	Do Not Meet Target	0.97	Do Not Meet Target	0.96	Do Not Meet Target
115th Pl NE	Northup Wy	3	0.95	Do Not Meet Target	0.97	Do Not Meet Target	0.97	Do Not Meet Target	1.02	Do Not Meet Target	1.09	Do Not Meet Target	1.08	Do Not Meet Target
Northup Wy	NE 24th St	3	0.49	Meet Target	0.54	Meet Target	0.58	Meet Target	0.66	Meet Target	0.67	Meet Target	0.67	Meet Target
150th Ave SE	SE Newport Wy	3	0.89	Do Not Meet Target	0.7	Meet Target	0.73	Meet Target	0.74	Meet Target	0.8	Meet Target	0.79	Meet Target
Richards Rd	Lk Hills Con	3	0.66	Meet Target	0.65	Meet Target	0.68	Meet Target	0.73	Meet Target	0.79	Meet Target	0.79	Meet Target
148th Ave NE	NE 29th Pl	3	0.83	Meet Target	0.71	Meet Target	0.74	Meet Target	0.78	Meet Target	0.8	Meet Target	0.8	Meet Target
Lakemont Blvd SE	SE Newport Wy	3	0.86	Do Not Meet Target	0.66	Meet Target	0.69	Meet Target	0.68	Meet Target	0.71	Meet Target	0.71	Meet Target
164th Ave SE	Lakemont Blvd	3	0.62	Meet Target	0.7	Meet Target	0.71	Meet Target	0.76	Meet Target	0.77	Meet Target	0.77	Meet Target
Village Park Dr SE	Lakemont Blvd SE	3	0.52	Meet Target	0.59	Meet Target	0.6	Meet Target	0.64	Meet Target	0.66	Meet Target	0.66	Meet Target
148th Ave NE	NE 51st St	3	0.92	Do Not Meet Target	0.7	Meet Target	0.72	Meet Target	0.72	Meet Target	0.74	Meet Target	0.75	Meet Target
92nd Ave NE	NE 8th St	3	0.37	Meet Target	0.43	Meet Target	0.4	Meet Target	0.42	Meet Target	0.44	Meet Target	0.44	Meet Target
148th Ave SE	SE 22nd St	3	0.84	Meet Target	0.85	Meet Target	0.91	Do Not Meet Target	0.91	Do Not Meet Target	0.98	Do Not Meet Target	0.97	Do Not Meet Target
Bel-Red Rd	NE 30th St	3	0.68	Meet Target	0.57	Meet Target	0.54	Meet Target	0.58	Meet Target	0.65	Meet Target	0.64	Meet Target
Coal Creek Pkwy SE	SE 60th St	3	0.74	Meet Target	0.72	Meet Target	0.75	Meet Target	0.74	Meet Target	0.76	Meet Target	0.75	Meet Target
108th Ave SE	Bellevue Way SE	3	0.72	Meet Target	0.77	Meet Target	0.82	Meet Target	0.86	Do Not Meet Target	0.9	Do Not Meet Target	0.9	Do Not Meet Target
Intersections not meeting the target			8		5		8		12		13		13	
Area Target			*0.85*		*0.85*		*0.85*		*0.85*		*0.85*		*0.85*	

Bellevue Comprehensive Plan EIS Appendix - Transit Travel Time Ratio

Existing

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown		1.65	1.81	**2.82**	1.78
Crossroads	**2.14**		**2.13**		**2.11**
Eastgate	**2.63**	**2.54**		1.50	**2.58**
Factoria	**3.32**		1.84		
Overlake	**2.35**	**2.11**	**2.20**		

No Action*
(Full Development on 2044 Network)

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown		0.98	1.06	0.97	0.90
Crossroads	1.81		1.81		1.66
Eastgate	1.17	**2.15**		0.64	**2.29**
Factoria	1.18		0.55		
Overlake	0.98	**2.09**	1.95		

Alt 1*

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown		0.99	0.95	0.85	0.88
Crossroads	1.78		1.77		1.66
Eastgate	1.17	**2.15**		0.64	**2.29**
Factoria	1.13		0.52		
Overlake	0.95	**2.07**	1.93		

Alt 2*

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown		0.99	0.91	0.82	0.87
Crossroads	1.78		1.74		1.65
Eastgate	1.15	**2.14**		0.64	**2.27**
Factoria	1.12		0.52		
Overlake	0.93	**2.04**	1.90		

Alt 3*

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown		1.00	0.90	0.80	0.86
Crossroads	1.75		1.72		1.63
Eastgate	1.12	**2.10**		0.62	**2.23**
Factoria	1.05		0.48		
Overlake	0.90	**2.02**	1.87		

Alt 3A*

	Downtown	Crossroads	Eastgate	Factoria	Overlake
Downtown		0.99	0.90	0.80	0.86
Crossroads	1.76		1.73		1.64
Eastgate	1.12	**2.10**		0.62	**2.23**
Factoria	1.05		0.48		
Overlake	0.91	**2.04**	1.88		

* The model includes system tolling and 30% WFH assumptions

Bellevue Comprehensive Plan EIS Appendix - VMT

	Modelled 2019		No Action* (Full Development on 2044 Network)		Alt 1* (Full Development on 2044 Network)		Alt 2* (Full Development on 2044 Network)		Alt 3* (Full Development on 2044 Network)		Alt 3A* (Full Development on 2044 Network)	
	jobs	137,714	jobs	262,485	jobs	316,630	jobs	314,878	jobs	338,112	jobs	338,112
	persons	144,073	persons	191,219	persons	212,508	persons	231,788	persons	251,800	persons	251,800
	VMT	Length	VMT	Length	VMT	Length	VMT	Length	VMT	Length	VMT	Length
PMPK	1,054,125	516.444	1,142,571	522.711	1,181,729	522.711	1,203,750	522.711	1,238,526	522.711	1,237,160	523.1243
Daily VMT (miles)	4,099,375		4,443,332		4,595,613		4,681,250		4,816,490		4,811,178	
Daily VMT per Person	28.45		23.24		21.63		20.20		19.13		19.11	
Annual VMT (millions of miles)	1,340		1,453		1,502		1,530		1,575		1,573	

* The model includes system tolling and 30% WFH assumptions

APPENDIX D Historic Resources Survey

CITY OF BELLEVUE

Comprehensive Plan 2044

Historic Resources Survey

City of Bellevue
Community Development Department
450 110th Avenue NE
Bellevue, WA 98004

Environmental Science Associates
2801 Alaskan Way, Suite 200
Seattle, WA 98121

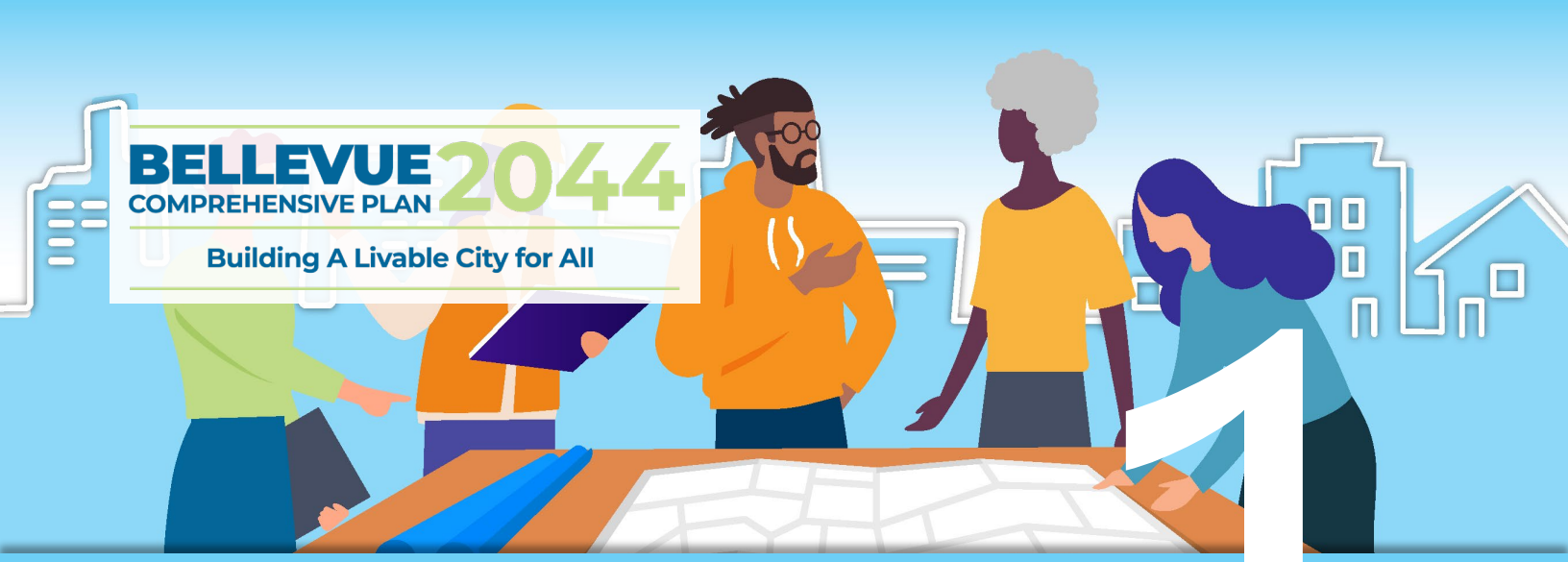
February 2023

Contents

ATTACHMENTS

FIGURES

INTENTIONALLY BLANK



SECTION 1 Introduction

Environmental Science Associates (ESA) was retained by the City of Bellevue to conduct a Historic Resources Survey as a part of the City's Environmental Impact Statement (EIS) for the Comprehensive Plan Periodic Update (Project). The Comprehensive Plan Periodic Update extends through 2044. The survey includes 121 resources that were constructed in or prior to 1994 (50 years old or older as of 2044) in four select areas of the city: Eastgate, Lake Hills, Lake Heights, and Sherwood Forest.

Survey maps are included in Attachment A. All survey information is included in a table, located in Attachment B, and photos of the resources are included in Attachment C.

This Project was undertaken by the following ESA staff members:

- Meagan Scott, MUP, Secretary of the Interior (SOI) qualified in Architectural History, Lead Researcher, Surveyor
- Nicole Lobodzinski, Deputy Project Manager
- Chris Lockwood, PhD, RPA, SOI qualified in Archaeology, Senior Editor
- Pam Xander, MA, Project Manager
- Andy Wilson and Lamai Cox, Geographic Information Systems (GIS) Analysts
- Peter Carr, Technical Editor

ESA appreciates the assistance received from City of Bellevue staff Thara Johnson, Comprehensive Planning Manager and City's Project Manager; Emil King, Community Development Planning Director; Cameron Parker, Senior Planner, and Sydney Prusak, Associate Planner.

1.1 Survey Areas

This Historic Resources Survey for the City of Bellevue, King County, Washington, included the survey and inventory of select areas of the City's Eastgate, Lake Hills, Lake Heights, and Sherwood Forest neighborhoods (**Figure 1**). Information about the process used to select these areas is provided in Section 2.1. Approximately 30 buildings were surveyed in each neighborhood. The total surveyed area encompasses approximately 30.7 acres:

- 6.5 acres in Eastgate
- 5.2 acres in Lake Hills
- 11.6 acres in Lake Heights
- 7.4 acres in Sherwood Forest

1.2 Survey Objectives

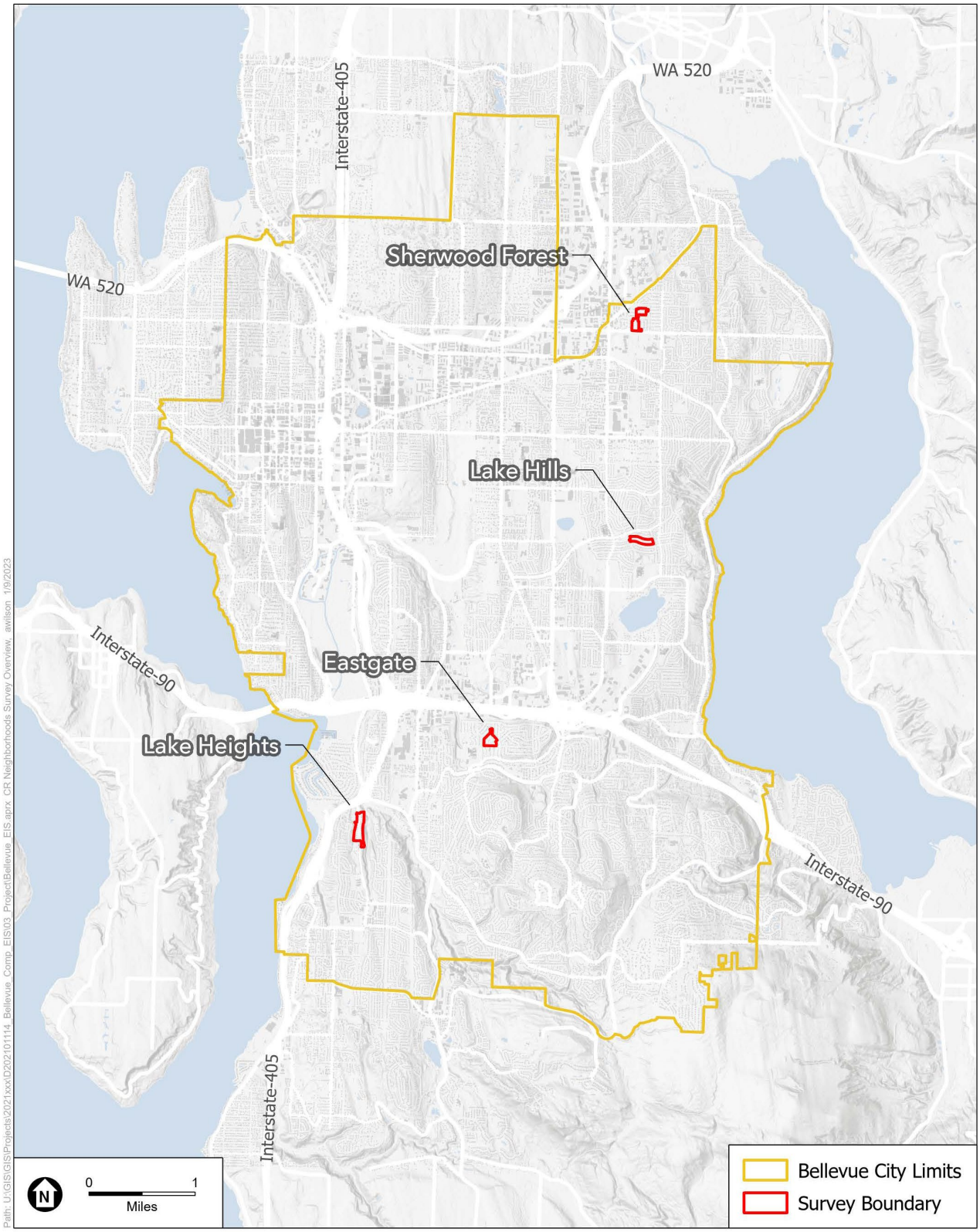
As a part of this Project, the City of Bellevue has identified the need to meet the requirements of Vision 2050, including multicounty planning policy (MPP) DP-6: "preserve significant regional historic, visual, and cultural resources, including public views, landmarks, archaeological sites, historic and cultural landscapes, and areas of special character" (Puget Sound Regional Council 2020:76).

A best practice for historic preservation and alignment with Vision 2050 MPP DP-6 would be to establish a baseline historic preservation inventory and undertake a survey of the entire city that includes resources that are 50 years old or older. Fifty years is the age threshold required for listing in the National Register of Historic Places (NRHP). Fifty years is generally considered the age standard for a historic resource unless a municipality has established separate criteria; Bellevue has not. As the Comprehensive Plan Periodic Update extends through 2044, best practices would include the survey of all resources 50 years old or older as of 2044 (built in or before 1994) to provide a full picture of historic resources for the full course of the Periodic Update's lifespan.

A preliminary review of building ages in Bellevue suggests several thousand resources were constructed in or prior to 1994. During scoping discussions with the City, it was clear that a survey of this extent is beyond the scope of this Project. City staff,[1] however, expressed the need to start a baseline survey, even if it did not encompass the entirety of the city. To provide the first phase of the survey, ESA surveyed some of the areas in the city that contain resources 50 years old or older by 2044 (**Figure 1**). Details regarding the identification of these areas is included in Section 2.1. The goal of this Project is to identify and record all resources within the survey boundaries within the four selected neighborhoods constructed in or before 1994.

Information derived from this survey has been provided to the City and is also included in the appendices to this report. The resulting data will help guide the Comprehensive Plan Periodic Update, particularly in relation to possible zoning changes.

[1] City project manager/Comprehensive Planning Manager, Community Development Planning Director, Senior Planner, and Associate Planner



SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Waterbodies: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

FIGURE 1 **Surveyed Areas**

INTENTIONALLY BLANK

SECTION 2 Methods and Expectations

2.1 Methods

This Project was performed as a geographic survey, with the goal of identifying and recording all resources within the survey boundary constructed in or before 1994. The first step in selecting survey areas involved Bellevue's GIS staff developing a map of the city with blocks categorized according to period of construction (**Figure 2**). Based on this information, ESA and City staff met in late October and early November 2022 and identified five potential areas for survey: Wilburton, Eastgate, Lake Hills, Newport (which contains Lake Heights), and Northeast Bellevue (which contains Sherwood Forest). Wilburton was considered for potential survey due to the presence of the Washington State Heritage Register (WSHR)-listed Wilburton Trestle and the early development of the area. The other four areas were listed based on the high density of pre-1960 buildings, represented on **Figure 2** as large areas of dark purple.

The City chose to focus on residential buildings constructed during the post-World War II era as they are an integral part of Bellevue's history. City staff understand that residential building during this period was a primary force shaping the character of the city and are still an integral part of the city's landscape. City staff (Comprehensive Planning Manager, Community Development Planning Director, Senior Planner, and Associate Planner) subsequently decided that the mix of dates represented (and therefore surveyed buildings) in the Wilburton area was not the preferred area of focus for this survey, and this area was removed from the study. The City elected to focus on mid-century developments in Bellevue, which represents a time of intensive growth. A 1992–1993 survey and 1997 update previously recorded several of the pre-World War II buildings in Bellevue (Tobin and Pendergrass 1997). Tobin and Pendergrass' 1992-1993 recordation included physical descriptions of each building, along with data including address and year built, and the 1997 update revisited each of the buildings and documented any changes (the 1997 report includes a copy of the 1992-1993 report, and is on file with the City of Bellevue). For this Project, the City decided to survey previously unrecorded buildings to expand the number of documented resources in the city, as opposed to re-recording the older resources and documenting additional changes since 1997.

Based on this information, City GIS staff performed a more granular review to identify one cluster of 30 buildings in each of the four survey areas to record for this Project. The resulting areas, seen in **Figure 3**, were provided to ESA, along with an Excel spreadsheet containing parcel numbers, addresses, and construction dates for 120 buildings within the survey areas. The City also provided a separate dataset with building permit records on file with the City dating from 2017 through November 2022, as well as two previous historic resources surveys not in Washington Information System for Architectural and Archaeological Records Data (WISAARD) (Tobin and Pendergrass 1997; Fitting et al. n.d.).[2]

[2] "East Lake Hills" in **Figure 3** is a current name for a portion of the larger Lake Hills development. This report refers to the area as Lake Hills, as it was known during the original post-war period when it was under construction.

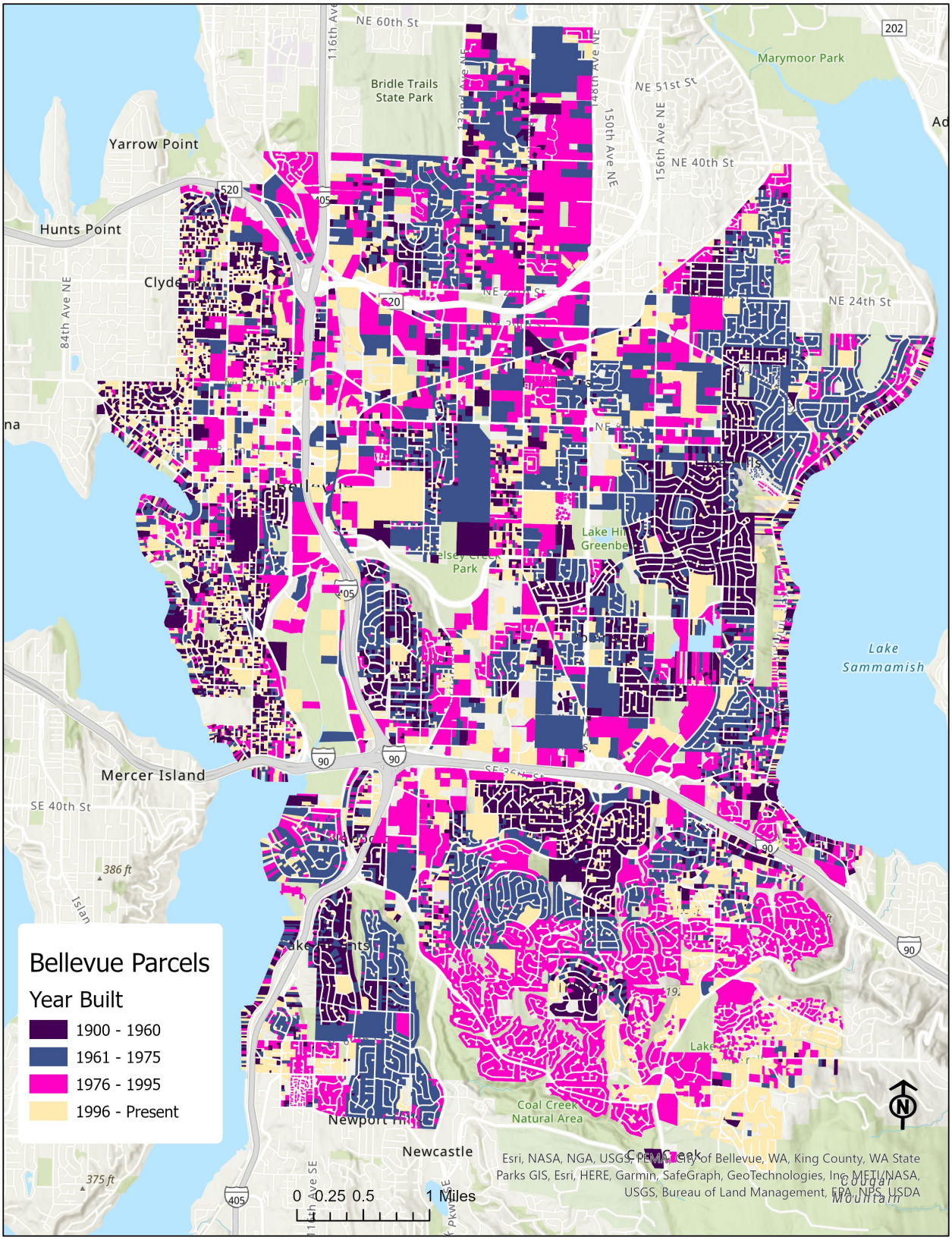
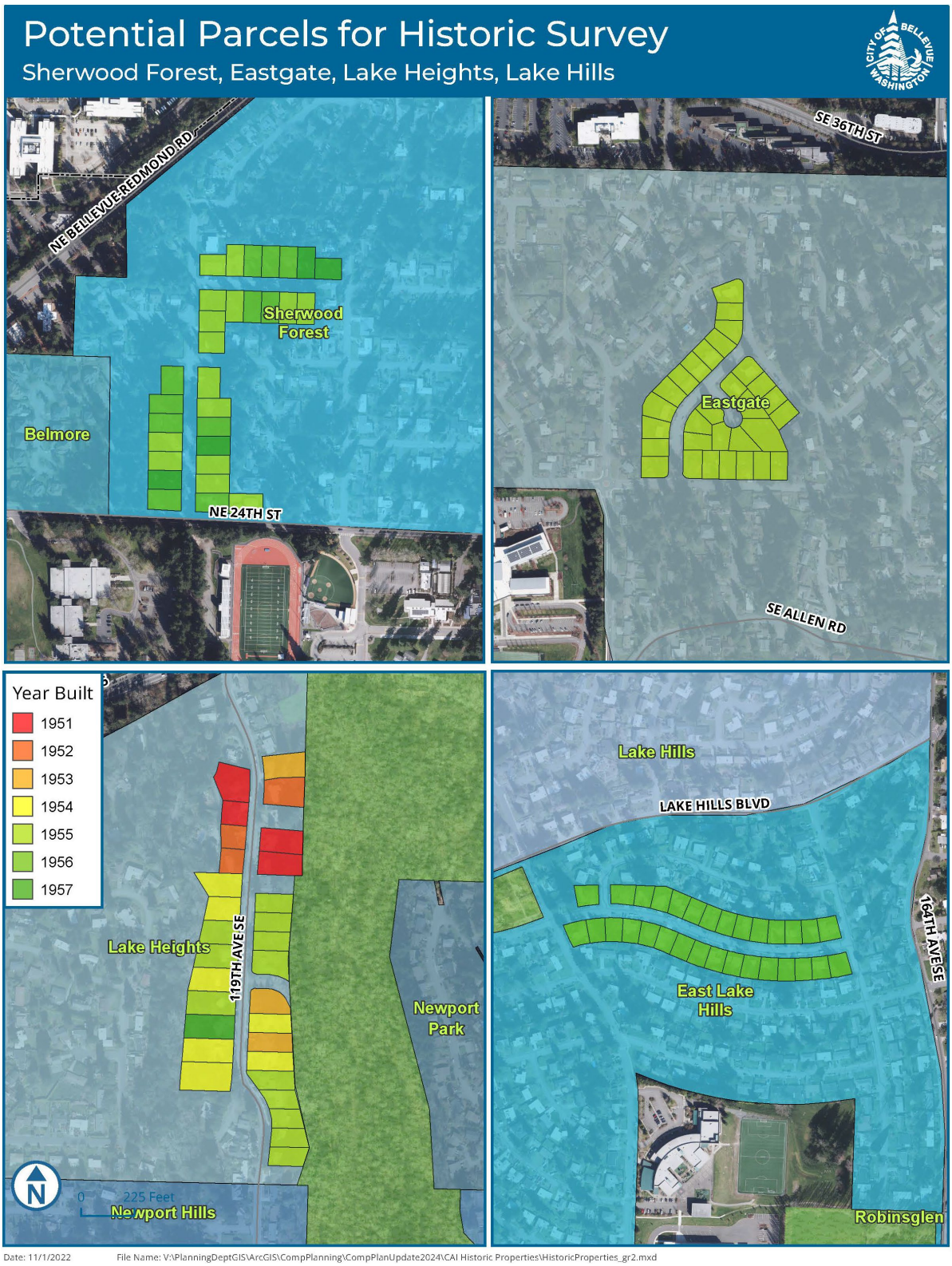


FIGURE 2 **City-Produced Preliminary Survey Map Showing Construction Dates in Bellevue**



NOTE: "East Lake Hills" is current nomenclature for a subarea of the larger Lake Hills development. Elsewhere, this report refers to this area as "Lake Hills," as it was known and identified during construction.

FIGURE 3 **City-Produced Map of Areas to Survey as a Part of This Project**

In collaboration with ESA, the City determined that WISAARD's Historic Property Inventory (HPI) forms would serve as a model for the information to be collected in the field for the survey, although HPI forms were not created for this Project. Information compiled on each resource included:

- Address
- Parcel number
- Neighborhood
- Year built
- Stories
- Historic use
- Current use
- Foundation
- Form type (single dwelling, church, etc.)
- Roof type
- Roof material
- Cladding
- Structural system
- Plan
- Style
- Changes to plan
- Changes to windows
- Changes to cladding
- Appears to meet NRHP (individual)
- In a potential NRHP historic district
- Would contribute to an NRHP historic district
- Photograph(s)

The Washington State Department of Archaeology and Historic Preservation (DAHP) identifies two levels of survey: reconnaissance and intensive, which serve as useful guidelines for a project's level of effort. A reconnaissance level survey is a "'first look' at a broad group of historic resources and records [...] observational information on architectural style and features" (DAHP 2023d). Intensive level surveys, however, record in-depth information on each resource and historic research about the building's use(s), ownership history, and changes throughout time. As this was a reconnaissance level survey, ESA did not conduct extensive historic research on the city, individual neighborhoods/development, or individual buildings, although an overview of the city's history and neighborhoods was developed for broad context (see Section 3, *Cultural Setting*).

During the planning phase, information collected prior to the field survey was input into an ESRI GIS database and made available to field survey team through the ESRI Collector mobile application (Collector app) to create a working map with all relevant data available in the field. Pre-populated data in the Collector app included a general building location for each parcel containing a building constructed in or prior to 1994, denoted by a point on the parcel; address; parcel number; year built; and neighborhood. This information was uploaded into the Collector app by ESA's GIS staff.

Generally, the field survey team worked along one side of a street from one end to the other, then worked back on the other side of the street. Field equipment included data collection devices loaded with the Collector application (Collector app) and a high-quality digital camera. The devices were further equipped with internet access, allowing data verification where needed, including building addresses, construction dates, and number of buildings on the parcel. For each building, architectural data and at least one photo were recorded directly into the Collector app. The field survey team documented all resources from the public right-of-way as they were not afforded access rights to privately owned parcels. The architectural significance and potential eligibility (both individually and as contributing to a potential district) for each resource was evaluated using NRHP criteria and aspects of integrity. Data collected in the field were then subject to a quality assurance/quality control (QA/QC) review.

Landmarks

Resources that have been listed in a historic register—local or the NRHP—are also referred to as *landmarks*. There is no difference between referring to a resource being *listed in a historic register* or as a *landmark*. Resources that are individually listed or contribute to a historic district are called landmarks.

Based on buildings' significance, potential landmark status, and neighborhood histories (Section 3) the team developed recommendations for potential historic districts. Because Bellevue does not have a local historic register, only NRHP recommendations were extended. These recommendations (Section 5) are largely based on the density of potentially contributing buildings, as this was a reconnaissance survey and extensive research on each building was not a part of the Project. Additionally, preliminary recommendations for possible individual landmarks were based on visible integrity and architectural character (Criterion C), as Criterion A and Criterion B are related to significant events and persons (respectively), and evaluation under these Criteria require additional research outside the scope of this project. Criterion D is related to information important in history or prehistory; given construction dates of the buildings that were recorded, it seems unlikely they would yield such information.

Survey staff evaluated each building based on its current state, taking into account any visible alterations as well as alteration data as provided by the City. Extensive additions and modifications, the use of incompatible exterior sidings and windows, and porch removal or enclosure are typical alterations that cause a building to possibly lose its historic character. While some modifications are found to be sensitive to the historic character and do not impact a building's integrity, other, more extreme modifications can diminish the integrity of the resource and therefore alter the significance. Window replacement is common in older houses as homeowners often desire a more energy-efficient option. Window alterations that retain the fenestration and light pattern, as well as the use of like materials, typically do not alter the character of a building. Another sensitive alteration would be the enclosure of a side porch or garage with the original footprint intact; the resource may be affected but does not necessarily lose integrity. On the other hand, buildings that have had large additions or major alterations to the main façade or prominent features, especially where one cannot determine the original from the alterations, would be identified as having lost or diminished integrity. Furthermore, some alterations are permanent while others may be reversible.

2.2 Evaluation Criteria

A Historic Resources Survey entails the gathering of data associated with the buildings, structures, sites, and objects that have potential historic significance and serves as the baseline for additional determinations of significance and planning efforts. The inclusion of a resource in a survey does not confer any particular significance, only that it meets a particular standard for recordation. Here, as is typical, that standard is the age of the resource. Although not every recorded resource may be deemed significant or be protected, a survey allows for the systematic documentation and ultimately the evaluation of resources that may, in fact, be significant.

In Washington State, historic resources are typically recorded in WISAARD, maintained by DAHP. Relatively few resources in WISAARD are listed in the NRHP or local landmarks programs. The NRHP is the official federal list of significant properties in the United States and is maintained by the Department of the Interior National Park Service (NPS). For this survey, the City of Bellevue elected to not have the resulting data uploaded to WISAARD.

This report evaluates identified resources under the criteria established by the National Historic Preservation Act to evaluate resources for their potential eligibility to be listed in the NRHP. For a resource to qualify for the NRHP, it must meet one of the NRHP criteria for evaluation by being associated with an important historic context and retaining historic integrity of those features necessary to convey its

significance. In addition to retaining integrity and meeting at least one of the four criteria, the NRHP requires that resources be at least 50 years old at the time of listing.

2.3 NRHP Criteria

Criteria for listing in the NRHP are as follows (NPS 1990):

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of significant persons in or past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded or may be likely to yield, information important in history or prehistory.

Ordinarily cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

a) A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

b) A building or structure removed from its original location but which is primarily significant for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

c) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building associated with his or her productive life; or

d) A cemetery that derives its primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

e) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

f) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

g) A property achieving significance within the past 50 years if it is of exceptional importance.

2.4 Integrity

To be included in the NRHP, resources must have retained some level of integrity. Integrity is the ability of a property to convey its significance. The seven aspects of integrity are: location, design, setting, materials, workmanship, feeling, and association. To be listed in the NRHP, a resource must not only be significant under the National Register criteria, but it also must have integrity. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property's physical features and how they relate to its significance. To retain historic integrity, a property will typically possess several, and often most, of the aspects. Determining which of these aspects are most important to a particular property requires knowing why, where, and when the property is or was significant.

Integrity

The seven aspects of integrity are location, design, setting, materials, workmanship, feeling, and association. A resource's *integrity* is different than its *condition*; the former refers to the resource's ability to convey its significance, whereas the latter refers to its physical condition. A poor condition can lead to the deterioration of elements that contribute to a resource's integrity, but they are two different ways to describe a resource.

2.5 Previously Recorded Resources

Several previous surveys have inventoried historic architectural resources in Bellevue, and many historic buildings have been recorded in WISAARD. These surveys and inventory forms have been completed for a variety of projects and include built environment and archaeological resources. One survey exclusively focused on the historic built environment: a 2021 reconnaissance survey of the Surrey Downs neighborhood (Pratt et al. 2021). There have been no comprehensive surveys of the city.

There are also two additional known historic built environment surveys that have been undertaken in Bellevue; neither is recorded in WISAARD. The first occurred in 1992–1993 and was updated in 1997 (Tobin and Pendergrass 1997). It recorded 50 buildings generally considered to have significant historic, cultural, and/or architectural value to the city. The second survey encompassed the mid-century Lake Hills development and was undertaken by undergraduate students at the University of Washington (Fitting et al. n.d.).

2.5.1 Listed Properties

There is one resource in Bellevue that is listed in the NRHP: the 1929 Winters House (Smithsonian Number 45KI606) at 2102 Bellevue Way SE, which was listed in 1991. Additionally, the Wilburton Trestle is listed in the WSHR, and the Twin Valley Dairy is listed in the Washington Heritage Barn Register (DAHP 2023a). The City of Bellevue does not have a historic landmarks program.

2.6 Expectations

ESA expected to survey 120 buildings as a part of this Project; based on data provided by Bellevue GIS staff, all of these resources were expected to date from the 1950s. Buildings of this age—approximately 70 years—have commonly seen a variety of alterations, which is expected of the buildings that are a part of this survey. It was anticipated that these changes would result in a variety of potential eligibility for NRHP listing. As these are all post-war developments, ESA expected that most of the architectural styles date from that time and generally be Ranch and Mid-Century Modern.

INTENTIONALLY BLANK

SECTION 3 Cultural Setting

3.1 Bellevue

This area has been used for time immemorial by many different people. This section contains a discussion of the use of the land by its early inhabitants in part because, like many places in the U.S., white settlers utilized the existing Native trails and settlement areas. Native gathering spaces were attractive to white settlers additionally because they provided already-established trade locations.

Tribes hold complete knowledge of their history. The following has been prepared based on published materials by non-Native people from the 19th, 20th, and 21st centuries. The materials often do not present the full and accurate understanding of Tribal history and knowledge. The authors acknowledge that these sources inherently contain deficiencies, and use of them is not intended to substitute or supersede historic knowledge held within the Tribe.

The survey areas are within the traditional territory of the Southern Coast Salish culture group, which includes but is not limited to the Duwamish *dxʷdəwʔabš* (people of the inside) and Snoqualmie *sdukʷalbixʷ* (people of the moon). The Southern Coast Salish have used this area since time immemorial for various levels of habitation, resource gathering, and cultural practices. The traditional language of the Southern Coast Salish is Southern Lushootseed (Suttles and Lane 1990:485). Descendants of the Duwamish and Snoqualmie at the time of the signing of the 1855 Treaty of Point Elliott are members of today's non-Federally recognized Duwamish Tribe and the following Federally recognized tribes: Snoqualmie Indian Tribe, Suquamish Tribe, Tulalip Tribes, Muckleshoot Indian Tribe, and Confederated Bands and Tribes of the Yakama Nation (Miller and Blukis Onat 2004:24–25, 56–108).

The Southern Coast Salish culture group shares similarities in language, subsistence patterns, structures, and other cultural practices (Suttles and Lane 1990). Permanent and seasonal campsites were located at specific locations ideal for resource gathering, hunting, and travel. Villages were located at the mouths of rivers, river confluences, and terraces, following a seasonal round for subsistence and resources. Traditional Southern Coast Salish diet relies heavily upon salmon, supplemented with other resources

found in marsh and river environments. Nearby rivers, lakes, and forests would have provided fishing and hunting opportunities for resources such as salmon, beaver, waterfowl, deer, elk, bear, and other animals.

The U.S. negotiated the Treaty of Point Elliott with the Duwamish and 21 "allied tribes" in 1855. Under the provisions of this treaty, ratified in 1859, the U.S. Government established four reservations within the Puget Sound region for the "Duwamish and allied tribes" to reside upon: Tulalip, Port Madison, Swinomish, and Lummi. The Treaty did not create a reservation specifically for the Duwamish, and not all Coast Salish moved to the established reservations (Lane 1975a, 1975b; Miller and Blukis Onat 2004). The Duwamish are actively petitioning the U.S. for federal acknowledgement (Duwamish Tribe 2021; U.S. Bureau of Indian Affairs 2021). The Snoqualmie were granted federal recognition in 1999.

The first white settlers to arrive in the area were William Meydenbauer and Aaron Mercer, in 1869; both claimed land near what is today downtown Bellevue. In 1894 and 1895, the Northern Pacific Railroad Company was granted over 1 million acres across the state, including several sections in what are now Bellevue and Redmond. Prior to this, "most transport was handled by steamboats on the Squak (Sammamish) River," supplemented by wagon trails in poor condition (Rinck 2017:10). The primary east-west route was King County Road 85 (today NE 24th Street), established in 1886. It was in this same year that the town's first post office opened. The town was platted in 1904, and a decade later the population had reached 750 (Goetz 2006:2–7).

Bellevue, and nearby Redmond, remained relatively small, primarily dedicated to logging agriculture, with small orchards and berry and truck farms in the surrounding area. Much of this work was done by Japanese immigrants who did "what white residents had moved away from: they did the back-breaking work of clearing the large and deeply rooted stumps and made Bellevue suitable for farming and homes" (Marsha 2017). The first paved road reached Bellevue in 1919, which connected it to what is now the Newport neighborhood (which includes Lake Heights), "followed by the completion of Lake Washington Boulevard to Seattle in 1920" (Goetz 2006:2–8). Car and passenger ferries also offered service across the lake and ran from Medina to Leschi Park (LeWarne 1997). Plans for a bridge across Lake Washington began as early as 1926, although construction did not begin until 1939, and in 1940 the four-lane Interstate 90 (I-90) opened (Jones and Stokes 2005:5; LeWarne 1997).

Many of the farms were owned and operated by Japanese Americans. By the 1930, approximately three-fourths of all produce in the region was grown on Japanese and Japanese American farms (Marsha 2017). Following the 1941 attack on Pearl Harbor, President Roosevelt signed Executive Order 9066, which forcibly removed over 100,000 people of Japanese ancestry on the West Coast to concentration camps for the duration of the war. Sixty Bellevue families were removed. Some had neighbors who helped maintain their farms, but most were forced to sell their land for far less than it was worth. After Executive Order 9066 went into effect, "… Eastside businessmen […] began the suburban and urban development that has built the city to what we know today. With the farmers forced out, the cleared farmland became available for upscale shopping centers and housing developments made accessible with new highways" (Marsha 2017). When families returned after the war (only 11 of the 60 returned at all), those who still owned land faced sabotaged wells, burned property, and finances too meager to purchase equipment.

Bellevue incorporated in March 1953, and at that time had a population of 5,940 and was still primarily agricultural (LeWarne 1997; Rinck 2017:13). Bellevue, like the rest of the country, was significantly impacted during the post-war decades. Between the end of the war and 1954, over 13 million houses were

constructed in the U.S. At the same time, auto production grew by over 400% (Boyle 2017:8). Marriage and birth rates exploded, not only in the United States but also "in virtually the entire Western industrialized world" to the point where the annual birth rate in some countries doubled (Bavel and Reher 2013:257). Popular culture, along with veterans returning to the domestic work force, promoted an image of women's "traditional" return to the role of housewife and mother. All of these factors led to the growth of suburbs with relatively little new development in cities. This "centrifugal movement of people to the suburbs" became the most characteristic and significant shift in the mid-century decades (Schmid 1944:75). Houses were "designed to accommodate active, young families, while the neighborhood itself incorporated space for parks, schools, and cul-de-sacs and street arrangements that slowed traffic and created a family friendly environment" (Boyle 2017:9). This type of development is directly reflected in many Bellevue neighborhoods and developments, and histories of the survey areas are further detailed in the following sections.

By 1960, the city's population had reached 12,800, and just a decade later stood at 61,200, although some of that was due to annexations. Several large suburban developments were constructed in the post-war era just outside of the city; one of the first was an 80-acre development known as Vuecrest just north of the city, on former Japanese American land; another was the 12,000-acre Lake Hills development that eventually consisted of approximately 4,000 houses (LeWarne 1997; McDonald 2000:157). The area to the east of the city was still relatively undeveloped; when the Crossroads Shopping Center (opened 1962) was planned, the site was "merely the end of a gravel road terminating at 156th Avenue," and the area remained unincorporated until the end of the decade (McDonald 2000:157). The mid-century saw both residential and commercial growth outward (today referred to as sprawl), with designs geared toward the automobile, with "ample parking on surface lots, [...] shopping malls and auto-oriented strip malls, and drive-in everything" (Boyle 2017:13).

Construction on Interstate 5 (I-5) linking Tacoma, Seattle, and Everett began in 1960, and the highway opened in 1965. Boeing, which became a significant employer in the area during World War II, boomed during the decade and peaked at 101,000 employees in 1968, although layoffs began just a year later. By 1970, it employed 80,400 people and 32,500 in October 1971, but would eventually recover (Boyle 2017:13). Microsoft, one of the Northwest's earlier tech companies, was founded in 1975 in Albuquerque and moved to Bellevue at the start of 1979 with approximately 30 employees, but more than tripled in size in just 2 years (Rousso 2020). The company moved to its current campus in Redmond in early 1986; originally 6 buildings on 30 acres, as of 2018 it sits on over 500 acres with 83 buildings, and regionally employs approximately 53,500 people.

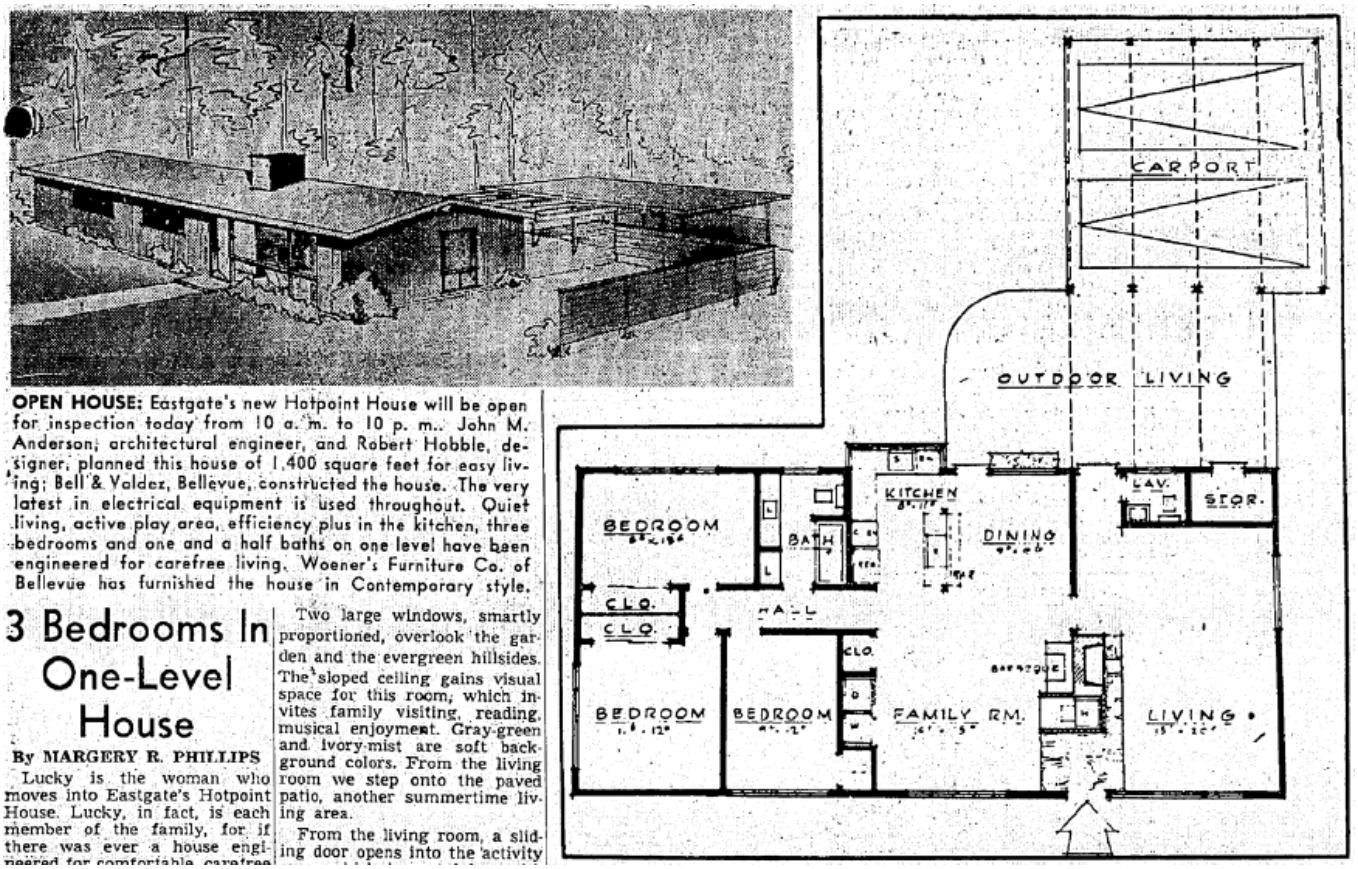
3.1.1 Eastgate

Development of the Eastgate neighborhood began in 1953–1954 by Century Builders Supply. The company was started in 1944 by George W. Rowley and Leo A. Speck, who utilized standardization and mass-production to reduce building costs. Houses in the 28-acre Eastgate development were designed by surveying housewives to find out what "features in her home were a help or a hinderance to home-making" (*Seattle Daily Times* 1953). Based on the results of the "inquiring reporters," houses in Eastgate were two- and three-bedrooms, around 1,000 square feet, and less than $9,500, approximately $105,000 in 2022 dollars (*Seattle Daily Times* 1953; U.S. Bureau of Labor Statistics 2022). The houses were sold prior to construction, and Century Builders advertised that they could be tailored to the specifications of the new

owners (*Seattle Daily Times* 1954a). The entire community was planned to include 900 houses and a commercial district, and cost $10 million in total. The construction firm was Bellevue-based Bell & Valdez.

The first houses were completed in early 1954. Down payments—for those who were not veterans—were $450 (*Seattle Daily Times* 1954c). By May of that year, over 250 houses had been sold, although many were not yet even started (*Seattle Daily Times* 1954b). Like many other new developments of the time, the community had model homes furnished and open for inspection. The Hotpoint House (**Figure 4**), designed by John M. Anderson, was described by renowned *Seattle [Daily] Times* architecture critic Margery R. Phillips as a house "for easy living [with] the latest in electrical equipment…used throughout. Quiet living, active play area, efficiency plus in the kitchen, three bedrooms and one and a half baths on one level have been engineered for carefree living" (Phillips 1954).

The development continued to grow, and by mid-1954 had sites for over 1,500 new homes, but this was insufficient. Century Builders purchased an additional 175 acres to expand the development in August of that year (*Seattle Daily Times* 1954e). Bell & Valdez were completing two buildings a day on average. By August, approximately 600 families had moved in, and plans were being made for an elementary school, 35-acre shopping center, and two churches within the development (*Seattle Daily Times* 1954e, 1954f).



OPEN HOUSE: Eastgate's new Hotpoint House will be open for inspection today from 10 a. m. to 10 p. m. John M. Anderson, architectural engineer, and Robert Hobble, designer, planned this house of 1,400 square feet for easy living; Bell & Valdez, Bellevue, constructed the house. The very latest in electrical equipment is used throughout. Quiet living, active play area, efficiency plus in the kitchen, three bedrooms and one and a half baths on one level have been engineered for carefree living. Woener's Furniture Co. of Bellevue has furnished the house in Contemporary style.

3 Bedrooms In One-Level House

By MARGERY R. PHILLIPS

Lucky is the woman who moves into Eastgate's Hotpoint House. Lucky, in fact, is each member of the family, for if there was ever a house engineered for comfortable carefree

Two large windows, smartly proportioned, overlook the garden and the evergreen hillsides. The sloped ceiling gains visual space for this room, which invites family visiting, reading, musical enjoyment. Gray-green and ivory-mist are soft background colors. From the living room we step onto the paved patio, another summertime living area.

From the living room, a sliding door opens into the activity

FIGURE 4 **Eastgate's Hotpoint House, as featured in the Seattle Daily Times in 1954**

3.1.2 Lake Hills

The following section is excerpted from Boyle 2017:28–29.

Perhaps one of the most comprehensive designs in the northwest during the 1950s, Lake Hills was a large, planned community developed in the early 1950s in an area east of Bellevue. At its inception, Lake Hills received a great deal of recognition for its appeal to new homebuyers. For the 1955 grand opening, the Seattle [Daily] Times *ran a full-length, promotional section advertising Lake Hills as the "birth of a city." The development was indeed on a city-sized scale and was promoted as the largest planned community in the northwest. The featured advertisement described Lake Hills as "A model community of 4,000 homes resting on 1,200 acres of rolling hills and valleys—engineered with facilities to serve an eventual population of 17,000 persons." Lake Hills was one of the east sides' "destination suburbs," along with Newport Hills, Surrey Downs, Somerset, Eastgate, Hilltop, and others.*

*Originally a home to settlements of the [Yakama] Indians and later Japanese immigrant farmers, the area that makes up Lake Hills was developed as a result of an exploding demand for single family housing, which escalated due to the regional growth of the Boeing Company (City of Bellevue 2016). The development's opening ceremony, officiated by then-governor Arthur Langlie, emphasized the high level of income and job opportunities, the growing population of the Pacific Northwest and the region's positive outlook on the economy (*Seattle Daily Times *1955b).*

R.H. Conner, a Seattle-based real estate developer and clothing manufacturer, worked with builders George Bell and Ted Valdez to create a self-sufficient community with modern amenities (We are Lake Hills 2016). Beginning with the platting of large residential parcels, the 1,200 acres were envisioned to eventually house commercial centers, churches, and green spaces. The idea was immensely popular, and Bell and Valdez were flooded with applications even before the first house was completed. The first houses were available for occupancy in August of 1955, and sales continued to increase at an exponential level. New homes were available with conventional financing, but also through [Federal Housing Administration's (FHA)] loans and the G.I. Bill. Later builders in Lake Hills included Kinney Leonard and J.W. Morrison & Associates.

The planning of Lake Hills involved an emphasis on modern design, which soon came to be well known through local features in Margery Phillips' design column in the Seattle [Daily] Times *and national design awards. Homes were characterized by their spacious layout and suburban amenities. Some of these houses were the subject of a recent study by University of Washington urban design and planning students who analyzed the development and its popular house models, [noted] below:*

- *The Tri-Vue, a low, asymmetrical gable roofed split level house with a projecting carport and approximately 1,475 square feet, designed in part by structural engineer John Anderson and built by Bell & Valdez.*
- *The Trilander 2, a single story house with a low gable roof, and projecting carport forming an L-shaped mass, designed by Ronald R. [Campbell] and built by Kinney Leonard.*
- *The Rivera, another split level home with a double garage integrated into the low-gabled mass at the ground level, designed by Robert Hobble and built by Bell & Valdez.*
- *The Greenbrier, a two story gable roofed house with an integrated two-car garage inserted at grade, featuring a classical-inspired design with pillars supporting the front roof overhang and a masonry chimney at one end, built by Bell & Valdez (designer unknown).*

- *The Westwood 2, a single story house with a continuous gable roof over the main mass and the carport at one end, featuring 1,988 square feet, built by Bell & Valdez (designer unknown).*
- *The Young Modern, a single story, 1,944 square foot house with an asymmetrical plan characterized by a wide, low pitched, front-facing gable roof over its main mass, with open single or double carport, and centralized chimney mass, built by Bell & Valdez (designer unknown).*
- *The Colonial, a two-story house with an attached, single story double garage, with both side-facing gable roofs. The 1,944 square foot house is finished with brick and cedar siding and features four tall posts [supporting] the upper roof overhang. It was designed by architect Lawrence & Hazen and built by J.W. Morrison & Associates.*
- *The Skylark, a single story house with a low-sloped gable roof planned for a sloping site with a daylight basement opening to the back yard and an [attached] single vehicle carport with shed roof projecting from the main mass, built by Bell & Valdez (designer unknown).*

Bell and Valdez formed a partnership in 1948 and [continued] building residential plots into the 1960s (Fitting et al. n.d.). The infrastructure (sewer and storm systems, drainage design) for the development was designed by Harstad and Associates. Architect and engineer John Anderson did many of the initial designs. Builder Kinney Leonard, who was known for some residences in Normandy Park, was also a builder in Lake Hills. Other designers in Lake Hills included John Anderson, Robert Hobbel, Lawrence & Hazen Architects.

3.1.3 Lake Heights

The Lake Heights development, currently a part of the larger Newport neighborhood, was developed by Jack Cluck starting in the early 1950s and located along 119th Avenue SE and between SE 44th and SE 48th Streets (*Seattle Daily Times* 1951). Advertisements for the new houses highlighted the views and described the buildings as "absolutely the latest in design and construction" (*Seattle Daily Times* 1952a, 1952b). Like many other developments of the time, new owners could purchase completed houses or vacant lots. Dave Jackson was the builder for the development, with Abraham & Son responsible for the concrete floors, driveways, and walkways; Bill Chapman Electric for wiring and lighting fixtures; Union Bay Plumbing & Heating for plumbing fixtures; and Shifton Plywood & Lumber for the doors and plywood (*Seattle Daily Times* 1952b). George Bondo was the realtor.

Each house had its "own individual style and construction," with prices for a house starting at $15,950, approximately $180,000 in 2022 dollars (*Seattle Daily Times* 1952b; U.S. Bureau of Labor Statistics 2022). Lots were priced between $2,250 and $2,500, approximately $25,000 and $28,000 in 2022 dollars (*Seattle Daily Times* 1952c; U.S. Bureau of Labor Statistics 2022). The first houses were completed in 1951, and construction continued through the following years. By July 1954, there were nine lots left for sale and houses were still being shown the following year (*Seattle Daily Times* 1954d, 1955d). In 1956, two more additions were developed; these were slightly larger and more expensive than the earlier development (*Seattle Daily Times* 1956a). A Lake Heights house, likely in one of the later developments, was featured by Margery Phillips in December 1957, who noted it was designed by local architect Gene Zema (Phillips 1957).

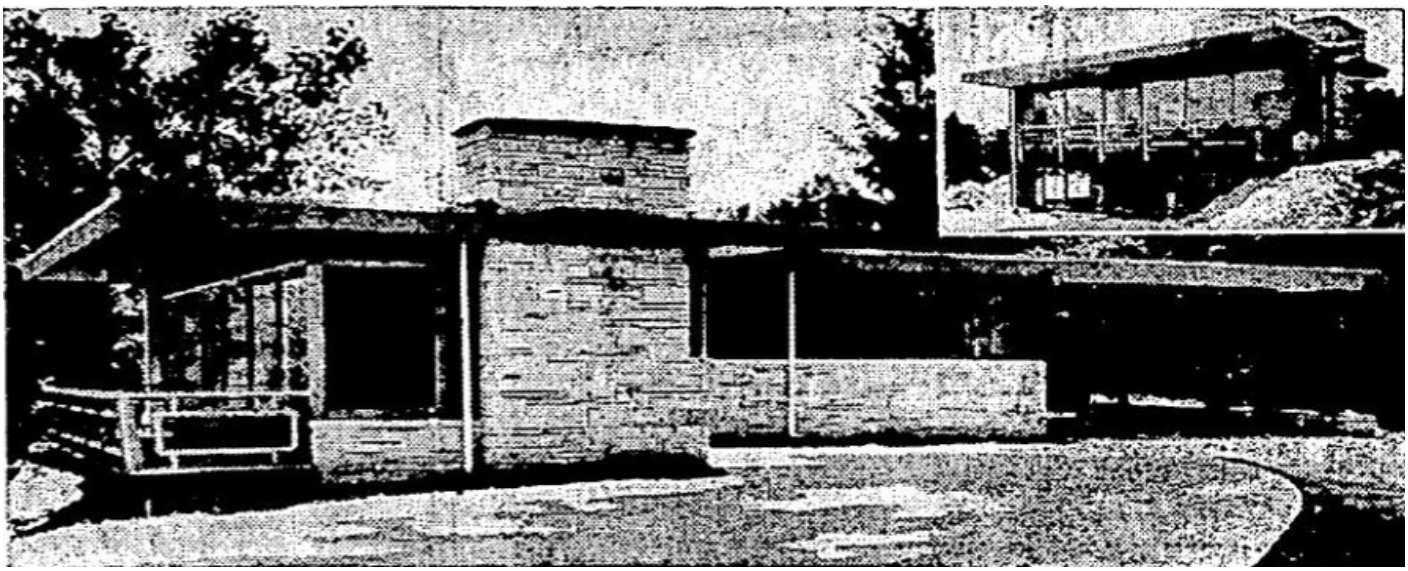


FIGURE 5 **A Lake Heights House Shortly after Completion in June 1952**

3.1.4 Sherwood Forest

Located in Northeast Bellevue, Sherwood Forest was a development planned by the Highland Development Company. Plans initially called for 300 houses on large lots, with houses priced between $17,000 and $22,000, approximately $188,000 to $243,500 in 2022 dollars (*Seattle Daily Times* 1955c; U.S. Bureau of Labor Statistics 2022). Early ads specified this was not a "tract project," and employed at least 13 different builders to allow buyers a variety of design options all similar prices (*Seattle Daily Times* 1955a, 1955e, 1956b). Features of Sherwood Forest included "space, outdoor living, privacy, low maintenance, expansion—and above all—real resale value for the future" (*Seattle Daily Times* 1955a). To help people move to the neighborhood, the development's realtor, John L. Scott, allowed existing homes to be used as a part or whole of the down payment. In January 1956, additional land was added to the development, bringing the total number of lots to 400 (*Seattle Daily Times* 1956b).

Due to the multitude of builders, the community had a variety of architectural designs by different architects, including Paul Hayden Kirk and Raymond H. Peck (Phillips 1956; *Seattle Daily Times* 1956c). While most newspaper articles do not provide specific addresses, a *Seattle Daily Times* article featuring Kirk's design notes an address of 2423 162nd Avenue NE. Most of the houses described were two or three bedrooms with attached garages, fireplaces, modern conveniences like dishwashers, and featured large windows for natural light. In just 11 months, total home sales had topped $1,114,000 (*Seattle Daily Times* 1956d).

3.2 Architectural Context

Popular American architectural styles regularly shift throughout the years, based on factors like taste, technology, historic trends, and regulations. Given that all four surveyed neighborhoods date from a relatively brief period of time, the variety of represented architectural styles is minimal, although this is typical of post-war development. The styles described below represent the styles found as a part of this survey and are representative of resources from the mid-century.

Virginia Savage McAlester's *A Field Guide to American Houses: The Definitive Guide to Identifying and Understanding America's Domestic Architecture* served as the basis for the architectural descriptions included here, supplemented by DAHP's Architectural Style Guide (DAHP 2022). Other sources are cited as appropriate.

3.2.1 Vernacular

Many buildings were constructed with no or few nods to architectural styles of the time. These can be called "no style"; "no architectural/academic style"; "vernacular," which typically carries a descriptor of the construction style (frame or masonry); or occasionally "folk." Unlike academic styles, Vernacular buildings are not tied to a specific time period. Frame vernacular buildings generally feature gable or hip roofs and shingle, clapboard, and sometimes novelty siding. Following World War II, the popularity of wood frame buildings fell off considerably, as concrete became cheaper than wood, and therefore more popular. Masonry units, which boomed in manufacture in the first decade of the 20th century, were easily transported by rail. While the price of masonry blocks began to drop below wood around the turn of the century, the significantly lighter weight cinderblock did not emerge until the 1920s and 1930s (Simpson 1989). Due to the stall in building during the Great Depression, masonry construction did not become widely used, particularly for residential construction, until after World War II. Masonry Vernacular structures typically follow the form and massing principles of other post-war styles, are typically asymmetrical but maintain regular window openings, and porches are often inset.

FIGURE 6 **A Vernacular Building at 2402 160th Avenue NE in Sherwood Forest**

3.2.2 Minimal Traditional (1935–1950)

During the latter half of the Great Depression (1935–1940) and through the end of the 1940s, Minimal Traditional buildings were overwhelmingly common. During that time, it was the FHA's preferred design and therefore more likely to be covered by FHA loans. In addition, the small houses could be constructed quickly, responding to housing needs to accommodate World War II production line workers and later to meet G.I. housing demands. The style eschewed nearly all decorations to maximize the visual size of the buildings, which were often less than 1,000 square feet. The focus was on the scale and proportion of doors and windows, and it was recommended only one cladding material be used. They are almost exclusively one story, and the roof typically has little to no overhang. The Minimal Traditional building at 4505 119th Avenue SE in Lake Heights (**Figure 7**) is a rare example of the style with an overhang.

FIGURE 7 **A Minimal Traditional at 4505 119th Avenue SE in Lake Heights**

3.2.3 Ranch (1935–1975)

By the end of the 1940s and start of the 1950s, Ranch replaced Minimal Traditional as the FHA's preferred building style. The design was considered more "traditional" than other styles of the time (notably Mid-Century Modern, see Section 3.2.4) and was embraced by both the FHA and the general American public. Some of the most refined versions of the style are large, sprawling buildings, but in many places lot sizes were too small to design what is sometimes referred to as a California or Midwest Ranch. Regardless of size, Ranch buildings are typically one story with a low pitch roof, often with a deep overhang, which together emphasize the horizontal massing of the building. This emphasis remains even on Split Level (see Section 3.2.5) or the rare two-story versions. Many included an integrated carport, and later a garage. To some degree, the style blurs interior and exterior spaces through the use of courtyards, large picture windows—originally these were typically grouped or multi-pane, but later alterations often replaced them with large, single pane windows (very rarely found in original designs)—and facing buildings in natural material, such as brick or stone. The Ranch house was the most common design in the West in the post-war era (Boyle 2017:17).

FIGURE 8 **A Simple Ranch at 3862 139th Avenue SE in Eastgate**

3.2.4 Mid-Century Modern (1945–1990)

The Mid-Century Modern (also known as Contemporary) style was favored by architects following World War II, although it did also gain popularity with much of the general public. It shares some similarities with Ranch buildings, including low-pitch roofs, wide eaves, and natural materials, although the style is more adaptable to multiple stories and sloping land. The style also leans into the integration of interior and exterior in a variety of ways such as panel walls, large windows or window walls (both fixed and operable), courtyards, and adapting the plan of the building to the features of the site. The front entry is often obscured or entirely hidden by panels. In the Pacific Northwest, the style utilized far more natural materials (notably wood shingles and cedar siding) than other areas, which preferred concrete and steel. Additionally, the local style incorporated design elements that responded to the rain (often utilizing much steeper roofs). Northwest architects also created prefabricated structures to then take them to more remote areas, such as the islands in the Puget Sound, where they were then assembled (Lodi 2010). The style was also used for commercial structures. Like residential, Mid-Century Modern commercial structures can range from the very simple to the very complex, but typically have large windows, often spanning significant portions of the façade, and are sometimes angled.

FIGURE 9 **A Mid-Century Modern at 16251 SE 8th Street in Lake Hills**

FIGURE 10 **A Mid-Century Modern at 4535 119th Avenue SE in Lake Heights**

3.2.5 Split Level

Split Level refers not to a style of building, but to its form. It rose to popularity in the post-war era and is distinguished by three or more levels that are separated by a partial flight of stairs. Garages are often incorporated into the design of the building, which had the added advantage of appearing larger and being adaptable to sloping ground. There are two primary types of Split Level: the tri- and bi-level split. The tri-level split has three living spaces and embodied the idea that families needed distinct space, including sleeping (upper level), traditional living rooms and kitchens (main level), and "noisy" spaces for the garage and television room (lower level); **Figure 11** is an example of a tri-level split. The bi-level split has two stories with a "split-entry level staggered in between" and emerged slightly later in the 1960s (McAlester 2013:613). Although the building form can be adapted to a variety of styles, it was most commonly employed for Ranch and Mid-Century Modern structures.

FIGURE 11 **A Mid-Century Modern Split Level building at 3879 139th Avenue SE in Eastgate**

SECTION 4 Survey Results

4.1 Overview

ESA completed a Historic Resources Survey of the four areas in Bellevue on November 21 and 22, 2022. Equipment included a handheld device with a high-quality digital camera. All visible materials were verified while in the field and recorded where not clear in the photographs. All structural information was verified against available historic information to clarify any alterations over time. From this information, the architectural significance was evaluated using NRHP criteria and aspects of integrity. Inventoried resources were surveyed and evaluated by a Secretary of the Interior Qualified Architectural Historian. Maps of survey findings are included in Attachment A, and a full list of surveyed resources and attributes can be found in Attachment B.

Surveyed resources include those buildings constructed in or before 1994. The typical cutoff for listing in the NRHP is 50 years, and as this survey is part of a larger project that extends to 2044, the more recent cutoff of 1994 was selected to give the City a more comprehensive picture of the resources that will be historic in 2044. The City's decision to focus on the post-war boom, however, resulted in the selection of areas dominated by resources that are approximately 60–70 years old (in 2022). While in the field, ESA staff identified a building in Lake Heights within the survey boundaries that was constructed in 1963 but not on the initial survey list. In total, 121 buildings were identified and surveyed that were constructed in or prior to 1994. An additional building, also in Lake Heights, was identified during survey, but was not recorded as it dates from 2021 according to King County Assessor records (**Figure 28**) (King County 2022a).

In four instances, a building was obscured by vegetation or fencing such that not enough character-defining features were visible to determine the building's style. In Attachments A and B, the styles of these four buildings have been marked as "Obscured." Additionally, their possible eligibility for individual listing in the NRHP and/or as part of a historic district is noted as "Needs Info." The "Needs Info" notation was used very selectively. In addition to obscured resources, it was also used in cases where additional research is needed to identify potential additions and/or alterations and determine the possibility of designation.

The surveyed structures all date from the post-war period and are residential. All but one were constructed between 1951 and 1957; the single building that does not date from the 1950s was built in 1963. The four surveyed areas all represent concentrated post-war development, both spread out over several years (primarily Lake Heights) and highly concentrated construction, as seen in Lake Hills and Eastgate (see **Figure 12**). Information on each development is detailed below, but together they represent excellent examples of post-war development and the range of architectural styles utilized by architects and builders of the period. Overall, Ranch and Mid-Century Modern styles are the most popular, at 35% and 33% respectively. Most of the remaining buildings are Vernacular (23%), with four Minimal Traditional buildings and four buildings that were too obscured to identify a style. Split Level buildings are common in Eastgate (30% of the surveyed buildings are Split Level), but only one version occurs in Sherwood Forest and one in Lake Hills, while there are none in Lake Heights. Maps depicting architectural styles, individual eligibility, and district eligibility are included in Attachment A.

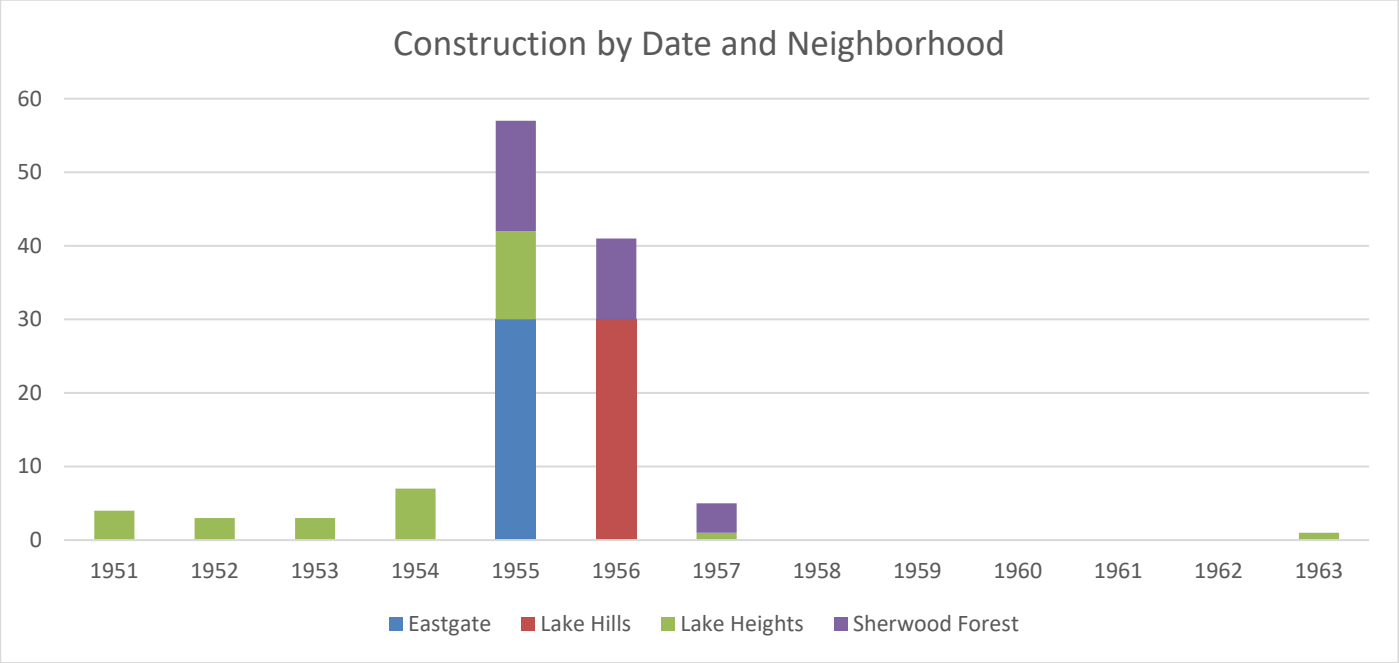


FIGURE 12 **Construction Dates in the Four Surveyed Areas**

The most significant threat to the historic resources in these neighborhoods is new development. Brief windshield surveys through other (non-surveyed) parts of the neighborhoods show a pattern of the more modest mid-century buildings being demolished for larger, New Traditional style buildings (**Figure 13** and **Figure 28**).[3] This redevelopment appears to be random within the survey areas, with no specific streets and/or parcels under more significant development pressure than others. Some buildings also exhibit considerable additions, obscuring the original form and style (**Figure 14**). These buildings have often been re-sided for a more comprehensive aesthetic, which further impacts the integrity.

[3] McAlester identifies "New Traditional," as she calls them, as new construction that draws on earlier designs and may or may not be constructed by builders who are familiar with the details of earlier styles (McAlester 2013:717).

FIGURE 13 **Typical New Construction, Seen behind a Historic Building in Eastgate**

FIGURE 14 **Historic Building with Modern Addition in Lake Heights**

Despite the new construction, all four surveyed areas display a remarkable level of integrity and design. Sixty-five percent of the surveyed buildings (79 of 122 resources) are potentially eligible for individual listing in the NRHP. Additionally, based on the areas surveyed, each of the four neighborhoods appears to be eligible as an NRHP historic district (Attachment A).

4.1.1 Eastgate

Within the Eastgate neighborhood, 30 buildings were surveyed as a part of this Project. All were constructed in 1955, placing them in the second wave of construction of the development (**Figure 12**). The same construction year for all of the buildings underscores the development occurring in both Eastgate and Bellevue more broadly during the time. Typically, streets and neighborhoods contain buildings constructed across several years, and sometimes decades. In Eastgate, however, the consistency in construction dates demonstrates a concerted building effort; newspapers of the time note that builders Bell & Valdez were completing two buildings a day on average.

Additional research and survey would be needed to determine if the second phase of construction was similar to the earlier 1953–1954 phase in architectural style, but the surveyed buildings are typical of those of the post-war period. Most of the buildings are Ranches (40%, or 12 buildings) or Mid-Century Modern (44%, or 13 buildings), with some Vernacular (4 buildings) and one Minimal Traditional building. Ten of the surveyed buildings are Split-Level; nine are Mid-Century Modern style and one is Vernacular.

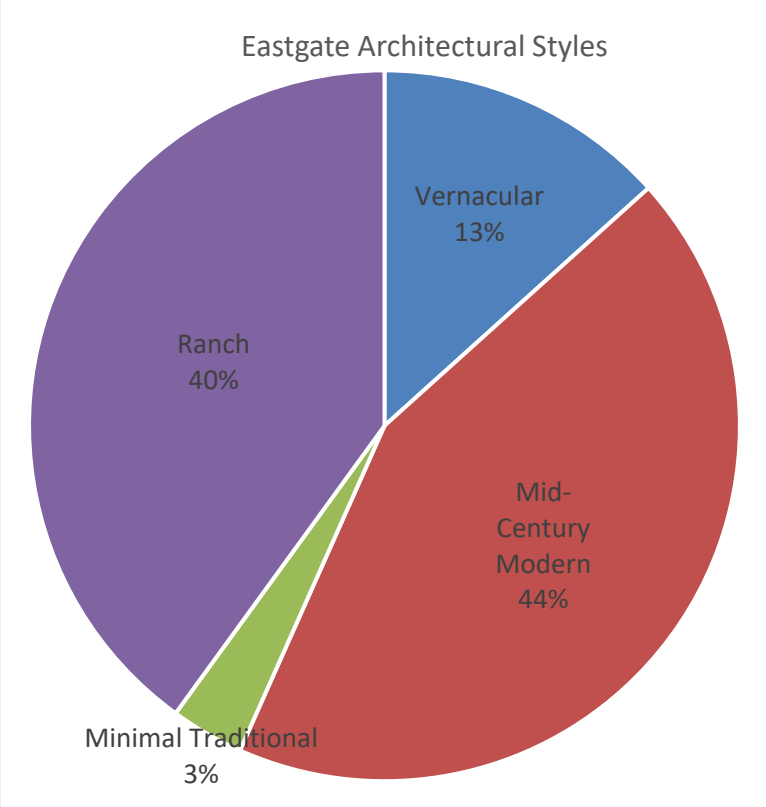


FIGURE 15 **Architectural Styles Surveyed in Eastgate**

Split Levels abound in Eastgate—ten of the surveyed buildings have the form. Six of the surveyed buildings (20%) are the same Mid-Century Modern Split Level design. These are:

- 13919 SE 38th Place (**Figure 16**)
- 3739 139th Avenue SE (**Figure 29**)
- 3871 139th Avenue SE
- 3882 139th Avenue SE
- 13904 SE 38th Place
- 3814 139th Avenue SE

Twenty-six of the surveyed buildings (87%) are potentially eligible for individual listing in the NRHP. Additionally, the area appears to be a part of a potential historic district; all but one of the surveyed

buildings would be contributing to a district. Additional survey and research would be needed to determine the boundaries of a historic district but would likely be associated with plats or development phases and would likely be significant for its architectural styles. Generally, the surveyed buildings within the Eastgate neighborhood are more modest iterations of the styles, but display a variety of post-war development architectural styles, represent the materials and construction of the time, and have overwhelmingly retained their integrity. Maps showing surveyed styles, district eligibility, and individual eligibility are included in Attachment A.

FIGURE 16 **A Mid-Century Modern Split Level at 13919 SE 38th Place**

4.1.2 Lake Hills

Thirty buildings in the Lake Hills development were surveyed; all were constructed in 1956 (**Figure 12**). Like the buildings in Eastgate, the same construction year for all of the buildings showcases a significant pressure to provide new housing. Mid-Century Modern is the most popular style (example seen in **Figure 20**), at 60% (18 buildings), followed by Vernacular (23%, or 7 buildings), Ranch (14%, or 4 buildings; **Figure 17**), and one Minimal Traditional. Some of the buildings are the popular models as identified by Fitting et al. (n.d.) and detailed in Section 3.1.2. Even on the single street that was surveyed for this Project, two similar plans were identified: the buildings at 16219 and 16019 SE 8th Street are the same plan, as are the buildings at 15921 and 16006 SE 8th Street. While Fitting et al. (n.d.) identify multiple iterations of models on SE 8th Street, some of the extant buildings noted in that report as the same model do not resemble the examples or each other. Additional research and analysis would be needed to verify the represented models prior to developing a historic district nomination.

FIGURE 17 **A Ranch Building at 3825 139th Avenue SE**

Notably, the Vernacular buildings that were surveyed have been altered to a greater degree than their styled neighbors (specifically, alterations to the buildings' plan, windows, and cladding); an example is shown in **Figure 19**. Only one of the Vernacular buildings appears to be eligible for individual listing in the NRHP, although 16 of the surveyed buildings in Lake Hills look to be eligible for individual listing. Extrapolating from the surveyed area, it appears that Lake Hills could be an NRHP-listed historic district; 83% (25 buildings) of the surveyed buildings would contribute to a district.

Existing research and documentation show that Lake Hills was an extensive development, constructed in waves over several years (Boyle 2017; Fitting et al. n.d.). An 8 page advertisement and writeup in the *Seattle Daily Times* from 1955 describes the opening of the community as the "birth of a city," with all of the "facilities of a self-contained city" (*Seattle Daily Times* 1955b:1, 8). As such, while there appears to be a high likelihood that Lake Hills could be a historic district, additional survey work may reveal that multiple districts could be a more appropriate approach to potential listing(s). These potential historic districts would likely be associated with plats and/or phases of development and would most likely be significant for its architecture and possibly the scale of the development and impact it had on Bellevue. Maps showing surveyed styles, district eligibility, and individual eligibility are included in Attachment A.

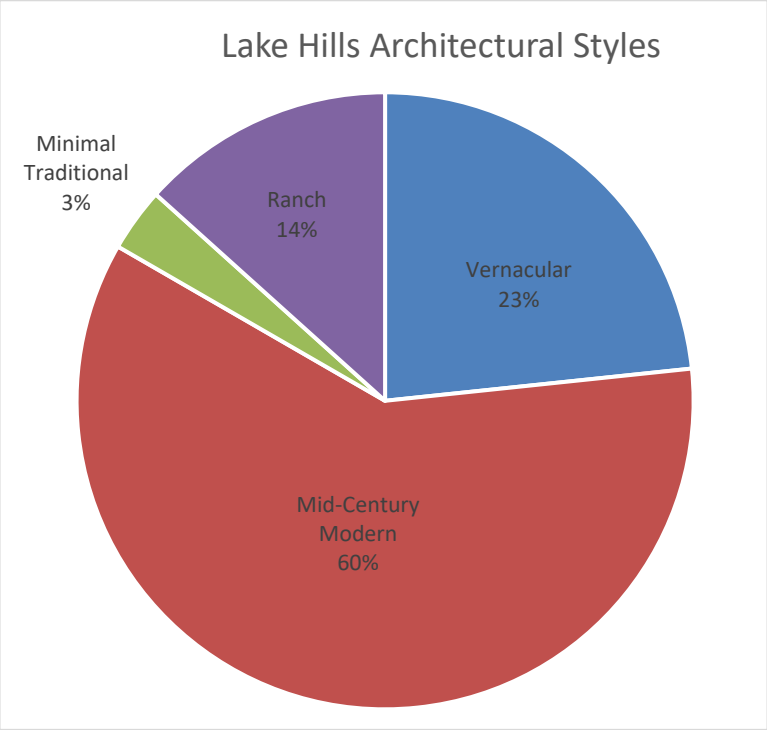


FIGURE 18 **Surveyed Architectural Styles in Lake Hills**

FIGURE 19 **A Vernacular Building at 16252 SE 8th Street**

FIGURE 20 **A Mid-Century Modern Building at 1627 SE 8th Street**

4.1.3 Lake Heights

In the Lake Heights development, 31 buildings were surveyed. Resources range in construction date from 1951 to 1963 (**Figure 12** and **Figure 22**). There was one additional building within the survey area (4526 119th Avenue SE; **Figure 28**), constructed in 2021 according to assessor data, that was not recorded due to its age. Compared to the other surveyed areas, the date range of construction is much longer. This may suggest builders did not work as swiftly in Lake Heights as in other neighborhoods, and/or perhaps slower sales. This may also be influenced by the time at which the development started. Construction in Lake

Heights began in 1951, and at that time the area was still primarily agricultural. Later developments had the benefit of greater urbanity, and as newer developments, may have received more attention from buyers than the already-established Lake Heights. The neighborhood's construction was focused in the first half of the decade, peaking in 1954 and 1955.

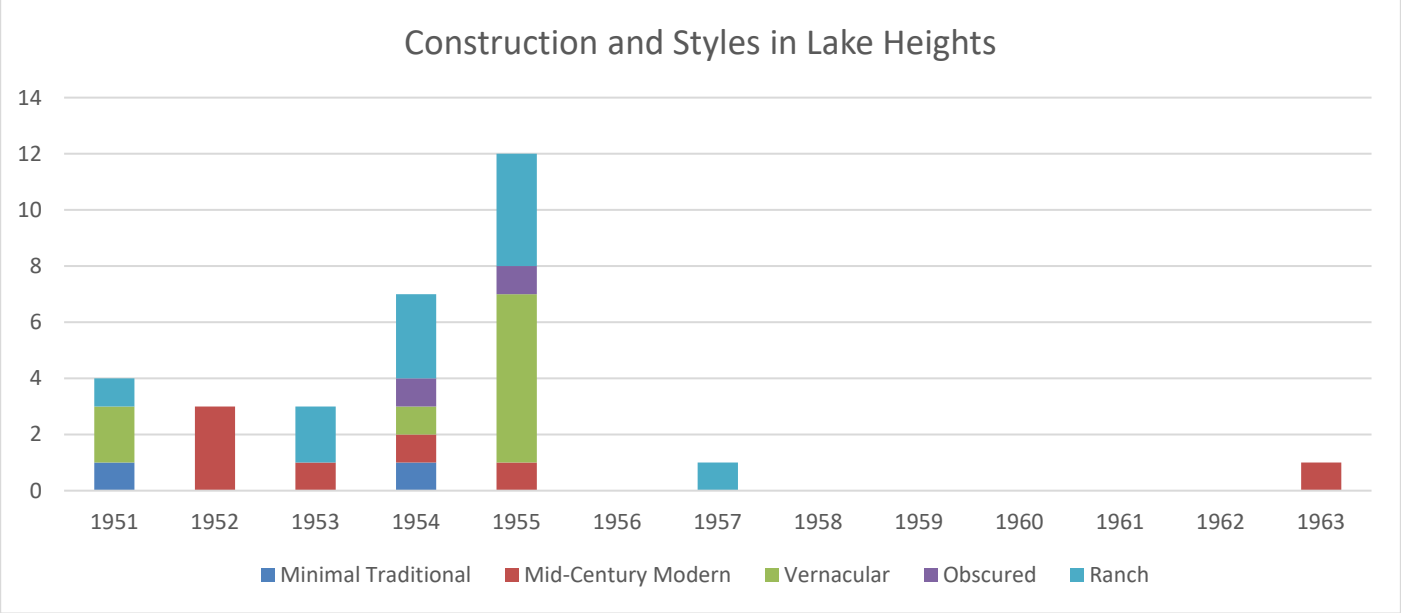


FIGURE 22 **Surveyed Styles and Construction Dates in Lake Heights**

The surveyed area is not dominated by one particular style, and the most common styles are Ranch (36%, or 11 buildings), Vernacular (19%, or 9 buildings; **Figure 24**), and Mid-Century Modern (23%, or 7 buildings; **Figure 10** and **Figure 23**). Two buildings are Minimal Traditional and two other buildings were too obscured to determine a style (4741 and 4705 119th Avenue SE).

Nineteen buildings, or 60%, of the surveyed buildings appear to be individually eligible for listing in the NRHP. Based on the surveyed area, it appears that Lake Heights could be a historic district; 78% (25 buildings) would contribute. Additional research and survey would be needed to determine the boundaries of a potential historic district, but research suggests that later phases may have differed in architectural styles (due to architect-designed buildings and/or notably different

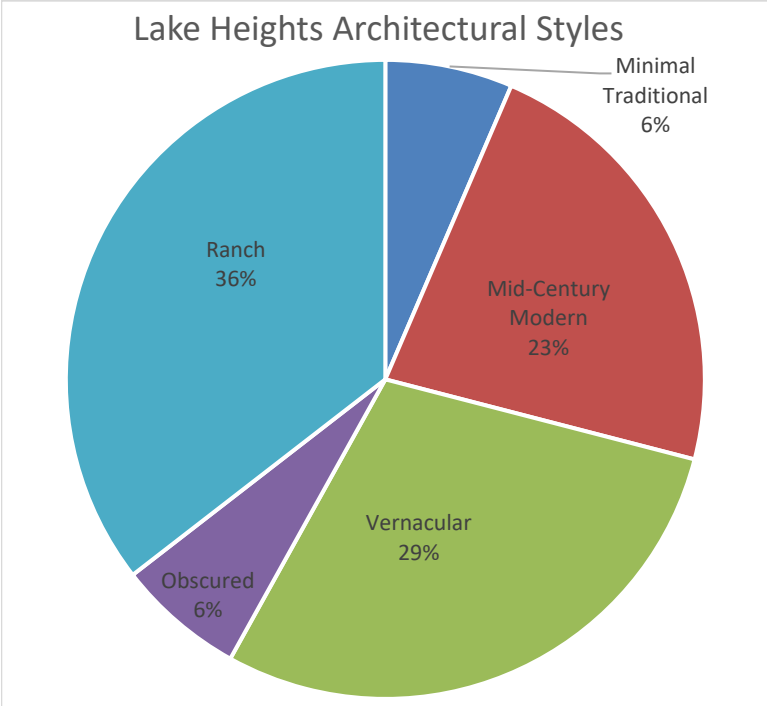


FIGURE 21 **Surveyed Architectural Styles in Lake Heights**

styles present), and multiple districts may better represent Lake Heights. Despite this, the surveyed buildings would likely be significant for their architecture. Maps showing surveyed styles, district eligibility, and individual eligibility are included in Attachment A.

FIGURE 23 **A Mid-Century Modern Style Building at 4615 119th Avenue SE**

FIGURE 24 **A Vernacular Building at 4536 119th Avenue SE**

4.1.4 Sherwood Forest

Thirty buildings were surveyed in the Sherwood Forest development, located in Northeast Bellevue. All of the surveyed buildings date from between 1955 and 1957, with approximately half constructed in in 1955 (**Figure 12**). Just over half (55%, or 16 buildings) are Ranches, with 8 Vernacular (27%) and 4 Mid-Century Modern (13%); additionally, there are two buildings that were too obscured to determine a style (**Figure 25**). Like Lake Hills and Eastgate, the narrow construction window demonstrates the region's and country's building boom of the time to accommodate people looking for new housing. The Ranch buildings have notably retained a high level of integrity; 14 appear to be individually eligible for listing in the NRHP. Within the entire surveyed area, 18 buildings appear to be individually eligible. Based on the resources surveyed in Sherwood Forest, the area may be eligible as an NRHP historic district, as 60% (18 buildings) would contribute to such a district. Aerial imagery and casual observation during this survey suggests that Sherwood Forest was a smaller development—although it was also undertaken in phases—and this suggests that a potential district would encompass the entire development; additional survey and research, however, would be needed to confirm this.

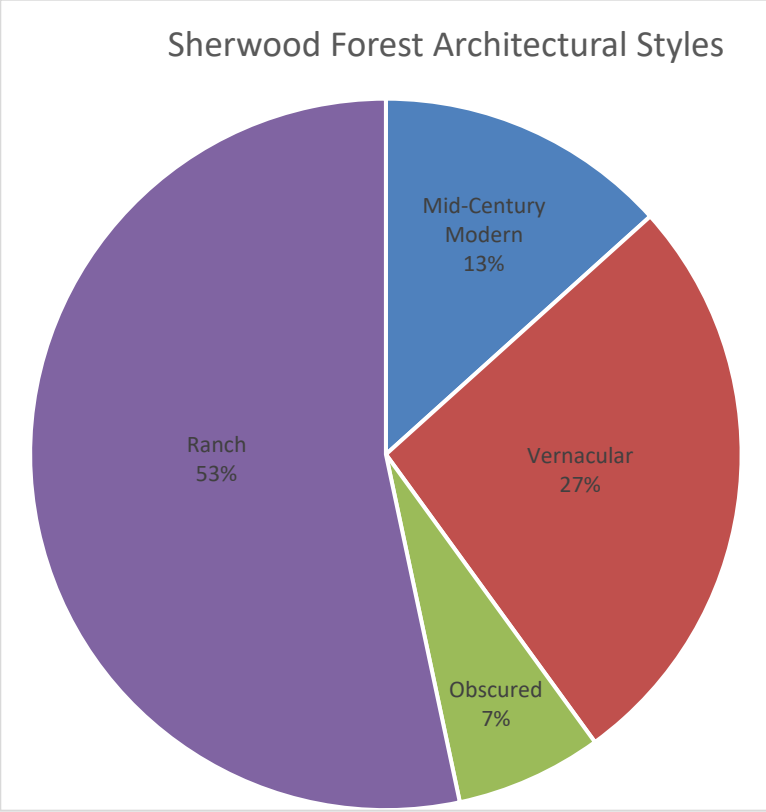


FIGURE 25 **Surveyed Architectural Styles in Sherwood Forest**

The surveyed buildings in Sherwood Forest seem to represent a wider range of alterations than seen in the other neighborhoods. Some buildings appear to have few, if any, alterations, such as the Mid-Century Modern building at 2447 160th Avenue NE (**Figure 26**). On the other hand, some, such as the one at 2430 160th Avenue NE (**Figure 27**), have been so altered they no longer contain any recognizable features of a historic building. This particular structure was built in 1957, but none of the features are identifiable as dating from the post-war period (King County 2022b). While not all of the surveyed buildings in the area have seen this level of alteration, it does represent one of the most extreme alterations that a building can undergo without being demolished.

This disparity in alterations has affected the number of buildings that would contribute to a potential historic district, as well as its ability to "convey a visual sense of the overall historic environment" (NPS 1990:5). While there is no set number (percentage) of contributing resources to constitute a historic district, the guidelines require the "majority" to be contributing (NPS 1990:5). Based on the surveyed area in Sherwood Forest, there is the potential that the area has been too altered to be a historic district, although

this would require additional survey work to confirm. The neighborhood may be better represented by individual NRHP listings, capturing the buildings with few alterations that remain largely as they were with few changes. Maps showing surveyed styles, district eligibility, and individual eligibility are included in Attachment A.

FIGURE 26 **An Excellent Example of a Mid-Century Modern Building at 2447 160th Avenue NE**

FIGURE 27 **A Highly Altered Building at 2430 160th Avenue NE**

INTENTIONALLY BLANK

SECTION 5 Recommendations

5.1 General Recommendations

A Historic Resources Survey is a vital step in Bellevue's preservation of its built environment. It provides the historical and architectural backbone upon which systematic decisions about preservation can be made. Further progress in preserving significant resources will depend on the decisions of Bellevue residents, elected officials, and staff. To assist in these next steps, the following recommendations are provided based on the results of this survey, along with knowledge of preservation best practices and local, state, and federal preservation practices.

1. Historic surveys—past, current, and future—should be made available to the public through the City's website. City staff, officials, and residents should utilize the information, becoming better aware of the city's historic building fabric and act to protect these resources.
2. The City should consider establishing a local historic preservation program to help preserve its resources; additional details on such a program are provided below.
3. In the face of climate change, the City should consider integrating any preservation policies with disaster preparedness/resilience and housing affordability. More details are below in Section 5.3 *Historic Preservation Program*.
4. There are many buildings that are 50 years old or older in Bellevue, and more that were constructed in or prior to 1994 that were not surveyed as a part of this Project. The City should strongly consider continuing historic surveys throughout the city; more information is provided below.
5. Currently, the City of Bellevue has implemented a Home Repair Assistance program, which provides low- and moderate-income households with 0% interest loans and grants to help fund work associated with health and safety, including plumbing, electrical, roofing, and siding repair projects (City of Bellevue 2022). This is a laudable program. The City should consider integrating guidance to encourage the retention of character-defining features for historic buildings. Although stringent, the *Secretary of the Interior's Standards for Rehabilitation* offer many examples this can be achieved.

6. Fitting et al. n.d. has done extensive work recording the design models in Lake Hills. Given the prevalence of the same plan in Eastgate, even in the few buildings surveyed, a similar model study in Eastgate would likely yield rich information about the development.
7. During this course of this survey, ESA staff identified 79 buildings that appear to be individually eligible for listing in the NRHP. ESA recommends they be further researched and, if applicable, nominations prepared.
8. As the City updates land use code provisions, it should explore a voluntary transfer of development rights mechanism aimed at helping preserve historic resources.
9. The City could explore further promoting the history of Bellevue through lecture series, walking tours, and other educational programming. This may include partnering with the Eastside Heritage Center, King County's Historic Preservation Program, DAHP, and/or neighborhood organizations.
10. The City could consider offering trainings or workshops on historic preservation. DAHP regularly hosts workshops and is an excellent resource for planning these events.

5.2 Future Survey Work

This survey represents a vital step in documenting the city's historic resources. The buildings documented for this Project strongly suggest a wealth of historic resources, but extrapolating data from 30 buildings (generally the number documented in each neighborhood) and applying that data wholesale is ill-advised, particularly given that several of these developments had several hundred buildings, if not into the thousands. As such, the City should consider expanding on the existing surveys to more comprehensively document its historic resources, as well as gain a better understanding of potential historic districts in the city. A review of construction eras in the city (**Figure 2**) shows that roughly half of the blocks contain resources constructed in or prior to 1975, with an additional approximate 25% constructed between 1976 and 1994.

The most significant threat to historic resources in Bellevue is the demolition of existing buildings and new construction, which (based on the limited windshield surveys performed as part of this Project) largely are out of scale and design with the surrounding buildings (**Figure 13** and **Figure 28**). The second most threat appears to be significant additions and/or alterations to existing buildings, in some cases completely obscuring any original design features. These threats additionally underscore the need for a more comprehensive survey of Bellevue's historic resources. Documentation provides a written record of a resource, accessible even after it is demolished or altered. Additionally, without baseline data, there is no or little broader context for the impacts that new construction may have to an area.

As noted, while 30 data points (i.e., surveyed buildings) in a neighborhood is not sufficient to extrapolate from, the results indicate that all four neighborhoods—Eastgate, Lake Hills, Lake Heights, and Sherwood Forest—have the potential to be historic districts. Previous work in Lake Hills lends supports this, and also contains valuable information about builders, architects, designs, and the history of the development. Additionally, Lake Hills and Eastgate were briefly documented in Victor Steinbrueck's 1962 *Seattle Cityscape*, in a much more contemporary context than other projects. This inclusion indicates both neighborhoods had architectural merit at the time, and a brief comparison of Steinbrueck's sketches with the existing built environment suggests the extant post-war buildings remain generally the same, but the feeling and design of the overall neighborhoods are changing with modern construction.

Additional research—which would be necessary for any nominations (individual or historic districts)—may reveal that some developments could be better represented by multiple historic districts. For instance, separating Eastgate into two districts that capture the first and second development periods may be more appropriate than one district spanning the entire development. Additionally, well over half (65%, or 79 resources) of the surveyed buildings are potentially eligible for individual listing in the NRHP. The City should consider reviewing these resources—along with others previously documented in earlier projects—and developing NRHP nominations for them.

FIGURE 28 **A 2021 building in Lake Heights at 4526 119th Avenue SE**

NOTE: A 2022 permit has been approved to demolish this building and replace it with a 4,224 square foot dwelling

FIGURE 29 **A Mid-Century Modern Split Level building at 3739 139th Avenue SE in Eastgate**

If the City does elect to move forward with additional survey, it is highly recommended that the resulting data be recorded in WISAARD. WISAARD is maintained by DAHP and serves as the state's repository for information on historic resources (including both built environment resources, like buildings, as well as archaeological sites). It is regularly used by federal, state, and local agencies, as well as consultants, to identify existing historic resources. Having a single location in which all historical data are stored makes future projects much more efficient and helps avoid redundancy and conflicting information.

The City should also consider integrating WISAARD into its current planning efforts. In the early stages of this Project, ESA identified a 2021 survey of the Surrey Downs neighborhood in WISAARD that the City did not appear to have any record of (Pratt et al. 2021). Additionally, uploading the information in the previous 1992–1993 survey/1997 update and work in Lake Hills (especially Fitting et al. n.d.) to WISAARD would make the valuable information (particularly about different house models, builders, and architects) more widely available.

5.3 Historic Preservation Program

In part, this survey was undertaken to meet MPP-DP-6 in Vision 2050 (Puget Sound Regional Council 2020). One of the best ways for a municipality to preserve its historic resources is to adopt a historic preservation program. Currently, the City of Bellevue does not have a such program, nor does it have an interlocal agreement with King County in regard to historic resources. Without local preservation ordinances, historic resources in the city receive few protections.

Vision 2050 MPP-DP-6

Preserve significant regional historic, visual, and cultural resources, including public views, landmarks, archaeological sites, historic and cultural landscapes, and areas of special character.

Currently, the City's Comprehensive Plan has four goals superficially related to landmarks and historic resources:

- UD-82. Preserve, enhance, and interpret Bellevue's historical identity.
- UD-83. Recognize the heritage of the community by naming (or renaming) parks, streets and other public places after major figures and events.
- UD-84. Designate historic landmark sites and structures and review proposed changes to ensure that these sites and structures will continue to be a part of the community and explore incentives for rehabilitation.
- UD-85. Identify vista points and landmarks such as major trees, buildings, and landforms to preserve as Bellevue develops.

It is commendable that the City has recognized the value of historic resources in helping "accurately represent its depth, diversity and uniqueness" (City of Bellevue 2019:323). However, there is no local guidance offered on how to designate resources, and no local program to do so. Presumably, therefore, UD-84 is referring to listing properties in the NRHP. The City also does not have a formal program by which changes to listed properties can occur—although only one building in the city, the Winters House, is currently designated.

It should also be noted that listing in the NRHP does not provide protection to listed properties that are private residences. Listing in the NRHP does provide protections for projects with a federal nexus or state monies (protection is also extended to properties that have been determined eligible for listing), but a private citizen demolishing or altering their private residence is not restricted by an NRHP listing. Protections to resources like these primarily come from local preservation ordinances. Without such a program, many historic buildings in Bellevue do not have any protection.

Typically, a preservation program includes the establishment of a local historic register and a landmarks preservation board. Ordinances associated with the program include guidelines for nomination criteria, designation procedures, and controls and incentives. In most cases, the landmarks board evaluates each nominated building or district for its alignment with the established criteria, and, depending on specific ordinances, either has the power to designate a property or recommend it to the final ruling body (such as City Council or a department director). It is generally considered best practice for local criteria to align with those of the NRHP for coordination at the local and federal levels. A wide range of local preservation programs and registers throughout the state and country can serve as a guide for Bellevue. Some nearby

examples that could serve as a guide include Redmond, Seattle, Tacoma, and Kirkland (some of these, and others, are provided in DAHP 2023b).

The adoption of a local historic preservation program is widely considered the most effective legal tool for preservation. The 1966 National Historic Preservation Act (as amended) encourages "local governments to strengthen their legislation for the designation and protection of historic properties. Hundreds of communities throughout the nation have in recent years adopted historic preservation ordinances, contributing to the development of a sizeable body of legal precedent for such instruments" (Powell et al. 2020:62). As a part of a local preservation program – if implemented – the City could consider a program to list City-owned historic resources to help lead by example. The U.S. General Services Administration has a similar plan for systematically evaluating Federally-owned resources as they come of age, listing (if appropriate) in the NRHP, and preparing building preservation plans; this could serve as an outline.

The City could also consider becoming a Certified Local Government (CLG), in which governments work in partnership with DAHP and receive support in encouraging, developing, and maintaining their preservation efforts. CLGs can also apply for preservation grants, administered through DAHP, to support their programming and provide additional technical support. To be certified by DAHP (and become a CLG), municipalities have responsibilities including maintaining a preservation commission, undertaking historic surveys, and providing for public participation in preservation activities, among others. Additional information is available through DAHP (DAHP 2023c).

If implemented, the City's Community Development Department should consider working with neighborhood groups and the Eastside Heritage Center to identify and nominate historic districts. This would have the added benefit of enhancing residents' knowledge of preservation and the associated regulations and benefits, both within Bellevue and more broadly at a national level.

5.4 Neighborhood Subarea Plans

Three of the surveyed areas—Eastgate, Newport (of which Lake Heights is a part), and Northeast Bellevue (which contains Sherwood Forest)—have subarea plans included in the current Bellevue Comprehensive Plan. These plans include various goals and policies that pertain to preservation, listed below. However, given that the City does not have a way to preserve its existing historic resources, the goals are more hypothetical without a legal mechanism to support them.

The first goal of the subarea plan for Northeast Bellevue, which includes Sherwood Forest, specifically calls out the need to "preserve Northeast Bellevue's existing neighborhood identity by supporting efforts to maintain and renovate existing mid-century homes and later styles" to support the sense of place, and further to "minimize impacts from any new housing typology to the environment and to the existing residential character of the street experience" (City of Bellevue 2019:230).

Newport's policies note that the area contains "sites and buildings of historic significance [and] whether or not their historic status has been officially recognized, their status should be confirmed before site development occurs" (City of Bellevue 2019:219). A local preservation program in which resources are reviewed for historic significance prior to development is laudable, and if the City were to implement such a program, it would be in the forefront of preservation programs in the country. Instead of depending on

preservation-minded owners nominating their buildings, a preemptive program helps ensure that resources of cultural, social, and architectural value are not lost.

Additionally, Newport's policy S-NH-56 (City of Bellevue 2019:220) includes adding historic resources designated by King County and Bellevue to the Bellevue Historic and Cultural Resources Survey (that is, Tobin and Pendergrass 1997). This nods to the need for a database in which historic data are stored—whether that is maintained by the City or uses WISAARD. Tobin and Pendergrass (1997) is a stand-alone survey and was not designed as a comprehensive document of all the historic resources in Bellevue. However, this partially semantic difference does not reduce the identified need for a single location where historic information is available on all the surveyed resources in the city.

The subarea plan for Eastgate does not specifically address preservation, although policy S-EG-28 speaks to the need to create community through the support of "public art, street lighting, landscaping, distinctive building design, and pedestrian-oriented site design" (City of Bellevue 2019:128). It would be worthwhile considering adding preservation as one of the elements that help create community in policy S-EG-28.

SECTION 6 References Cited

Bavel, Jan Van, and David S. Reher

2013 "The Baby Boom and Its Causes: What We Know and What We Need to Know." *Population and Development Review*. Vol 39, No. 2. June:257–288.

Boyle, Susan

2017 *Mid-Century King County: A Context Statement on Post-War Residential Development*. Prepared by BOLA Architecture + Planning. On file, Washington State Department of Archaeology and Historic Preservation, Olympia. Electronic document, https://dahp.wa.gov/sites/default/files/Mid-CenturyKingCounty_ResidentialContextStatement_2017.pdf, accessed December 7, 2022.

City of Bellevue

2016 West Lake Hills. Electronic document, http://www.bellevuewa.gov/west-lake-hills-area.htm, accessed July 11, 2016.

2019 Bellevue Comprehensive Plan, updated 2019. Electronic document, https://bellevuewa.gov/city-government/departments/community-development/planning-initiatives/comprehensive-plan, accessed December 20, 2022.

2022 Home Repair Assistance. Electronic document, https://bellevuewa.gov/city-government/departments/parks/community-services/human-services/home-repair-assistance, accessed December 21, 2022.

Department of Archaeology and Historic Preservation (DAHP)

2022 Architectural Style Guide. Electronic document, https://dahp.wa.gov/historic-preservation/historic-buildings/architectural-style-guide, accessed December 9, 2022.

2023a Washington Information System for Architectural and Archaeological Records Data (WISAARD) database. Secure database, http://www.dahp.wa.gov/, accessed January 8, 2023.

2023b Preservation Planning. Electronic document, https://dahp.wa.gov/preservationplan, accessed January 11, 2023.

2023c Certified Local Government Program. Electronic document, https://dahp.wa.gov/certified-local-government-program, accessed January 11, 2023.

2023d Survey Levels. Electronic document, https://dahp.wa.gov/historic-preservation/historic-buildings/historic-building-survey-and-inventory/survey-levels, accessed January 17, 2023.

Duwamish Tribe

2021 Federal Recognition. Electronic document, https://www.duwamishtribe.org/federal-recognition, accessed December 20, 2022.

Fitting, Dan, Elena Umanskaya, Yachen Lin, and Bogdan Tishchenko

n.d. *Not Just Old, But Significant: Lake Hills, Bellevue, WA*. On file, Washington State Department of Archaeology and Historic Preservation, Olympia. Electronic document, https://www.dahp.wa.gov/sites/default/files/LakeHillsStudy_UW_StudentProject.pdf, accessed December 15, 2022.

Goetz, Linda Naoi

2006 *Cultural Resources Assessment of NE 24th Street Improvements, Bellevue, Washington*. Prepared by Landau Associates for KPG Inc. and the Washington State Department of Transportation. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

Jones & Stokes

2005 *Archaeological Survey of the Housing at the Crossroads Kensington Square Project, City of Bellevue, King County, Washington*. Prepared by Jones & Stokes for Housing at the Crossroads. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

King County

2022a Department of Assessments. Data for parcel 4034900040. Electronic document, https://blue.kingcounty.com/Assessor/eRealProperty/Dashboard.aspx?ParcelNbr=4034900040, accessed December 7, 2022.

2022b Department of Assessments. Data for parcel 7751600140. Electronic document, https://blue.kingcounty.com/Assessor/eRealProperty/Dashboard.aspx?ParcelNbr=7751600140, accessed January 11, 2023.

Lane, Barbara

1975a *Identity, Treaty Status and Fisheries of the Duwamish Tribe of Indians*. Prepared for the U.S. Department of the Interior and the Snohomish Tribe of Indians. On file, ESA, Seattle.

1975b *Anthropological Report on the Identity, Treaty Status and Fisheries of the Snoqualmie Tribe of Indians*. Prepared for the U.S. Department of the Interior and the Snoqualmie Indian Tribe. On file, ESA, Seattle.

LeWarne, Charles R.

1997 Bellevues I Have Known: Reflections on the Evolution of an "Edge City." *Columbia Magazine*, Summer: Vol 11, No. 2. Electronic document on file, Washington State Historical Society, Tacoma. https://www.washingtonhistory.org/wp-content/uploads/2020/04/bellevues-known-1.pdf, accessed December 20, 2022.

Lodi, Erin

2010 "Northwest Modernism: A Style for the Elements" in *Columns*. March. Electronic document, https://www.washington.edu/alumni/columns/march10/modernism.html, accessed December 19, 2022.

Marsha, Alia

2017 How Bellevue businessmen who stoked fears benefited after Japanese American incarceration. February 19, The Seattle Globalist. Electronic document. https://seattleglobalist.com/2017/02/19/anti-japanese-movement-led-development-bellevue/62732. Accessed December 19, 2022.

McAlester, Virginia

2013 A Field Guide to American Houses: The Definitive Guide to Identifying and Understanding America's Domestic Architecture, 2nd ed. Alfred A. Knopf, New York.

McDonald, Lucile

2000 *Bellevue: Its First 100 Years*. Bellevue Historical Society, Bellevue, Washington.

Miller, Jay, and Astrida R. Blukis Onat

2004 *Winds, Waterways, and Weirs: Ethnographic Study of the Central Link Light Rail Corridor*. Prepared for Sound Transit, Central Link Light Rail, by BOAS, Inc., Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

National Park Service (NPS)

1990 *How to Apply the National Register Criteria for Evaluation*. National Register Bulletin No. 15, U.S. Department of Interior, National Park Service Cultural Resources. Government Printing Office, Washington, D.C.

Phillips, Margery R.

1954 "Eastgate Home Engineered for Carefree Living." *Seattle Daily Times*. July 18, p. 49.
1956 "Roomy Residence in Sherwood Forest." *Seattle Daily Times*. May 6, p. 85.
1957 "All 1,300 Feet Put To Good Use." *Seattle Daily Times*. December 15, p. 108.

Powell, Meghan, Meagan Scott, Sarah McDonald, and Patricia Davenport-Jacobs

2020 *Nassau County Countywide Historic Resource Survey*. Prepared by Environmental Services, Inc. for Nassau County. On file, Florida Master Site File, Tallahassee.

Pratt, Katie, Spencer Howard, and Sarah Martin

2021 *Surrey Downs Reconnaissance Level Survey 2021-02-00792*. Prepared by Northwest Vernacular Inc. and SJM Cultural Resource Services. Prepared for Main Street Apartments LLC. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

Puget Sound Regional Council

2020 *Vision 2050: a Plan for the Central Puget Sound Region*. October. Electronic document, https://www.psrc.org/sites/default/files/2022-11/vision-2050-plan.pdf, accessed December 19, 2022.

Rinck, Brandy A.

2017 *Cultural Resources Assessment for the 152nd Avenue Main Street Project, Redmond, King County, Washington*. Prepared for Widener & Associates by Cultural Resources Consultants. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

Rousso, Nick

2020 "Microsoft moves from New Mexico to Bellevue on January 1, 1979." History Link essay no. 21161. Electronic document, https://www.historylink.org/File/21161, accessed December 13, 2022.

Schmid, Calvin F.

1944 *Social Trends in Seattle*. University of Washington Press, Seattle.

Seattle Daily Times

1951 "North End Plat Held Up For Drainage Check." September 26, p. 23.
1952a "Lake Heights Value with a View." March 9, p. 25.
1952b "Lake Heights Home Opens Sunday." June 15, p. 17.
1952c "Vacant Lots." August 18, p. 27.
1953 "Home Design Aids Housewives." November 15, p. 167.
1954a "41 New Homes Soon to Be Ready." February 21, p. 46.
1954b "More Than 250 Homes Reported Sold in Eastgate." May 23, p. 23.
1954c "Eastgate." May 23, p. 51.
1954d "Value Plus at Lake Heights." July 11, p. 34.
1954e "Builder Adds 175 Acres to Eastgate Tract." August 5, p. 17.
1954f "416 Families In New Homes At Eastgate." December 12, p. 52.
1955a "Quality Street." July 31, p. 59.
1955b "Birth of a City." August 21, p. 1-8.
1955c "12 Contractors Building in Sherwood Area." October 2, p. 47.
1955d "Open House Until Dusk Today At Lake Heights." October 16, p. 25.
1955e Suburban Comfort in Sherwood Forest." December 11, p. 50.
1956a "43 View Lots East of Lake Offered for Sale." January 22, p. 30.
1956b "New Financing Plan Eases Home Buying." March 4, p. 65.
1956c "Roomy Residence in Sherwood Forest." June 1, p. 36.
1956d "Sales in New Development Top $1,000,000." December 2, p. 39.

Simpson, Pamela H.

1989 "Cheap, Quick, and Easy: The Early History of Rockfaced Concrete Block Building." Perspectives in Vernacular Architecture Vol 3, pp. 108–118.

Steinbrueck, Victor

1962 *Seattle Cityscapes*. University of Washington Press, Seattle.

Suttles, Wayne, and Barbara Lane

1990 Southern Coast Salish. In *Northwest Coast*, edited by Wayne Suttles, pp. 485–502. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Tobin, Caroline C., and Lee F. Pendergrass

1997 *Historic and Cultural Resources Survey*. Prepared for the City of Bellevue Design and Development Department. On file, City of Bellevue.

U.S. Bureau of Indian Affairs

2021 Office of Federal Acknowledgement - Petitioner #025: Duwamish Indian Tribe, WA. Electronic document, https://www.bia.gov/as-ia/ofa/025-duwami-wa, accessed December 21, 2022.

U.S. Bureau of Labor Statistics

2022 CPI Inflation Calculator. Electronic document, https://www.bls.gov/data/inflation_calculator.htm, accessed December 14, 2022.

We are Lake Hills

2016 History. Electronic document, https://www.wearelakehills.org/history/, accessed July 11, 2016.

INTENTIONALLY BLANK

ATTACHMENT A **Maps**

SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Figure A-1
Architectural Styles - Eastgate

SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

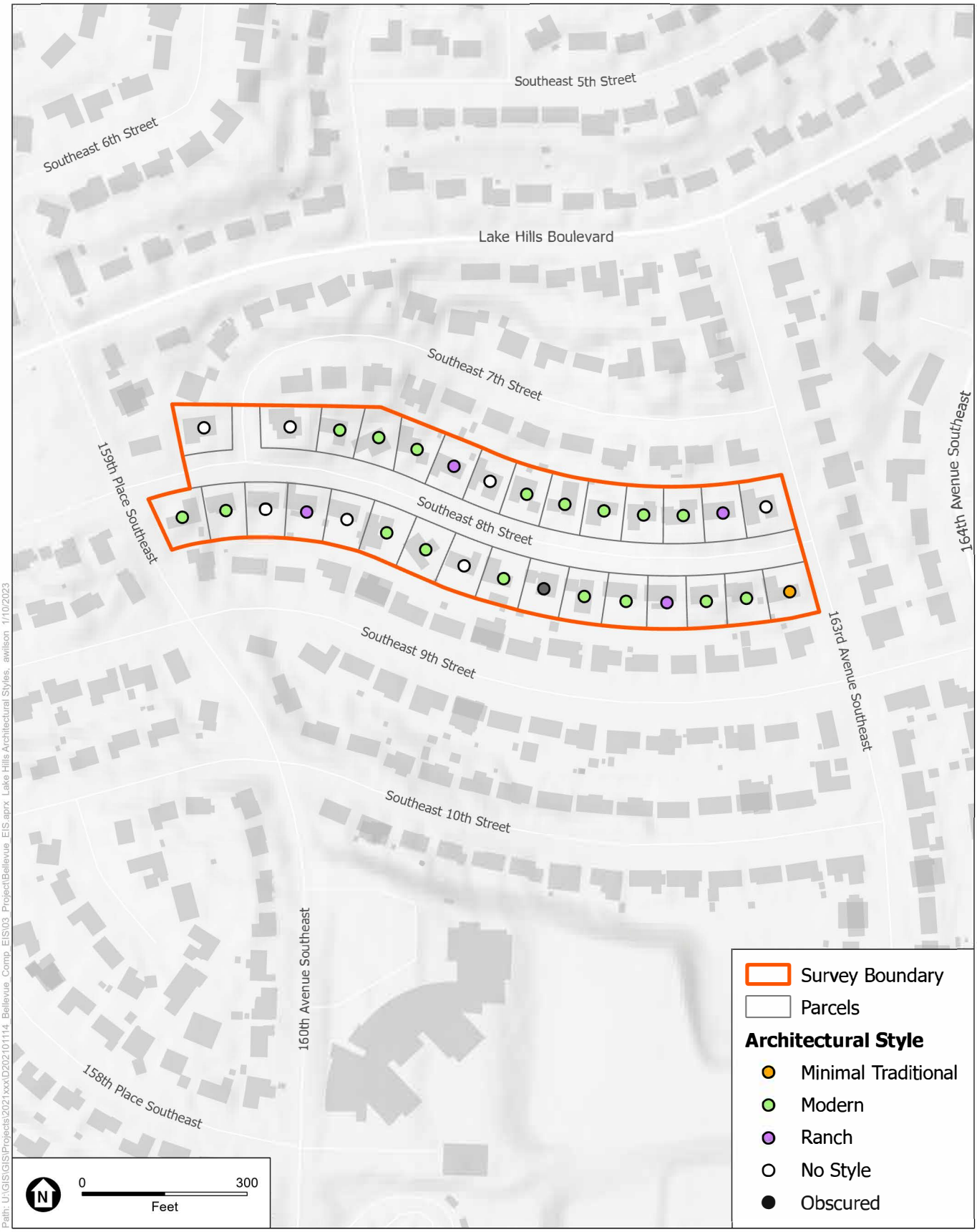
City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Figure A-2
District Eligibility - Eastgate

SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

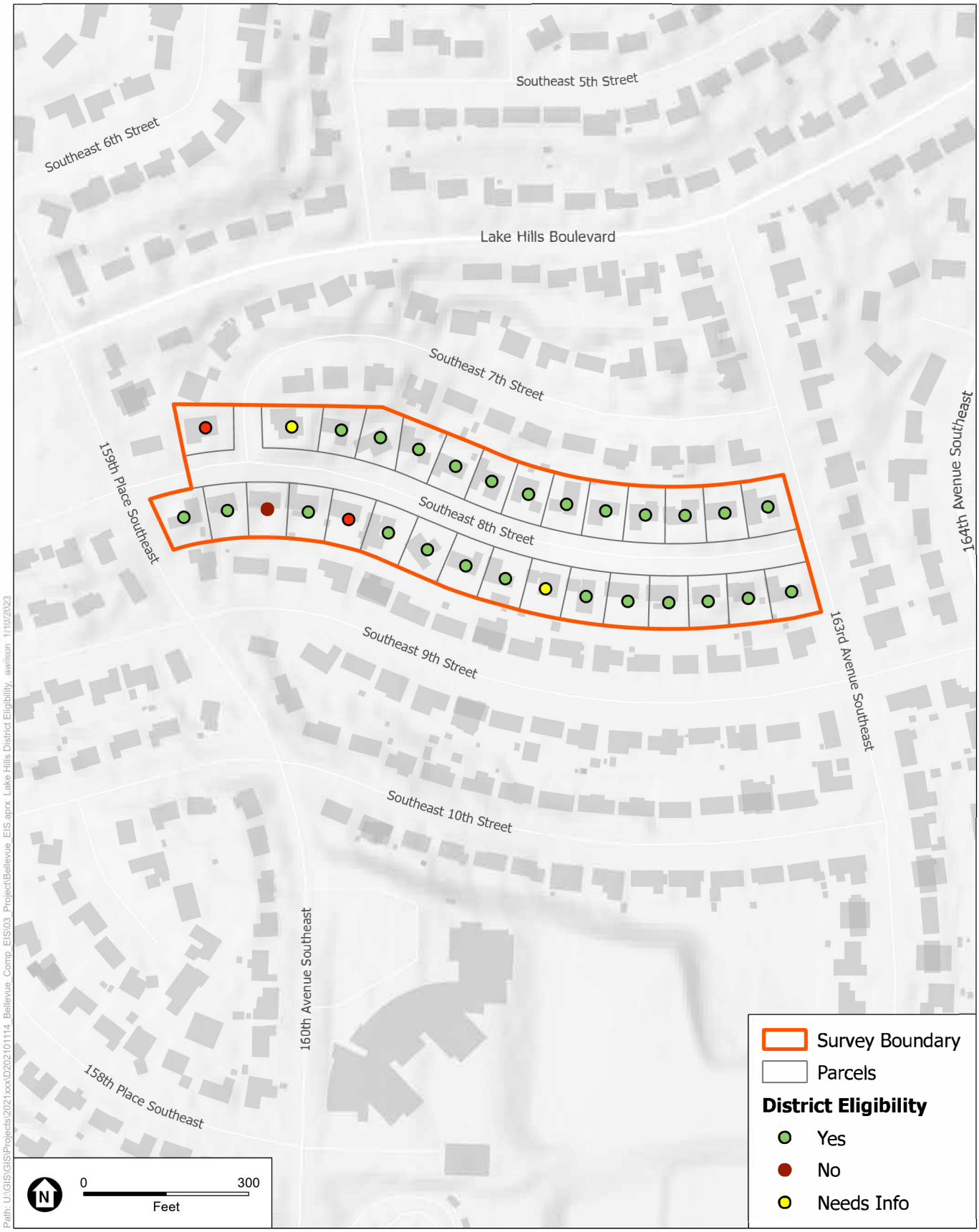
Figure A-3
NRHP Eligibility - Eastgate



SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Figure A-4
Architectural Styles - Lake Hills



SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

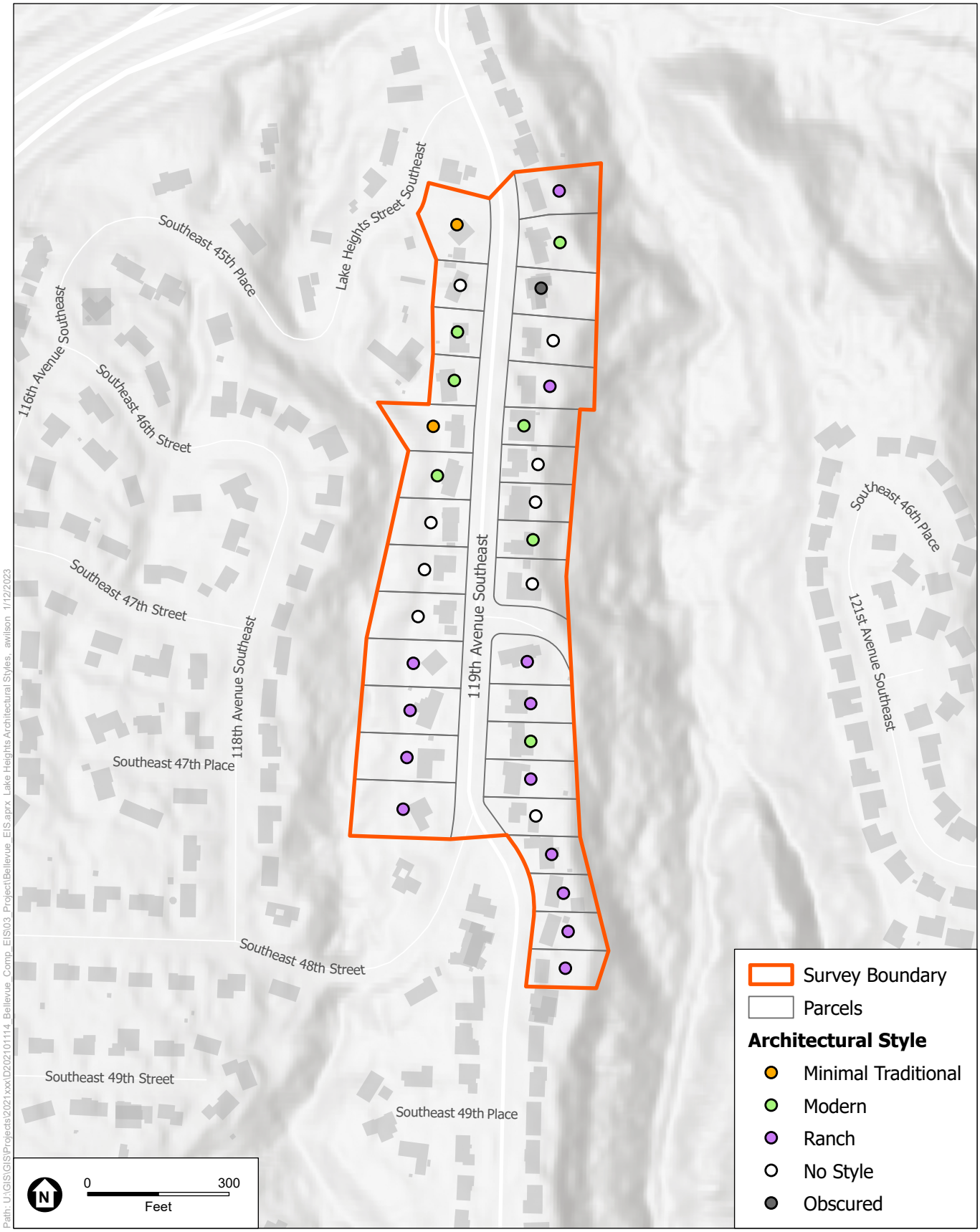
City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Figure A-5
District Eligibility - Lake Hills

SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

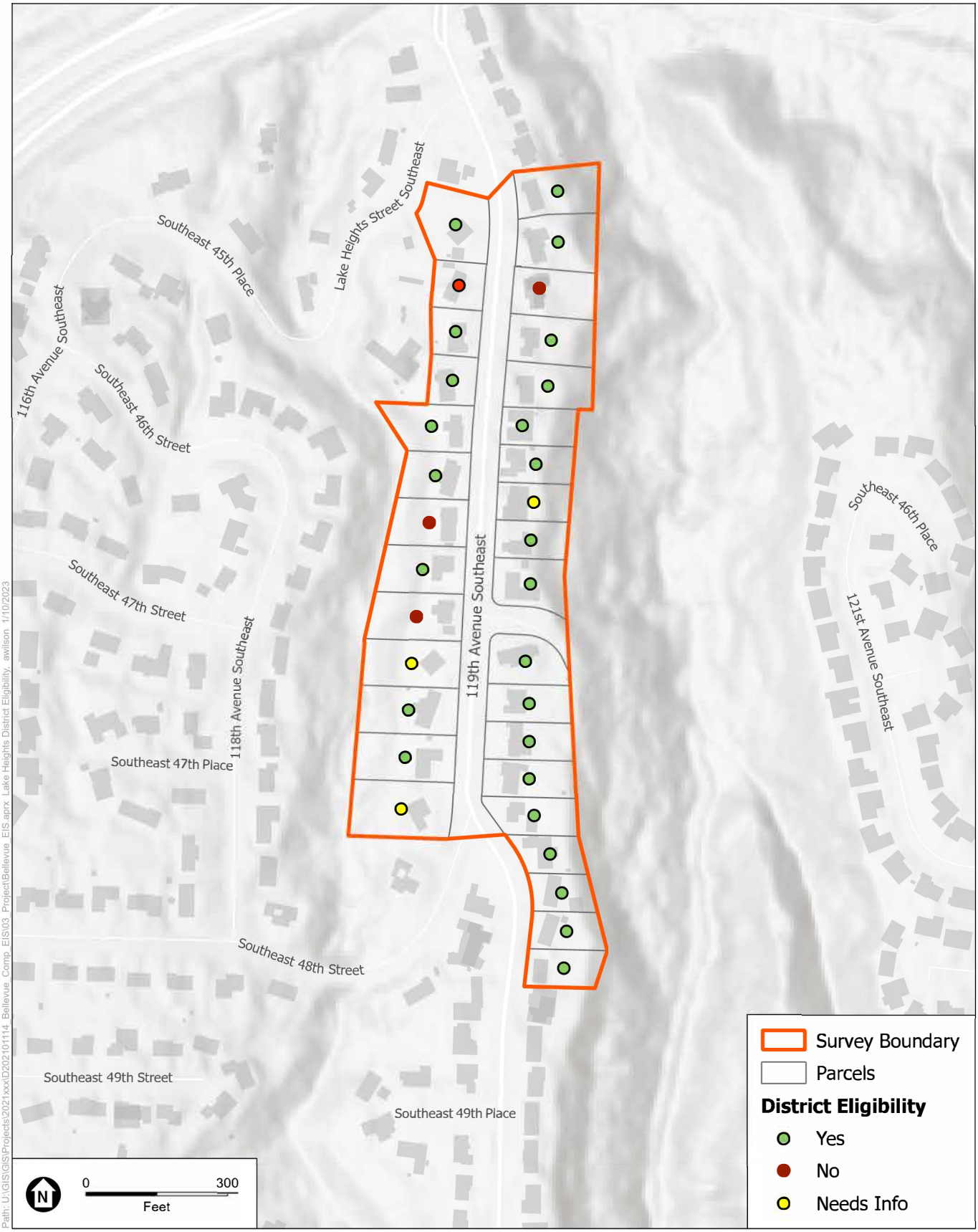
Figure A-6
NRHP Eligibility - Lake Hills



SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

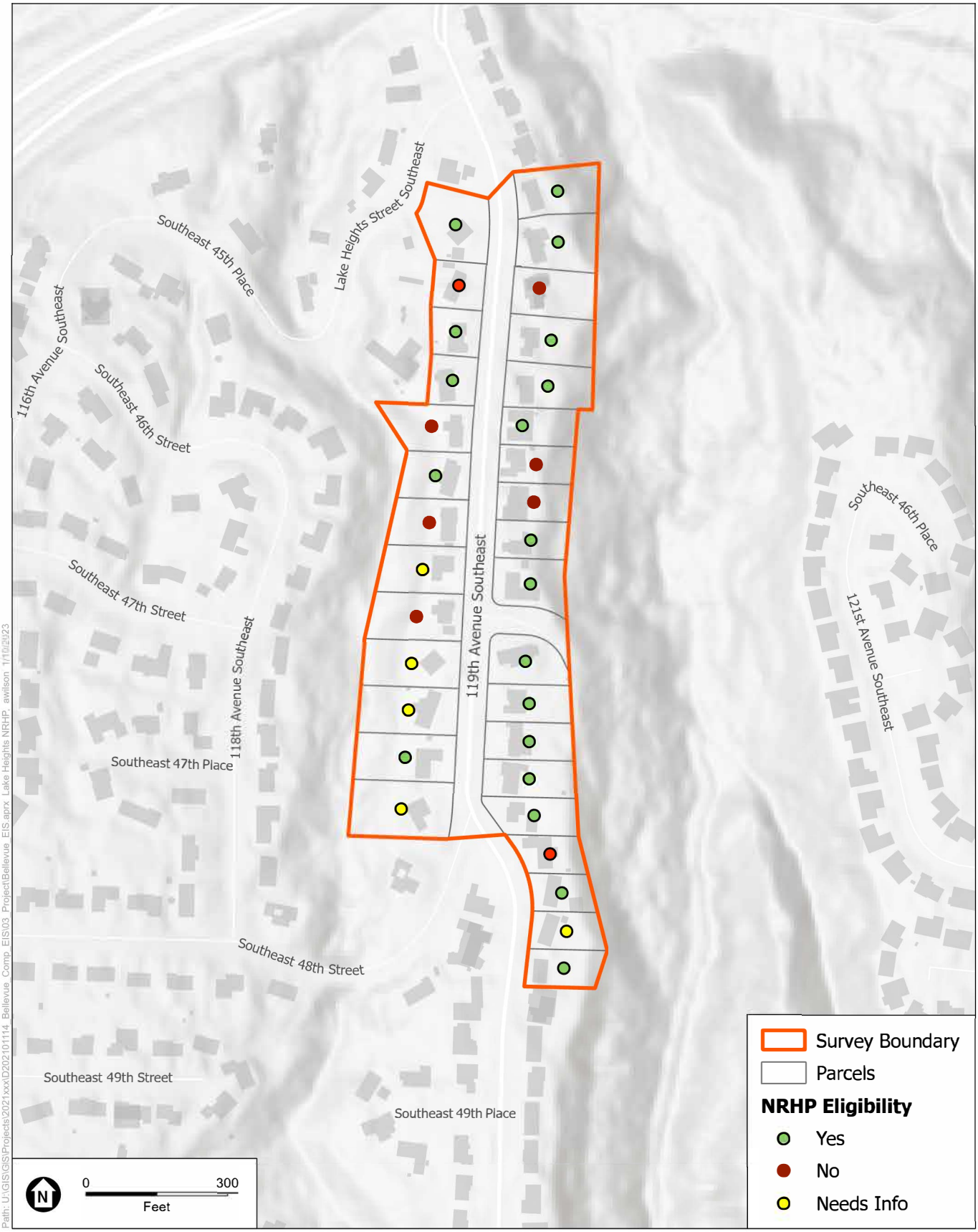
Figure A-7
Architectural Styles - Lake Heights



SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

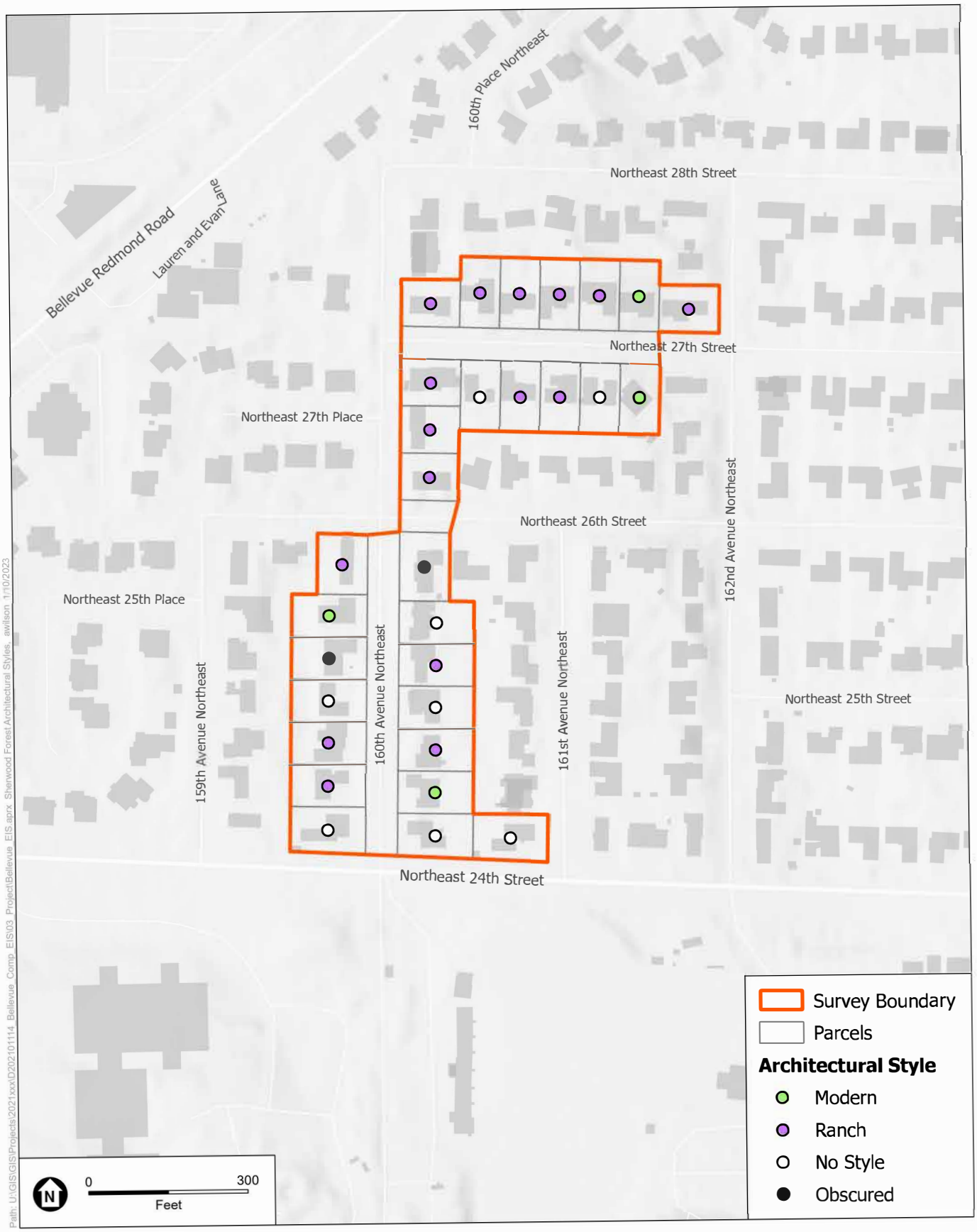
Figure A-8
District Eligibility - Lake Heights



SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Figure A-9
NRHP Eligibility - Lake Heights



SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

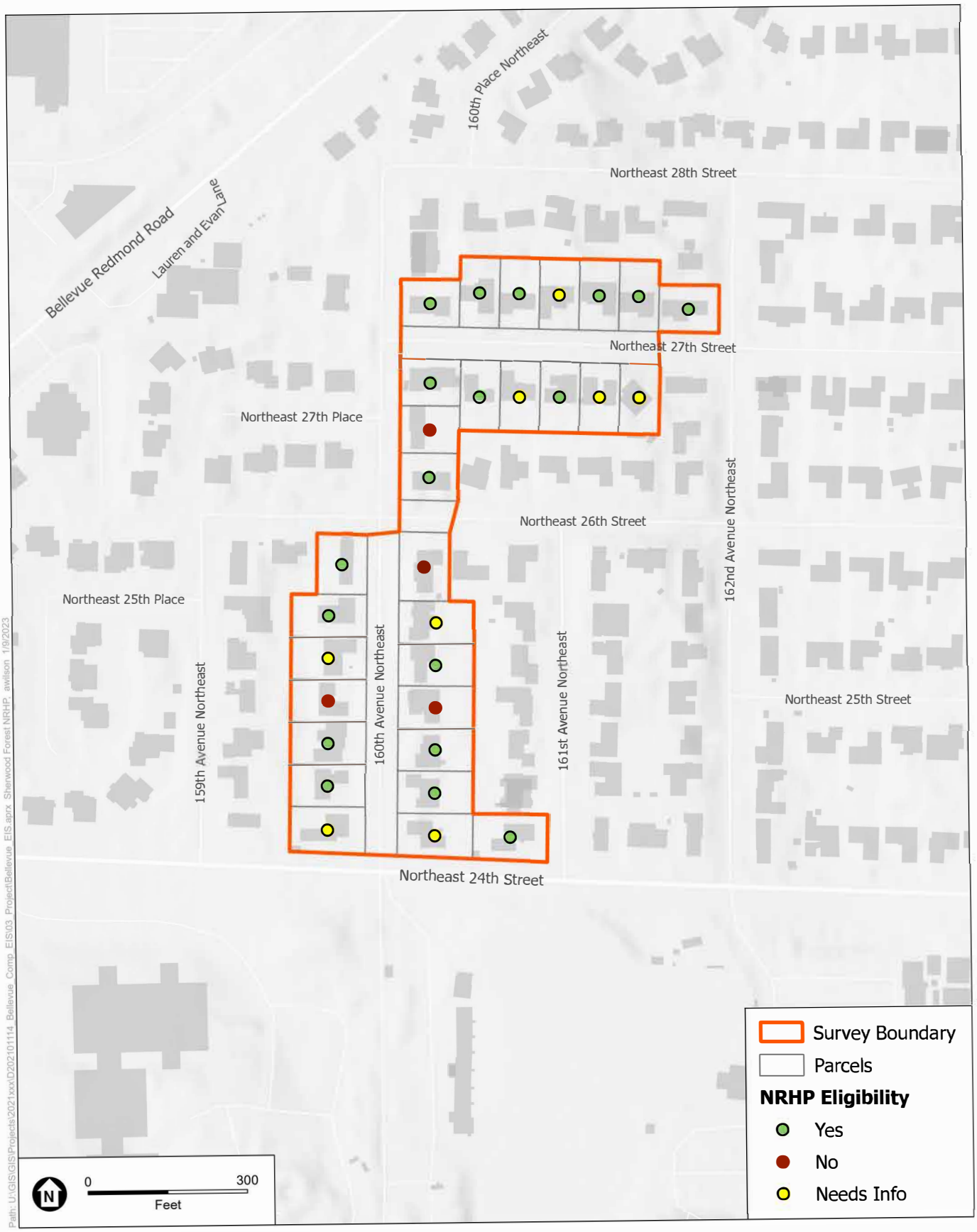
City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Figure A-10
Architectural Styles - Sherwood Forest

SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Parcels: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Figure A-11
District Eligibility - Sherwood Forest



SOURCE: Basemap: ESRI, 2023; City Limits: City of Bellevue, 2022; Waterbodies: King County, 2022; ESA, 2022

City of Bellevue 2024-2044 Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Figure A-12
NRHP Eligibility - Sherwood Forest

ATTACHMENT B Survey Results

Address	Parcel No	Neighborhood	Build Date	Stories	Historic Use	Current Use	Foundation	Form Type	Roof Type 1	Roof Type 2	Roof Material	Cladding 1	Cladding 2	Cladding 3	Structural System	Plan	Style	Changes to Plan	Changes to Windows	Changes to Cladding	Meets NR	In a Potential District	Contributes to District	Notes
13912 SE 40TH ST	2206500610	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Vertical			Wood	Rectangle	Minimal Traditional	Slight	Slight	Intact	Yes	Yes	Yes	Enclosed carport or garage
13904 SE 38TH PL	2206500560	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Shed	Asphalt – Shingle	Vinyl	Brick		Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Split level, possible enclosed carport but is now historic (unlikely to have been carport); same plan as 5 other surveyed bldgs
13915 SE 38TH PL	2206500650	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Wood – Clapboard	Wood – Vertical		Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Split level, roof material obscured
13919 SE 38TH PL	2206500645	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Shed	Obscured	Wood – Clapboard	Brick		Wood	Rectangle	Modern	Slight	Intact	Intact	Yes	Yes	Yes	Split level, roof material obscured, garage may be enclosed carport but is prob now historic; same plan as 5 other surveyed bldgs
3726 138TH PL SE	2206500440	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Asphalt – Rolled	Wood – Clapboard			Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	
3739 139TH AVE SE	2206500445	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Metal – Standing Seam	Wood – Clapboard	Brick		Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Split level; permit in 2022 to demolish and replace w/new 2 story 4224sf building; same plan as 5 other surveyed bldgs
3814 139TH AVE SE	2206500565	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Shed	Metal – Standing Seam	Vinyl	Brick		Wood	Rectangle	Modern	Intact	Slight	Slight	Yes	Yes	Yes	Split level; same plan as 5 other surveyed bldgs
3821 139TH PL SE	2206500575	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Asphalt – Built Up	Wood – Board & Batten	Wood – Clapboard	Wood – Shingle	Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Split level
3829 139TH PL SE	2206500580	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Obscured	Wood – Clapboard			Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Obscured roof type
3865 139TH AVE SE	2206500480	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Shed	Obscured	Wood – Clapboard			Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Can't see roof
3871 139TH AVE SE	2206500485	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Flat	Asphalt – Rolled	Brick	Wood – Clapboard		Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Split level; same plan as 5 other surveyed bldgs
3872 139TH AVE SE	2206500620	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Shed	Metal – Corrugated	Wood – Clapboard	Wood – Vertical		Wood	L	Modern	Slight	Slight	Intact	Yes	Yes	Yes	Enclosed carport, most of roof is obscured
3879 139TH AVE SE	2206500490	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Shingle	Wood – Clapboard	Brick		Wood	Rectangle	Modern	Intact	Intact	Intact	Yes	Yes	Yes	Split level
3882 139TH AVE SE	2206500615	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Gable – Side	Asphalt – Shingle	Wood – Clapboard			Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Split level; same plan as 5 other surveyed bldgs
13912 SE 38TH PL	2206500635	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Clapboard	Brick		Wood	Rectangle	Ranch	Slight	Slight	Intact	Yes	Yes	Yes	enclosed carport
13920 SE 38TH PL	2206500640	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Clapboard			Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	Ranchette
13920 SE 40TH ST	2206500605	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Clapboard	Simulated Stone		Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
13934 SE 40TH ST	2206500595	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Metal	Wood – Clapboard			Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
13940 SE 40TH ST	2206500590	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Clapboard	Brick	Asbestos	Wood	Rectangle	Ranch	Intact	Intact	Intact	Yes	Yes	Yes	
3747 139TH AVE SE	2206500450	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip	Shed	Asphalt – Shingle	Simulated Stone	Wood – Clapboard	Wood – Shingle	Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
3811 139TH AVE SE	2206500460	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Rolled	Wood – Clapboard			Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
3825 139TH AVE SE	2206500465	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Rolled	Brick	Wood – Clapboard	Wood – Vertical	Needs Info	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
3851 139TH AVE SE	2206500470	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Brick	Wood – Vertical	Wood – Clapboard	Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
3859 139TH AVE SE	2206500475	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Asbestos			Wood	Rectangle	Ranch	Intact	Intact	Intact	Yes	Yes	Yes	
3862 139TH AVE SE	2206500625	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Vertical	Simulated Stone	Wood – Plywood	Wood	Rectangle	Ranch	Intact	Intact	Intact	Yes	Yes	Yes	
3889 139TH AVE SE	2206500495	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Clapboard	Brick		Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
13926 SE 40TH ST	2206500600	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Asphalt – Shingle	Vinyl			Wood	Rectangle	Vernacular	Slight	Moderate	Slight	No	Yes	No	
3801 139TH AVE SE	2206500455	Eastgate	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Clapboard			Wood	Rectangle	Vernacular	Intact	Slight	Intact	No	Yes	Yes	
3811 139TH PL SE	2206500570	Eastgate	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Asphalt – Shingle	Vinyl			Wood	Rectangle	Vernacular	Intact	Slight	Slight	No	Yes	Yes	Split level; 2021 new additions (garage and kitchen)
3854 139TH AVE SE	2206500630	Eastgate	1955	1-2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip	Gable – Front	Asphalt – Shingle	Wood – Clapboard	Brick		Wood	Rectangle	Vernacular	Unknown	Intact	Intact	Needs Info	Yes	Yes	
16259 SE 8TH ST	4036801060	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Built Up	Wood – Clapboard			Wood	L	Minimal Traditional	Intact	Moderate	Intact	Yes	Yes	Yes	
16211 SE 8TH ST	4036801030	Lake Hills	1956	1	Domestic	Domestic	Obscured	Single Dwelling	Gable – Front	Flat	Obscured	Wood – Vertical	Wood – T1-11		Wood	Rectangle	Modern	Unknown	Unknown	Unknown	Needs Info	Yes	Needs Info	
16028 SE 8TH ST	4036801250	Lake Hills	1956	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Shed	Obscured	Wood – Clapboard			Wood	Irregular	Modern	Intact	Slight	Intact	Needs Info	Yes	Yes	
16019 SE 8TH ST	4036801010	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Asphalt – Rolled	Brick	Wood – Vertical	Wood – Clapboard	Wood	Rectangle	Modern	Intact	Moderate	Intact	No	Yes	Yes	same as nearby 16219 SE 8TH ST
16243 SE 8TH ST	4036801050	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Wood – Clapboard			Wood	Rectangle	Modern	Intact	Moderate	Intact	No	Yes	Yes	roof material not visible
16219 SE 8TH ST	4036801035	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Obscured	Brick	Wood – T1-11		Wood	L	Modern	Slight	Slight	Intact	No	Yes	Yes	roof material not visible; same as nearby 16019 SE 8TH ST
16227 SE 8TH ST	4036801040	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Asphalt – Rolled	Wood – Vertical	Wood – Plywood		Wood	Rectangle	Modern	Slight	Moderate	Intact	No	Yes	Yes	enclosed carport, likely historic
16014 SE 8TH ST	4036801260	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Obscured	Wood – Vertical	Other		Wood	Rectangle	Modern	Slight	Slight	Moderate	No	Yes	Yes	
16027 SE 8TH ST	4036801015	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Shed	Flat	Obscured	Wood – Vertical			Wood	Irregular	Modern	Intact	Intact	Intact	Yes	Yes	Yes	roof material not visible
16205 SE 8TH ST	4036801025	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Asphalt – Rolled	Wood – Clapboard			Wood	L	Modern	Intact	Slight	Intact	Yes	Yes	Yes	likely historic enclosure of carport (to garage)
16232 SE 8TH ST	4036801220	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Obscured	Wood – Vertical			Wood	L	Modern	Intact	Slight	Intact	Yes	Yes	Yes	garage is likely enclosed carport; roof material obscured
15913 SE 8TH ST	4036800990	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Vinyl			Wood	Rectangle	Modern	Intact	Slight	Slight	Yes	Yes	Yes	roof material obscured
16251 SE 8TH ST	4036801055	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Shed	Flat	Obscured	Vinyl			Wood	Rectangle	Modern	Intact	Slight	Slight	Yes	Yes	Yes	roof material not visible
16240 SE 8TH ST	4036801215	Lake Hills	1956	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Obscured	Wood – Clapboard	Brick	Wood – Vertical	Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	split level; roof material obscured
16020 SE 8TH ST	4036801251	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Wood – Clapboard			Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	
15905 SE 8TH ST	4036800985	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Wood – Vertical			Wood	Rectangle	Modern	Intact	Intact	Intact	Yes	Yes	Yes	roof material obscured
16210 SE 8TH ST	4036801235	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Obscured	Wood – Vertical			Wood	U	Modern	Intact	Intact	Intact	Yes	Yes	Yes	garage appears to be an addition but is likely historic; roof material is obscured
16218 SE 8TH ST	4036801230	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Flat	Obscured	Brick	Wood – Shingle	Wood – Clapboard	Wood	L	Modern	Slight	Slight	Intact	Yes	Yes	Yes	partial carport enclosure or exention (not historic); roof material obscured
16226 SE 8TH ST	4036801225	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Wood – Clapboard			Wood	L	Modern	Slight	Moderate	Intact	Yes	Yes	Yes	roof material obscured; carport was enclosed as garage in 2019
16005 SE 8TH ST	4036801000	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Flat		Obscured	Wood – Board & Batten	Wood – Clapboard		Wood	L	Ranch	Intact	Slight	Intact	Needs Info	Yes	Yes	Partially obscured
16034 SE 8TH ST	4036801245	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Gable – Front	Asphalt – Rolled	Wood – Vertical	Wood – Shingle		Wood	L	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
16235 SE 8TH ST	4036801045	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Rolled	Vinyl			Wood	Rectangle	Ranch	Intact	Slight	Slight	Yes	Yes	Yes	
16246 SE 8TH ST	4036801210	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Obscured	Wood – Clapboard			Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	roof material not visible
16006 SE 8TH ST	4036801265	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Asphalt – Shingle	Wood – Clapboard			Wood	Rectangle	Vernacular	Moderate	Moderate	Intact	No	Yes	Needs Info	similar to nearby 15921 SE 8TH ST
16011 SE 8TH ST	4036801005	Lake Hills	1956	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Asphalt – Shingle	Vinyl	Simulated Stone		Wood	Rectangle	Vernacular	Extensive	Moderate	Extensive	No	Yes	No	
15912 SE 8TH ST	4036801285	Lake Hills	1956	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Hip	Asphalt – Shingle	Wood – Clapboard	Simulated Stone	Wood – Plywood	Wood	Rectangle	Vernacular	Extensive	Slight	Moderate	No	Yes	No	
15921 SE 8TH ST	4036800995	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Gable – Side	Asphalt – Shingle	Wood – Shingle			Wood	Rectangle	Vernacular	Intact	Extensive	Moderate	No	Yes	No	similar to nearby 16006 SE 8TH ST

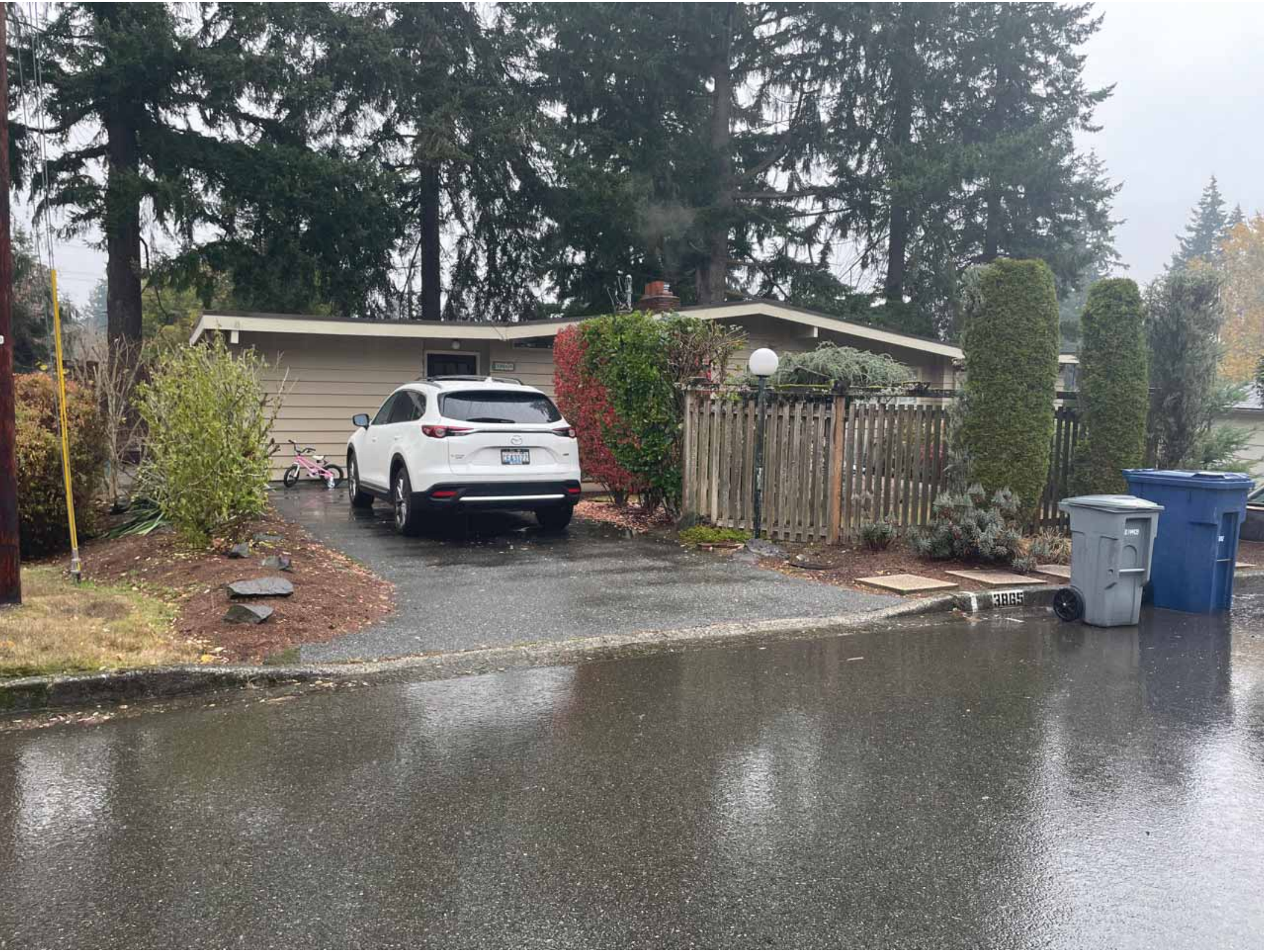
16035 SE 8TH ST	4036801020	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Vinyl			Wood	L	Vernacular	Intact	Slight	Slight	No	Yes	Yes	
16252 SE 8TH ST	4036801205	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Vinyl	Wood – Clapboard		Wood	U	Vernacular	Unknown	Moderate	Slight	No	Yes	Yes	mass to east (right) may be addition
16204 SE 8TH ST	4036801240	Lake Hills	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Vinyl	Brick		Wood	U	Vernacular	Intact	Slight	Slight	Yes	Yes	Yes	
4505 119TH AVE SE	4034900060	Lake Heights (Newport)	1951	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Other		Asphalt – Shingle	Wood – Vertical	Wood – Clapboard		Wood	Rectangle	Minimal Traditional	Intact	Slight	Intact	Yes	Yes	Yes	
4601 119TH AVE SE	4035500100	Lake Heights (Newport)	1954	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Shingle	Wood – Vertical	Brick	Wood – Clapboard	Wood	Rectangle	Minimal Traditional	Slight	Slight	Intact	No	Yes	Yes	
4516 119TH AVE SE	4034900035	Lake Heights (Newport)	1952	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Asphalt – Rolled	Brick	Wood – Vertical		Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Yellow textured sidelight
4545 119TH AVE SE	4034900075	Lake Heights (Newport)	1952	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Wood – Plywood			Wood	Rectangle	Modern	Intact	Intact	Intact	Yes	Yes	Yes	Carport enclosed for garage
4535 119TH AVE SE	4034900071	Lake Heights (Newport)	1952	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Shed	Obscured	Wood – Vertical			Wood	Rectangle	Modern	Intact	Intact	Intact	Yes	Yes	Yes	
4722 119TH AVE SE	4035500040	Lake Heights (Newport)	1953	1	Domestic	Domestic	Other	Single Dwelling	Shed		Obscured	Wood – Vertical			Wood	Rectangle	Modern	Unknown	Slight	Unknown	Yes	Yes	Yes	
4626 119TH AVE SE	4035500020	Lake Heights (Newport)	1955	1-2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Flat		Asphalt – Rolled	Wood – Vertical	Brick		Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	
4602 119TH AVE SE	4035500005	Lake Heights (Newport)	1963	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross	Flat	Asphalt – Shingle	Brick	Wood – Vertical		Masonry – Brick	L	Modern	Slight	Intact	Intact	Yes	Yes	Yes	
4615 119TH AVE SE	4035500105	Lake Heights (Newport)	1954	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Shed	Asphalt – Shingle	Wood – Vertical			Wood	Rectangle	Modern	Intact	Intact	Intact	Yes	Yes	Yes	
4741 119TH AVE SE	4035500140	Lake Heights (Newport)	1954	1	Domestic	Domestic	Obscured	Single Dwelling	Gable – Front	Shed	Obscured	Brick			Needs Info	Rectangle	Obscured	Unknown	Unknown	Unknown	Needs Info	Yes	Needs Info	Too obscured for style and others
4705 119TH AVE SE	4035500125	Lake Heights (Newport)	1955	1	Domestic	Domestic	Obscured	Single Dwelling	Gable – Side	Shed	Obscured	Wood – Shingle			Needs Info	Rectangle	Obscured	Unknown	Slight	Intact	Needs Info	Yes	Needs Info	Unknown style, can't see
4546 119TH AVE SE	4034900050	Lake Heights (Newport)	1951	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Shingle	Brick			Masonry – Brick	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
4704 119TH AVE SE	4035500030	Lake Heights (Newport)	1953	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Shingle	Brick	Wood – Vertical		Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
4502 119TH AVE SE	4034900030	Lake Heights (Newport)	1953	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Shingle	Brick	Asbestos		Masonry – Brick	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
4732 119TH AVE SE	4035500045	Lake Heights (Newport)	1954	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Other	Brick	Wood – Clapboard		Masonry – Brick	L	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	Tar and gravel roof
4725 119TH AVE SE	4035500135	Lake Heights (Newport)	1954	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Flat	Asphalt – Rolled	Wood – Clapboard	Simulated Stone	Other	Wood	L	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
4714 119TH AVE SE	4035500035	Lake Heights (Newport)	1954	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Wood – Vertical	Wood – Clapboard	Brick	Wood	L	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
4764 119TH AVE SE	4035500065	Lake Heights (Newport)	1955	1	Domestic	Domestic	Concrete - Poured	Multiple Dwelling	Gable – Side		Asphalt – Rolled	Brick			Needs Info	Rectangle	Ranch	Intact	Slight	Intact	Needs Info	Yes	Yes	
4756 119TH AVE SE	4035500060	Lake Heights (Newport)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Rolled	Brick			Masonry – Brick	Rectangle	Ranch	Intact	Moderate	Intact	Yes	Yes	Yes	
4748 119TH AVE SE	4035500055	Lake Heights (Newport)	1955	1	Domestic	Domestic	Other	Single Dwelling	Gable – Side	Shed	Metal	Wood – Vertical	Brick		Wood	L	Ranch	Intact	Moderate	Unknown	No	Yes	Yes	Obscures foundation, brick at carport passage wall
4772 119TH AVE SE	4035500070	Lake Heights (Newport)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Metal	Wood – Clapboard			Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
4715 119TH AVE SE	4035500130	Lake Heights (Newport)	1957	1	Domestic	Domestic	Obscured	Single Dwelling	Gable – Side		Asphalt – Shingle	Wood – Board & Batten	Wood – Clapboard		Wood	Rectangle	Ranch	Unknown	Slight	Intact	Needs Info	Yes	Yes	
4616 119TH AVE SE	4035500015	Lake Heights (Newport)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Brick	Simulated Stone		Needs Info	Rectangle	Vernacular	Intact	Slight	Intact	No	Yes	Needs Info	
4525 119TH AVE SE	4034900065	Lake Heights (Newport)	1951	1-2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Gable – Front	Asphalt – Shingle	Wood – Clapboard	Wood – Board & Batten		Needs Info	Rectangle	Vernacular	Moderate	Slight	Moderate	No	Yes	No	2 story mass replaced a carport
4645 119TH AVE SE	4035500120	Lake Heights (Newport)	1954	1-2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Gable – Front	Asphalt – Shingle	Vinyl			Wood	Rectangle	Vernacular	Extensive	Slight	Slight	No	Yes	No	
4625 119TH AVE SE	4035500110	Lake Heights (Newport)	1955	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Shingle	Wood – Vertical			Wood	Rectangle	Vernacular	Unknown	Slight	Intact	No	Yes	No	
4536 119TH AVE SE	4034900045	Lake Heights (Newport)	1951	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Wood – Board & Batten			Wood	Rectangle	Vernacular	Intact	Slight	Intact	Yes	Yes	Yes	
4635 119TH AVE SE	4035500115	Lake Heights (Newport)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Shed	Asphalt – Rolled	Wood – Clapboard			Wood	L	Vernacular	Unknown	Slight	Intact	Needs Info	Yes	Yes	probably added side w garage
4610 119TH AVE SE	4035500010	Lake Heights (Newport)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip	Flat	Asphalt – Shingle	Wood – Vertical	Wood – Clapboard	Simulated Stone	Wood	U	Vernacular	Intact	Slight	Intact	No	Yes	Yes	artstone is probably a non-historic change from clapboard (or visa versa)
4636 119TH AVE SE	4035500025	Lake Heights (Newport)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Gable on Hip	Gable – Cross	Asphalt – Shingle	Wood – Vertical	Wood – Clapboard		Wood	L	Vernacular	Intact	Intact	Intact	Yes	Yes	Yes	
4740 119TH AVE SE	4035500050	Lake Heights (Newport)	1955	1	Domestic	Domestic	Other	Single Dwelling	Gable – Cross	Shed	Asphalt – Shingle	Brick	Wood – Clapboard		Masonry – Brick	Rectangle	Vernacular	Intact	Unknown	Intact	Yes	Yes	Yes	
16047 NE 27TH ST	7751800110	Sherwood Forest (NE Bellevue)	1955	2	Domestic	Domestic	Obscured	Single Dwelling	Gable – Side		Obscured	Wood – T1-11	Wood – Clapboard		Wood	Rectangle	Modern	Unknown	Slight	Intact	Needs Info	Yes	Needs Info	too obscured to make out many details
2412 160TH AVE NE	7751600130	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front	Other	Asphalt – Rolled	Wood – Clapboard	Brick		Wood	Irregular	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Rear mass is hip roof
2447 160TH AVE NE	7751600020	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Wood – Clapboard			Wood	Rectangle	Modern	Intact	Slight	Intact	Yes	Yes	Yes	Roof material not visible
16050 NE 27TH ST	7751800050	Sherwood Forest (NE Bellevue)	1957	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Front		Obscured	Wood – T1-11	Simulated Stone		Wood	L	Modern	Intact	Intact	Intact	Yes	Yes	Yes	split level; roof material not visible
2439 160TH AVE NE	7751600025	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Obscured	Single Dwelling	Flat	Gable – Side	Asphalt – Rolled	Brick	Wood – Board & Batten		Needs Info	L	Obscured	Unknown	Unknown	Unknown	Needs Info	Yes	Needs Info	
16025 NE 27TH ST	7751800095	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Obscured	Single Dwelling	Gable – Side		Asphalt – Rolled	Wood – Clapboard			Wood	L	Obscured	Unknown	Slight	Intact	Needs Info	Yes	Needs Info	very likely Ranch but too obscured too confirm
2454 160TH AVE NE	7751600080	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Shingle	Wood – T1-11			Wood	Rectangle	Ranch	Slight	Unknown	Slight	No	Yes	Needs Info	Enclosed carport or garage
2614 160TH AVE NE	7751800160	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Shingle	Wood – Plywood	Other		Wood	Rectangle	Ranch	Intact	Slight	Extensive	No	Yes	Yes	
2420 160TH AVE NE	7751600135	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Obscured	Brick			Wood	Irregular	Ranch	Intact	Intact	Intact	Yes	Yes	Yes	Multiple hip roofs, sort of ranch with high roof
16014 NE 27TH ST	7751800070	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Asphalt – Rolled	Wood – Vertical	Brick		Wood	L	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
2421 160TH AVE NE	7751600035	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Brick	Wood – Vertical		Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
16007 NE 27TH ST	7751800085	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Gable on Hip	Hip	Asphalt – Shingle	Simulated Stone	Wood – Clapboard		Wood	Rectangle	Ranch	Intact	Slight	Unknown	Yes	Yes	Yes	
16008 NE 26TH ST	7751800155	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Rolled	Wood – Clapboard	Wood – T1-11		Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
16004 NE 27TH ST	7751800075	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Obscured	Wood – Clapboard	Simulated Stone	Wood – Vertical	Wood	Rectangle	Ranch	Intact	Unknown	Intact	Yes	Yes	Yes	roof material not visible
16030 NE 27TH ST	7751800060	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Simulated Stone	Wood – T1-11		Wood	L	Ranch	Intact	Slight	Slight	Needs Info	Yes	Yes	garage proportions seem off; need further research to determine if historic/original
16038 NE 27TH ST	7751800055	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Simulated Stone	Wood – T1-11		Wood	L	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
2438 160TH AVE NE	7751600145	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Asphalt – Shingle	Wood – Clapboard	Simulated Stone		Wood	L	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
16022 NE 27TH ST	7751800065	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Obscured	Wood – Vertical	Simulated Stone	Wood – Clapboard	Wood	L	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	roof material not visible
16033 NE 27TH ST	7751800100	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Metal – Standing Seam	Wood – Vertical		Wood – T1-11	Wood	L	Ranch	Intact	Slight	Slight	Yes	Yes	Yes	
2455 160TH AVE NE	7751600015	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Gable on Hip		Asphalt – Shingle	Wood – Clapboard	Brick		Wood	Rectangle	Ranch	Intact	Slight	Intact	Yes	Yes	Yes	
2413 160TH AVE NE	7751600040	Sherwood Forest (NE Bellevue)	1957	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Brick	Wood – Vertical		Wood	L	Ranch	Intact	Intact	Intact	Yes	Yes	Yes	
16056 NE 27TH ST	7751800045	Sherwood Forest (NE Bellevue)	1957	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Simulated Stone	Wood – Clapboard		Wood	Rectangle	Ranch	Intact	Intact	Intact	Yes	Yes	Yes	
2446 160TH AVE NE	7751600150	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Plywood			Wood	Irregular	Vernacular	Unknown	Slight	Intact	Needs Info	Yes	Needs Info	Steep hip roofs
16039 NE 27TH ST	7751800105	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Metal – Standing Seam	Wood – T1-11			Wood	U	Vernacular	Unknown	Slight	Slight	Needs Info	Yes	Needs Info	possibly large second wing addition

2431 160TH AVE NE	7751600030	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip – Cross Hip		Asphalt – Shingle	Wood – T1-11			Wood	U	Vernacular	Extensive	Slight	Moderate	No	Yes	Needs Info	small 128sf addition on east in 2021
2401 160TH AVE NE	7751600045	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side	Flat	Asphalt – Rolled	Wood – Clapboard	Brick		Wood	Rectangle	Vernacular	Unknown	Unknown	Intact	Needs Info	Yes	Needs Info	
2430 160TH AVE NE	7751600140	Sherwood Forest (NE Bellevue)	1957	2	Domestic	Domestic	Concrete - Poured	Single Dwelling	Hip		Asphalt – Shingle	Wood – Clapboard	Simulated Stone		Wood	Irregular	Vernacular	Extensive	Extensive	Extensive	No	Yes	No	Buiding has been so altered that it no longer appears to be historic in any way
16015 NE 27TH ST	7751800090	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Asphalt – Rolled	Wood – T1-11			Wood	L	Vernacular	Intact	Slight	Intact	Yes	Yes	Yes	
2403 161ST AVE NE	7751600120	Sherwood Forest (NE Bellevue)	1955	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Side		Asphalt – Rolled	Wood – Clapboard			Wood	Rectangle	Vernacular	Intact	Slight	Intact	Yes	Yes	Yes	
2402 160TH AVE NE	7751600125	Sherwood Forest (NE Bellevue)	1956	1	Domestic	Domestic	Concrete - Poured	Single Dwelling	Gable – Cross		Asphalt – Rolled	Wood – Clapboard			Wood	L	Vernacular	Slight	Slight	Intact	Needs Info	Yes	Yes	Possibly added garage but is historic

ATTACHMENT C Survey Photos


3729
3730


SE


3865


3871
3871


3814


3821


3821


13920


3882
YARD WASTE ONLY
Y 0506764


3926


R0007575


4502


CAUTION CAUTION CAUTION
CAUTION CAUTION CAUTION
CAUTION CAUTION CAUTION


4536


4546


4546


BUMP


4535


UMP


4602


4602


4616
BIA2854


4626


36


4732


BVM9374


CHEVROLET


120 MFG
CHEVROLE


864-ZDI


4715


4741
4715


4 / 41


KIA


16019


BTD8235


16205


16211


16243


mazda


16226


16210

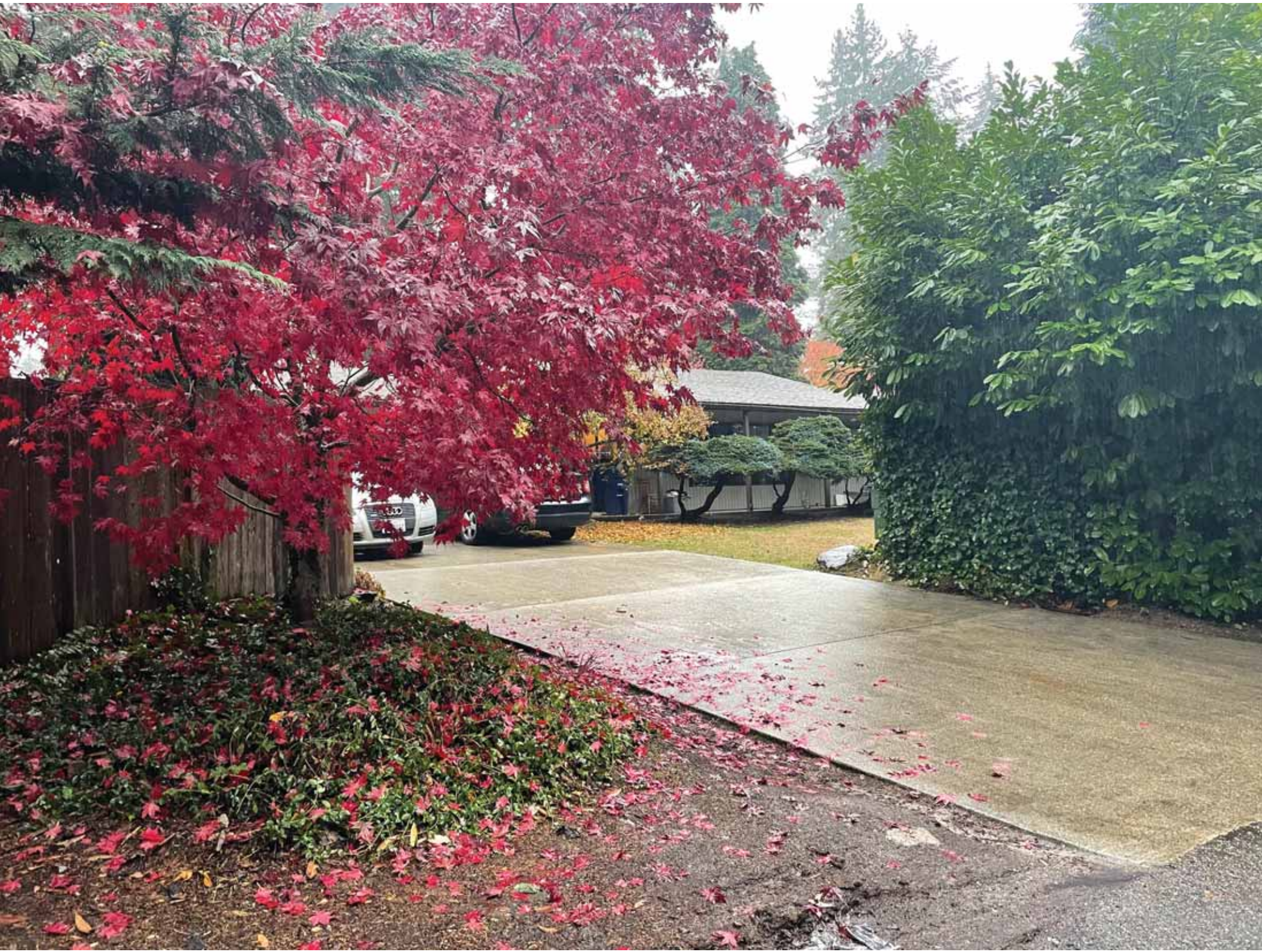

16020


2439


Q3


2413


24011




2403
BBM7141


16050

APPENDIX E Plants and Animals Memorandum

ESA

2801 Alaskan Way
Suite 200
Seattle, WA 98121
206.789.9658 phone
206.789.9684 fax

esassoc.com

memorandum

date	April 24, 2023
to	Thara Johnson, Comprehensive Planning Manager, City of Bellevue
cc	Pam Xander, ESA
from	Aaron Killgore and Emily Heim, ESA
subject	Bellevue Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Introduction

As part of the City of Bellevue's Comprehensive Plan Periodic Update and Wilburton Vision Implementation (Comprehensive Plan Periodic Update), ESA prepared this technical memorandum to analyze impacts on those environmental elements that may be likely to have a significant adverse impact on the environment, per WAC 97-11-444 and -442.

This memorandum examines existing plant and animal resources, including vegetation and wildlife habitat, aquatic resources and wetlands, and species of local importance. Existing data were reviewed from available sources including study reports, maps, priority habitats and species studies, wetland inventories, stream mapping and classification, basin studies, and aerial photography. Existing resources for information about tree canopy include the City of Bellevue Environmental Performance Dashboard, the Bellevue Tree Guide, and the Urban Tree Canopy Assessment.

After describing current conditions within Bellevue city limits, the impacts analysis in the memo considers how the Comprehensive Plan Periodic Update could affect ecosystem resources within the city limits. This includes the potential for direct, indirect, and cumulative impacts on vegetation and wildlife habitat, threatened and endangered species, and aquatic resources and wetlands.

Regulatory Environment

Numerous federal and state as well as local regulations address the potential environmental impacts of development on plants and animals. Bellevue City Code, the State Environmental Policy Act (SEPA), and the federal National Environmental Policy Act (NEPA) establish environmental regulations and procedures that affect

the development and use of property. These regulations are meant to ensure impacts on the environment are avoided, minimized, documented, and mitigated, and provide the opportunity for public notice and comment:

- **Federal Endangered Species Act** is designed to protect species from extinction as a "*consequence of economic growth and development untempered by adequate concern and conservation.*" (7 U.S.C. § 136, 16 U.S.C. § 1531 et seq.)
- **Federal Clean Water Act and Stormwater Regulations.** Federal review applies to any project affecting Waters of the United States, including wetlands, and thus requiring review by the U.S. Army Corps of Engineers (Corps). Such projects generally must show that impacts on endangered species and cultural resources have been avoided or minimized. Permit requirements often include mitigation for unavoidable impacts.
- **Shoreline Management Act.** The Shoreline Management Act (SMA) requires all counties and most towns and cities with shorelines to develop and implement Shoreline Master Programs. The law also defines our role in reviewing and approving local programs. The SMA was passed by the Washington Legislature in 1971 and adopted by voters in 1972. The SMA applies to all 39 Washington counties and about 250 towns and cities with stream, river, lake, or marine shorelines. These shorelines include:
  - All marine waters.
  - Streams and rivers with greater than 20 cubic feet per second mean annual flow.
  - Lakes 20 acres or larger.
  - Upland areas called shorelands that extend 200 feet landward from the edge of these waters.
  - Biological wetlands and river deltas connected to these water bodies.
  - Some or all of the 100-year floodplain, including all wetlands.
- **Shoreline Master Program.** Shoreline Master Programs (SMPs) are local land use policies and regulations that guide the public and private use of Washington shorelines. These policies and regulations provide for public access to public waters and shorelines, protect natural resources, and plan for water-dependent uses. Shoreline Master Programs are subject to the Shoreline Management Act (RCW 90.58). The goals and policies of the Shoreline Master Program are included in comprehensive plans under the Growth Management Act (GMA) (RCW 36.70A). Bellevue's shoreline jurisdiction is regulated through zoning and shoreline environment designations established in Bellevue City Code (BCC) 20.25E. The Shoreline Jurisdiction includes Lake Washington, Lake Sammamish, Lower Kelsey Creek, Mercer Slough, and Phantom Lake, as well as associated wetlands and shorelands 200 feet from the ordinary high-water mark (including the floodway and 200 feet of any adjacent floodplain) of each of the listed water bodies.
- **Waters of the State.** State review applies to any project affecting Waters of the State and thus requiring review by the Washington State Department of Ecology (Ecology) and/or Washington Department of Fish and Wildlife (WDFW). Such projects must also show that impacts have been minimized, and permit requirements often include mitigation for unavoidable impacts.
- **Bellevue Critical Areas Ordinance (CAO).** Protects critical areas: Streams and riparian areas, wetlands, habitats for species of local importance, geological hazard areas, and flood hazard areas. Buffers and structure setbacks are applied to the edges of these critical areas to protect their functions and values.
- **Stormwater Regulations.** The City of Bellevue ensures that development complies with State of Washington Waste Discharge Act regulations regarding stormwater through the Bellevue City Code and Ecology Stormwater Manuals.
- **Bellevue Comprehensive Plan.** Through land use permit reviews, the city ensures project compliance with environmental policies identified in the Comprehensive Plan, and with underlying zoning, land use, and other regulations, policies, and procedures.

- **Environmental Health Regulations.** The Model Toxics Control Act (MTCA) of the State of Washington sets forth prescribed limits of contamination that must be addressed by any disturbance, based on the type of activity and proposed use for a parcel. The standards for voluntary cleanup for lower levels of contaminants are incorporated into new development or redevelopment on parcels that have been noted to have contamination potential.
- **Bellevue Land Use Code (LUC).** LUC 20.20.900 sets requirements for tree retention and replacement. The retention of significant trees is "*necessary to maintain and protect property values, to enhance the visual appearance of the City, to preserve the natural wooded character of the Pacific Northwest, to promote utilization of natural systems, to reduce the impacts of development on storm drainage system and water resources, and to provide a better transition between the various land uses permitted in the City*." Alternative tree retention or replacement options must be approved by the Director of Development Services. In addition, 20.25E.065 contains shoreline regulations for residential uses within the Shoreline Overlay District intended to ensure no net loss of ecological function.
- **Tree Canopy Code Amendments.** Bellevue's tree canopy is a critical environmental asset and central to the vision of a "City in a Park." Bellevue's Environmental Stewardship Plan Action N.1.1 calls for a comprehensive review and update of provisions in the Land Use Code and City Code for tree preservation, retention, replacement, and protection during construction. The city's current code provisions related to trees have been updated periodically, but never in a comprehensive fashion. Amendments to Bellevue's Land Use Code and City Code will update tree preservation, retention, replacement, and protection provisions to better support citywide tree canopy goals.

These environmental regulations and policies condition development proposals to avoid, minimize, and/or mitigate potential impacts on vegetation and wildlife habitat, threatened and endangered species, and aquatic resources and wetlands.

Affected Environment

Vegetation and Wildlife Habitat

Historical data on vegetation types and locations in both the City of Bellevue and throughout the region reveal that riparian areas have been heavily disturbed through timber harvest and urban development; through the development of roads, railroads, and other infrastructure; and through other anthropogenic activities. The historical climax communities were likely forests of western hemlock and Douglas fir, intermixed with western red cedar and a variety of associated understory species. In areas of frequent disturbance, early successional trees, such as red alder and maple, dominated coastal forests.

Bellevue's shorelines are often dominated by maple, alder, and non-native species, which colonize rapidly after many types of disturbance, including logging, fire, soil erosion, and other anthropogenic impacts. Madrone forests are found on dry, sunny sites with relatively nutrient-poor soils. The most common forest types found throughout Bellevue's parks are Dry-Mesic Conifer, Conifer Deciduous Mixed Forest, Conifer Broadleaf Evergreen Mixed Forest, and Oak Woodlands. Bellevue's Forest Management Program stewards 2,000 acres of park and public Native Growth Protection Area (NGPA) lands – ranging from environmentally sensitive stream corridors and wetlands to forested open space.

According to the WDFW Priority Habitats and Species (PHS) database, a number of priority habitats exist in Bellevue: Lake, Riverine, Biodiversity Areas and Corridors, and several wetland types.

Tree Canopy

Bellevue has been analyzing their tree canopy using aerial imaging every 5–10 years since 1986. Up-to-date data on tree canopy cover and impervious surfaces allow the city to make informed decisions about tree planting and preservation, stormwater management, land use and the benefits trees provide. Development in Bellevue over the last 30 years has resulted in the loss of trees from farming, mining, and logging as well as residential and commercial development.

The city recently updated its tree canopy assessment using the most up-to-date methodologies and analyzed tree canopy for both 2011 and 2019. This assessment shows Bellevue's overall tree canopy at 39%, and highlights neighborhoods with net losses of tree canopy and others with tree canopy increases. The City of Bellevue has gained 2% or 411 acres of urban tree canopy since 2011. Twenty-two percent of the land is classified as possible planting area (City of Bellevue 2022). The areas designated as parks had the highest Urban Tree Canopy, with 72% of all park area covered by tree canopy.

There is an opportunity to require developers to add trees in these areas through development regulations. In neighborhood residential areas, there is not necessarily a change in the lot coverage regulations, so it is difficult to assess the impact of development on tree canopy. There is an opportunity to implement regulations to require clustered development and preservation of large trees.

Bellevue's tree canopy is a critical environmental asset and central to the vision of a "City in a Park." Bellevue's Environmental Stewardship Plan Action N.1.1 calls for a comprehensive review and update of provisions in the Land Use Code and City Code for tree preservation, retention, replacement and protection during construction. The city's current code provisions related to trees have been updated periodically, but never in a comprehensive fashion.

Amendments to Bellevue's Land Use Code and City Code will update tree preservation, retention, replacement, and protection provisions to better support citywide tree canopy goals.

Aquatic Resources and Wetlands

Aquatic resources in the City of Bellevue include lakes, streams, and wetlands within the city limits. Bellevue has more than 80 miles of streams, which provide habitat for salmon, cutthroat trout, waterfowl, and other wildlife. In addition to bordering Lake Washington and Lake Sammamish, Bellevue has three small lakes (considered by some to be wetlands) –Lake Bellevue, Phantom Lake, and Larsen Lake. More than 800 acres of wetlands here slow down stormwater runoff, preventing flooding and erosion, and serve as a rich habitat for fish and wildlife.

Lakes

Since the early 1940s, Lake Bellevue’s watershed has experienced substantial urban development (City of Bellevue 2016). The lake fringe wetlands and the lake itself have been reduced in area, and the underlying peat soil deposits have been covered by impervious surfaces causing a decrease in habitat and a decline in water quality. The result is a eutrophic lake that is over-enriched with nutrients, specifically phosphorus, which promotes cyanobacteria growth. The lake has therefore long since exhausted its resiliency or capacity to assimilate nutrients resulting in excess phytoplankton, reduced dissolved oxygen (leading to odors), high water temperature in the summer, and loss of aquatic habitat. The lake’s ability to support beneficial uses (including fish habitat) and recreational uses (such as fishing, boating, and swimming) has been substantially diminished.

Phantom Lake is a small lake inside the city limits of Bellevue. A 2.6-mile pedestrian trail circles the lake, and according to the city government, Bellevue's oldest and largest trees are there. Historically, Phantom Lake once drained to the north through the Kelsey Creek basin. Nineteenth-century farmer Henry Thode redirected the Phantom Lake outlet to Lake Sammamish, creating Weowna Creek in the process. Today, Phantom Lake has a surface area of 63 acres (0.25 km^2) and a maximum depth of 45 feet (14 m). Boating is permitted on the lake during the daytime, but the number of boats is regulated by the City of Bellevue on a first-come, first-served basis. Phantom Lake offers opportunities to catch a variety of fish.

Larsen Lake is a freshwater lake located in King County, Washington. At an elevation of 253 feet and 9.8 acres, it is home to several species of fish, including yellow perch, black crappie, brown bullhead, largemouth bass, and coastal cutthroat trout (resident). Larsen Lake provides good shoreline access and a fishing pier.

Streams

Bellevue has approximately 80 miles of streams that eventually drain to either Lake Sammamish or Lake Washington. Streams are classified into four types, based on their flow and capacity to support fish. Artificial channels (e.g., ditches) are generally not protected by laws and regulations, unless they are used by salmonids or convey a stream that previously occurred naturally in that location (LUC 20.25H.075). As part of Bellevue’s five strategic initiatives in the city's 2015 Storm and Surface Water Plan, Bellevue staff conducted a city-wide Stream Habitat Assessment from 2018 to 2020 to characterize streams for fish, habitat, and watershed health, and included Vasa Creek, West Tributary, Coal Creek, Kelsey Creek, small Lake Washington tributaries, and Lake Sammamish.

Bellevue’s stream corridors, the area within 100 feet of a stream, had an average of 65% tree canopy coverage. Trees planted within stream corridors can intercept and absorb stormwater runoff that may otherwise carry unhealthy pollutants into the streams (City of Bellevue 2022).

Wetlands

Wetlands include vegetated edges of ponds, lakes, rivers, and creeks, and areas commonly called swamps, marshes, and bogs. In Washington, wetlands are protected by several laws overseen by federal, state, and local agencies, as well as tribes (LUC 20.25H.095). The authority to regulate wetlands is under the state Water Pollution Control Act and the Shoreline Management Act. Under Section 401 of the federal Clean Water Act, Ecology also has the authority to review and approve projects that include dredging or filling in Waters of the United States.

The 800 acres of protected wetlands in Bellevue provide important ecosystem functions.

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland

Other wetlands may be present and have not yet been inventoried. Any proposed development would require a critical areas assessment that may require a wetlands analysis pursuant to federal, state, and local regulations.

Shoreline Overlay District Jurisdiction

The Shoreline Master Program (SMP) applies to shorelines of the state, which include shorelines of statewide significance and shorelines as defined in RCW 90.58.030 and this subsection of the memo. Specifically included in the Shoreline Overlay District jurisdiction are the following shorelines in Bellevue:

- Lake Washington
- Lake Bellevue
- Lake Sammamish
- Lower Kelsey Creek
- Phantom Lake

Species of Local Importance

"Species of local importance" are defined as recognized local populations of native species that are at risk of being lost from Bellevue (LUC 20.25H.150). A review of the city's Critical Areas Ordinance (CAO) identifies 23 species of local importance, as listed in **Table 1**. Habitat assessments are required for permits that impact critical areas and are conducted to assess the presence of and potential impacts on species and habitat of local importance.

TABLE 1
CITY OF BELLEVUE SPECIES OF LOCAL IMPORTANCE

1. Bald eagle (*Haliaeetus leucocephalus*)	13. Western big-eared bat (*Plecotus townsendii*)
2. Peregrine falcon (*Falco peregrinus*)	14. Keen's myotis (*Myotis keenii*)
3. Common loon (*Gavia immer*)	15. Long-legged myotis (*Myotis volans*)
4. Pileated woodpecker (*Dryocopus pileatus*)	16. Long-eared myotis (*Myotis evotis*)
5. Vaux's swift (*Chaetura vauxi*)	17. Oregon spotted frog (*Rana pretiosa*)
6. Merlin (*Falco columbarius*)	18. Western toad (*Bufo boreas*)
7. Purple martin (*Progne subis*)	19. Western pond turtle (*Clemmys marmorata*)
8. Western grebe (*Aechmophorus occidentalis*)	20. Chinook salmon (*Oncorhynchus tshawytscha*)
9. Great blue heron (*Ardea herodias*)	21. Bull trout (*Salvelinus confluentus*)
10. Osprey (*Pandion haliaetus*)	22. Coho salmon (*Oncorhynchus kisutch*)
11. Green heron (*Butorides striatus*)	23. River lamprey (*Lampetra ayresi*)
12. Red-tailed hawk (*Buteo jamaicensis*)	

SOURCE: City of Bellevue Land Use Code 20.25H.150

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system identifies 16 protected bird species that may occur in the area:

- Bald eagle (*Haliaeetus leucocephalus*)
- Black swift (*Cypseloides niger*)
- Black turnstone (*Arenaria melanocephala*)

- California gull (*Larus californicus*)
- Cassin's finch (*Carpodacus cassinii*)
- Clark's grebe (*Aechmophorus clarkii*)
- Evening grosbeak (*Coccothraustes vespertinus*)
- Golden eagle (*Aquila chrysaetos*)
- Lesser yellowlegs (*Tringa flavipes*)
- Marbled godwit (*Limosa fedoa*)
- Olive-sided flycatcher (*Contopus cooperi*)
- Rufous hummingbird (*Selasphorus rufus*)
- Short-billed dowitcher (*Limnodromus griseus*)
- Western grebe (*Aechmophorus occidentalis*)
- Marbled murrelet (*Brachyramphus marmoratus*)
- Yellow-billed cuckoo (*Coccyzus americanus*)

Additionally, seven salmonid species that have the potential to occur in the area:

- Bull trout (*Salvelinus confluentus*) - Critical Habitat in Lake Washington
- Chinook (*Oncorhynchus tshawytscha*)
- Coho (*Oncorhynchus kisutch*)
- Steelhead (*Oncorhynchus mykiss*)
- Sockeye (*Oncorhynchus nerka*)
- Cutthroat Trout (*Oncorhynchus clarkii*)
- Chum (*Oncorhynchus keta*)

Four species of bats potentially occur in the area:

- Big brown bat (*Eptesicus fuscus*)
- Little Brown Bat (*Myotis lucifugus*)
- Townsend's Big-eared Bat (*Corynorhinus townsendii*)
- Yuma myotis (*Myotis yumanensis*)

The Monarch butterfly (*Danaus plexippus*) also has potential to occur in the area. Consultation with the USFWS is recommended to identify any potential loss of habitat associated with these species if there is a federal nexus.

Potential Impacts of the Comprehensive Plan Periodic Update

The purpose of this analysis is to provide a broad overview of protected species and their habitats within the City of Bellevue for the purposes of future planning. Individual projects will continue to be subjected to review under the laws described in previous sections while undergoing SEPA review. The SEPA process identifies potential concerns of specific projects early in the environmental review and permitting process.

For example, some projects could affect riparian habitat and would be subject to avoidance, minimization, and/or mitigation provisions of the city's CAO. Compliance with those provisions would reduce residual impacts to a less-than-significant level. Redevelopment projects could also have indirect impacts on aquatic habitat as a result of increased pollutant loading in stormwater runoff. New low-impact development requirements would increase on-site infiltration of stormwater, thereby reducing the amount of stormwater runoff currently conveyed to creeks.

Future development may increase the amount of impervious surface including rooftops, roads, sidewalks, driveways, and parking lots. In 2019, 8,113 acres or 38 percent of the city was impervious surface (City of Bellevue 2022). Eight percent of all tree canopy was overhanging impervious surface. Most of the housing and job capacity identified in the Comprehensive Plan Periodic Update alternatives is in areas with little tree canopy, including Mixed Use Centers, Neighborhood Centers, or along transportation corridors. There is an opportunity to require developers to add trees in these areas through development regulations. In neighborhood residential areas, there is not necessarily change in the lot coverage regulations, so it is difficult to assess the impact of development on tree canopy. There is an opportunity to implement regulations to require clustered development and preservation of large trees.

Opportunities may arise for the city to consider further restoration of riparian areas and stormwater function as well as enhancements to the tree canopy. Redevelopment plans may provide ecological benefits from creating an open-channel water feature on properties, particularly if the existing pipes do not currently allow fish passage. Redevelopment plans that could result in impacts on streams or wetlands may trigger the need to comply with fish passage requirements.

The Comprehensive Plan Periodic Update is a governmental action involving decisions on policies, plans, or programs that contain standards controlling the use or modification of the environment, which is considered to be a non-project action under SEPA. The Plan proposes to contain growth in an urban area per the GMA and protect critical areas, habitat, and wildlife through city codes. This effort preserves these species and habitats in rural areas outside the growth boundary. Thus, adoption of the Comprehensive Plan Periodic Update, regardless of the alternative selected, is not expected to have a significant adverse impact on these environmental elements.

Future site-specific development projects under the Comprehensive Plan Periodic Update could result in adverse impacts on vegetation and wildlife habitat, threatened and endangered species, and aquatic resources and wetlands. However, those projects will be subject to existing regulations (discussed above) that protect vegetation and wildlife habitat, threatened and endangered species, and aquatic resources and wetlands. These existing regulations include the Endangered Species Act, Clean Water Act and Stormwater Regulations, state regulations protecting Waters of the State, the Shoreline Management Act, the Shoreline Master Program, the Shoreline City Codes, the Model Toxics Control Act of the State of Washington, the city's CAO, and stormwater regulations, policies in the city's existing Comprehensive Plan, and underlying land use permit review processes and regulations. Existing regulations will require detailed site-specific analyses of the impacts resulting from those projects, and the implementation of required avoidance, minimization, and/or mitigation measures, when the associated plans and project permit applications are submitted for city review and processing.

References

City of Bellevue. 2011. Trees of Bellevue. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/m10175-Trees%20of%20Bellevue%202011%20b%20%28002%29.pdf.

City of Bellevue. 2015. Storm and Surface Water System Plan. Accessed April 2023. https://bellevuewa.gov/city-government/departments/utilities/utilities-projects-plans-standards/utilities-plans-and-reports/storm-and-surface-water-system-plan.

City of Bellevue. 2021. City of Bellevue Environmental Performance Dashboard. Accessed April 2023. https://cobgis.maps.arcgis.com/apps/MapSeries/index.html?appid=be30baa631864324bd2119db1b48514e.

City of Bellevue. 2022. Urban Tree Canopy Assessment. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/file/2022/Bellevue%20WA%20-%20Urban%20Tree%20Canopy%20Assessment%20Report%20-%202011%20and%202019%20FINAL.pdf.

U.S. Department of Agriculture. 2019. National Agriculture Imagery Program (NAIP) GeoHub. Accessed April 2023. https://naip-usdaonline.hub.arcgis.com/.

USFWS (U.S. Fish and Wildlife Service). 2023. Information for Planning and Consultation (IPaC) database. Accessed April 2023. https://ipac.ecosphere.fws.gov/.

WDFW (Washington Department of Fish and Wildlife). 2023. Priority Habitats and Species (PHS) database. Accessed April 2023. https://wdfw.wa.gov/species-habitats/at-risk/phs.

INTENTIONALLY BLANK

APPENDIX F Water Memorandum

ESA

2801 Alaskan Way
Suite 200
Seattle, WA 98121
206.789.9658 phone
206.789.9684 fax

esassoc.com

memorandum

date	April 24, 2023
to	Thara Johnson, Senior Planner, City of Bellevue
cc	Pam Xander, ESA
from	Matthew Blinstrub, ESA
subject	Water Resources Memo for the City of Bellevue Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS

Introduction

As part of the City of Bellevue's Comprehensive Plan Periodic Update and Wilburton Vision Implementation EIS process (Comprehensive Plan Periodic Update), the City of Bellevue is obliged to disclose potential significant adverse impacts that may result to elements of the environment. ESA prepared this technical memorandum to assist the city in deciding whether the Comprehensive Plan Periodic Update may have the potential for significant adverse impacts on water resources and therefore should be analyzed in the EIS.

This memorandum describes existing conditions of water resources in the City of Bellevue and downstream receiving waters. The analysis was prepared using existing information available in public sources or provided by the city, such as current impervious surface areas from parcel records and stormwater management plans.

After describing current conditions within the city limits, the impacts analysis considers how the Comprehensive Plan Periodic Update could affect water sources both within and adjacent to the city limits.

Regulatory Context

Numerous existing federal, state, and local regulations protect water resources and limit potential environmental impacts. Bellevue City Code, the State Environmental Policy Act (SEPA), and the federal National Environmental Policy Act (NEPA) establish environmental regulations and procedures that regulate the development and use of property. These regulations are meant to ensure that impacts on the environment are avoided, minimized, documented, and mitigated, and provide the opportunity for public notice and comment:

- **Federal Clean Water Act.** Federal review applies to any project affecting waters of the United States and thus requiring review by the U.S. Army Corps of Engineers (Corps). Such projects must generally show that impacts have been avoided or minimized; permit requirements often include mitigation for unavoidable impacts.

- **Waters of the State.** State review applies to any project affecting waters of the state and thus requiring review by the Washington Department of Ecology (Ecology) and/or Washington Department of Natural Resources (WDNR). Such projects must also show that impacts have been minimized, and permit requirements often include mitigation for unavoidable impacts.
- **Shoreline Management Act.** The Shoreline Management Act (SMA) requires all counties and most towns and cities with shorelines to develop and implement Shoreline Master Programs. The law also defines our role in reviewing and approving local programs. The SMA was passed by the Washington Legislature in 1971 and adopted by voters in 1972. The SMA applies to all 39 Washington counties and about 250 towns and cities with stream, river, lake, or marine shorelines. These shorelines include:
  - All marine waters.
  - Streams and rivers with greater than 20 cubic feet per second mean annual flow.
  - Lakes 20 acres or larger.
  - Upland areas called shorelands that extend 200 feet landward from the edge of these waters.
  - Biological wetlands and river deltas connected to these water bodies.
  - Some or all of the 100-year floodplain, including all wetlands.
- **Shoreline Master Program (SMP).** Bellevue has a Shoreline Master Program as subject to the Shoreline Management Act (RCW 90.58). The goals and policies of the Shoreline Master Program are included in comprehensive plans under the Growth Management Act (GMA) (RCW 36.70A). Shoreline Master Programs (SMPs) are local land use policies and regulations that guide the public and private use of Washington shorelines. These policies and regulations provide for public access to public waters and shorelines, protect natural resources, and plan for water-dependent uses. Bellevue's shoreline jurisdiction is regulated through zoning and shoreline environment designations established in Bellevue City Code (BCC) 20.25E. The Shoreline Jurisdiction includes Lake Washington, Lake Sammamish, Lower Kelsey Creek, Mercer Slough, and Phantom Lake, as well as associated wetlands and shorelands 200 feet from the ordinary high-water mark (including the floodway and 200 feet of any adjacent floodplain) of each of the listed water bodies.
- **Bellevue Critical Areas Ordinance (CAO).** The city's CAO protects critical areas: streams and riparian areas, wetlands, habitats for species of local importance, geological hazard areas, and flood hazard areas. Buffers and structure setbacks are then applied to the edges of these critical areas to protect their functions and values.
- **Stormwater Regulations.** The city ensures that development complies with State of Washington Waste Discharge Act regulations regarding stormwater.
- **Ecology 303(d) List.** Ecology monitors the quality of state waters and maintains a list of water bodies that have water quality concerns (the 303(d) list). Washington's 2014–2018 303(d) List was partially approved and partially disapproved by the U.S. Environmental Protection Agency (EPA) in June 2022 (EPA 2022).
- **Bellevue Comprehensive Plan.** Through land uses permit reviews, the city ensures project compliance with environmental policies identified in the Comprehensive Plan, and with underlying zoning, land use, and other regulations, policies, and procedures.

These environmental regulations condition development proposals to avoid, minimize, and/or mitigate potential impacts on water resources.

Affected Environment

Drainage Basins and Land Cover

The City of Bellevue consists of approximately 37.5 square miles of land area, and is currently developed with medical, commercial office, and retail uses, as well as residential land uses. In general, stormwater runoff drains to roadside ditches, catch basins, and storm drains. Runoff is collected and conveyed into larger storm drains within the major streets, and discharges into local creeks and drainage tributaries.

Bellevue has a wealth of both surface and groundwater resources. There are about 79 miles of streams within the city limits. There are also approximately 13 miles of large-lake shoreline (Lake Washington and Lake Sammamish); and smaller lakes that are considered by some to be wetlands (Larsen Lake, Lake Bellevue, and Phantom Lake); and the 320-acre wetland known as the Mercer Slough.

The total area subject to the city's Shoreline Master Program (SMP) is approximately 960 acres (1.50 square miles), encompassing 19.7 miles of stream and lakeshore.

The City of Bellevue is already highly urbanized. Under current conditions, most of this pollution-generating hard surface area is directly connected to conveyance systems that drain to minimally treated stormwater to the creek basins.

Water Quality

Water quality conditions for the city's water bodies are generally consistent with urban developed areas, such as higher concentrations of metals and sediments, elevated water temperature, and increased fecal coliform (City of Bellevue 2022; King County 2021).

Groundwater

There are several wells within the larger vicinity of drainage basins, including the Beaux Arts Village, which obtains municipal water primarily from groundwater from the City of Bellevue (King County 2009). Glacial till underlies much of the City of Bellevue at a shallow depth. Water infiltrates relatively slowly through this material. During rainy seasons, it is common for perched groundwater to develop above layers of glacial till. During the drier summer months, groundwater plays a critical role in providing base flows to the creeks.

Flooding

Federal Emergency Management Agency (FEMA) 100-year floodplains, as mapped by FEMA, were analyzed to determine potential flooding within and downstream of the City of Bellevue. The 100-year floodplain lies along the Mercer Slough and the Kelsey Creek and West Tributary Basin Creek drainage basins that lie along the creek extents (FEMA 2018; King County 2021). Numerous small floodplains exist in areas of Bellevue, such as along Coal Creek west of I-405; Kelsey Creek through the Lake Hills Greenbelt, Glendale Golf Course, and Kelsey Creek Park; Valley Creek near Highland Park; Richards Valley; and the shoreline of Lake Sammamish. Under the Federal Flood Insurance Program, some floodplain development is allowed if eligibility requirements are met. The city regulates land uses and land alteration activities to minimize the potential for damage from flooding.

Bellevue's drainage system – composed of streams, lakes, wetlands, flood detention sites, pipes, and ditches – has been designed to hold and carry water during storms to prevent flooding. However, when intense storms hit and overwhelm the system, flooding can occur.

Potential Impacts of the Comprehensive Plan Periodic Update

The purpose of this memo is to provide a broad overview of protected water resources within the City of Bellevue for the purposes of future planning. Individual projects will continue to be subject to review under the laws described above while undergoing a SEPA review. The SEPA process identifies potential concerns of specific projects early in the environmental review and permitting process. The Comprehensive Plan Periodic Update is a governmental action involving decisions on policies, plans, or programs that contain standards controlling the use or modification of the environment, which is considered to be a non-project action under SEPA. The Plan proposes to contain growth in an urban area per the GMA and protect water resources through city codes. Thus, adoption of the Comprehensive Plan Periodic Update, regardless of the alternative selected, is not expected to have a significant adverse impact on water resources.

Future site-specific development projects under the Comprehensive Plan Periodic Update could result in adverse impacts on water resources. However, those projects will be subject to existing regulations (discussed above) that protect water resources. These existing regulations include the Clean Water Act, state regulations protecting Waters of the State, the Shoreline Management Act, the Shoreline Master Program, Bellevue City Codes, Bellevue's CAO, Ecology 303(d) list, Bellevue stormwater regulations, policies in the city's current Comprehensive Plan, and underlying land use permit review processes and regulations. Existing regulations will require detailed site-specific analyses of the impacts resulting from those projects, and the implementation of required avoidance, minimization, and/or mitigation measures, when the associated plans and project permit applications are submitted for city review and processing.

References

City of Bellevue. 2017. "Sturtevant Creek Basin Drainage Details". Accessed April 2023. https://bellevuewa.gov/city-government/departments/utilities/conservation-and-the-environment/drainage-basins/sturtevant-creek-basin-drainage-details.

City of Bellevue. 2021. City of Bellevue Environmental Performance Dashboard. Accessed April 2023. https://cobgis.maps.arcgis.com/apps/MapSeries/index.html?appid=be30baa631864324bd2119db1b48514e.

City of Bellevue. 2022. Water Quality Report 2022. PWS ID: 05576B. Accessed April 2023. https://bellevuewa.gov/sites/default/files/media/pdf_document/2022/Water%20Quality%20Report%2022.pdf.

City of Bellevue. 2023. Drainage Basins. Accessed April 2023. https://bellevuewa.gov/city-government/departments/utilities/conservation-and-the-environment/drainage-basins.

Ecology (Washington Department of Ecology). 2023. "Water Quality Atlas". Accessed April 2023. https://apps.ecology.wa.gov/waterqualityatlas/wqa/startpage.

EPA (Environmental Protection Agency). 2022. "Partial Approval and Partial Disapproval of Washington 2014-2018 303d List". https://www.epa.gov/tmdl/partial-approval-and-partial-disapproval-washington-2014-2018-303d-list.

FEMA (Federal Emergency Management Agency). 2018. FEMA Flood Map Service Center (MSC). Accessed April 2023. https://msc.fema.gov/portal/home.

King County. 2018. iMap Tool using King County spatial information. Accessed April 2023. https://kingcounty.gov/services/gis/Maps/imap.aspx.

King County. 2021. "Streams Monitoring Home". Accessed April 2023. https://green2.kingcounty.gov/streamsdata/Default.aspx.

INTENTIONALLY BLANK

APPENDIX G Relationship of Climate Change Vulnerability to the Alternatives

Climate Change–Related Impacts

Climate change-related impacts may include both those contributions from proposed actions and alternatives to climate change, and the observed and reasonably foreseeable future effects of climate change on a proposed action, its alternatives, and the surrounding area, including increased vulnerabilities and their amelioration.

The City of Bellevue is conducting a Climate Vulnerability Assessment to determine the extent to which climate change is likely to affect residents, the built environment, and natural systems. Climate projections for the assessment were obtained from the University of Washington's Climate Impacts Group.

The City of Bellevue will likely experience the following over the next 50 years (Climate Impacts Group 2009; Roop et al. 2020):

- Increasing average annual air temperatures and extreme heat events
- Increasing extreme precipitation events, particularly during the winter
- Increased risk of runoff, erosion, and landslides or mudslides
- Increased frequency and extent of flood events
- More prolonged periods of drought, particularly during summers, in soil moisture and streambeds
- Increasing stream temperatures
- Increasing frequency, severity, and extent of wildfires (e.g., local risk is low but wildfire smoke will be an issue as fires increase across the Pacific Northwest)

Climate Vulnerability Index

PURPOSE OF BELLEVUE CLIMATE VULNERABILITY INDEX

The Bellevue Climate Vulnerability Index (CVI) is being developed as part of the Bellevue Climate Vulnerability Assessment. The CVI includes 30+ indicators and combines them to form an index that supports a planning-level view of climate vulnerability in Bellevue to help identify areas of the city that may be more or less vulnerable to the impacts of climate change. The indicators include metrics for climate stressors, demographics, community health, critical areas, and others relevant to the spatial variability of climate vulnerability.

Climate vulnerability in this context is defined as exposure to a changing climate based on regional climate trends for extreme heat and precipitation, and an overall vulnerability index made up of subindices:

- A sub-index reflecting local environmental conditions including flooding, air quality, and heat data
- A sub-index reflecting the inherent sensitivity of people (e.g., health or age) or environments (e.g., geologic hazards, water quality) to a changing climate
- A sub-index regarding the capacity of the community and place to cope or adapt to the impacts of a changing climate

The conceptual formula is:

Climate Vulnerability = Regional Climate Change Exposures + Local Environmental Exposures Sub-index + Sensitivity Sub-index + (Low) Adaptive Capacity Sub-index

The CVI sums over 30 indicators of climate vulnerability at the parcel level and displayed at larger and/or generalized geographies (e.g., census block groups, heat maps, etc.), which help to identify where Bellevue is more or less vulnerable to climate change. The indicators are drawn from literature and studies regarding social vulnerability, health, environment, and climate change. For example, some areas are more vulnerable due to extreme heat, such as “heat islands” with more pavement and fewer trees, or areas with a higher concentration of older residents. Some areas are vulnerable to extreme precipitation such as floodplains and landslide hazard areas, along with populations that live alone or have less access to a vehicle. The index provides information useful for Bellevue to develop strategies to enhance the city’s resilience over the medium and long-term and include the strategies in plans, budgets, partnerships, and more.

INDEX INDICATORS

An index is a calculation used to summarize multiple datasets into one measure and normalizes or standardizes dissimilar data. This index uses the standard score, or z-score, which is a statistical measure that describes how many standard deviations away from the mean a given value is. Scores greater than the mean have a positive value, and scores less than the mean have a negative value. For each indicator dataset, values are standardized by calculating the corresponding z-score for each value, creating an “apples-to-apples” measure by which these dissimilar datapoints are compared.

For each component of climate vulnerability (exposure, sensitivity, and adaptive capacity), the indicators are standardized and then averaged to create an average z-score for each component. These three component

z-scores are then averaged together to create the final Climate Vulnerability Index value. To visually present the CVI, final index values are classified based on quintile categorization, which distributes the values into five groups of an equal number of values based on the total range of scores. The final group results in lower, medium-low, medium, medium-high, and higher vulnerability classifications, emphasizing the relative nature of the calculation.

Table G-1 shows the exposure, sensitivity, and adaptive capacity indicators selected for the index.

- **Regional Exposure:** Exposure indicators for extreme heat and extreme precipitation are considered in relation to local environmental exposures, sensitivity conditions, and adaptive capacity conditions in Bellevue. These extreme heat and extreme precipitation data are outside of the CVI given the fairly constant increase within the Bellevue city limits.
- **Local Exposure Sub-index:** This sub-index contributes to the CVI and is comprised of equal parts flooding, air quality, and heat considering local conditions. Regional climate exposures such as extreme precipitation could exacerbate the depth and extent of flooding. Extreme heat can exacerbate the health conditions of persons also exposed to air pollution, and extreme heat can be magnified by local environmental conditions (e.g., less trees, more pavement).
- **Sensitivity Sub-index:** Sensitivity is the component of the CVI addressing attributes inherent to the population or place that make them predisposed to increased impacts from climate exposure. The indicators for sensitivity are categorized into sub-categories of age, environment, and health conditions.
- **Adaptive Capacity Sub-index:** Adaptive capacity is the component of the CVI addressing attributes related to a population or environment's capacity to adapt to increased exposure to climate change. The indicators for adaptive capacity are categorized into sub-categories of socioeconomic, transportation, housing/built environment, employment, health, and environment/ecologic.

These components—exposure, sensitivity, and adaptive capacity—taken together create the CVI.

TABLE G-1 **Indicators for Bellevue CVI**

Sub-Category		Indicator
LOCAL EXPOSURE		
Extreme Heat	(+)	Urban heat island
Air Quality	(+)	Air Quality (PM2.5)
Extreme Precipitation	(+)	100-yr Floodplains (potentially include 500-yr Floodplains)
	(+)	Historically Flood-Prone Areas
SENSITIVITY		
Age	(+)	Under 5 years old
	(+)	Over 65 years old
Environment	(+)	Steep Slopes/Geologic Hazards (liquefaction/ landslide hazards)
	(+)	Poor Stream/Waterbody Health – 303d list for bacteria, dissolved oxygen, and temperature
Health Conditions	(+)	Diabetes – crude rate in population >= age 18
	(+)	Asthma – crude rate in population >= age 18
	(+)	Respiratory Disease - COPD – crude rate in population >= age 18
	(+)	Coronary Heart Disease – crude rate in population >= age 18
	(+)	Poor Physical Health – crude rate in population >= age 18
	(+)	Poor Mental Health – crude rate in population >= age 18

Sub-Category		Indicator
ADAPTIVE CAPACITY		
Socioeconomic	(+)	People of Color
	(+)	Population Experiencing Poverty
	(+)	Low Educational Attainment – less than high school degree
	(+)	Linguistic Isolation – households with limited English speaking at home
	(+)	Living Alone – households comprised of householder living alone
	(+)	Housing Cost Burden – renter households spending >30% of income on housing
	(+)	Access to Vehicle – households without access to a vehicle
Transportation	(-)	Access to Frequent Transit
Housing/Built Environment	(+)	Housing Condition – houses built before 1960
	(+)	Affordable Housing Inventory
	(+)	Impervious Surfaces
	(-)	Proximity to City-Owned Facilities that increase adaptive capacity (libraries, community centers, fire stations)
Employment	(+)	Unemployment
	(+)	Outdoor Professions – jobs likely to be performed outside (NAICS codes 11, 21, and 23)
Health	(+)	Adult Population Without Health Insurance
Environment/ Ecologic	(-)	Tree Canopy Coverage
	(-)	Access to Parks/Open Space

NOTES: A (+) means that a higher indicator value contributes to a *higher* index value, while a (-) means that a higher indicator value contributes to a *lower* index value.
COPD = chronic obstructive pulmonary disease.
NAICS = North American Industry Classification System

REGIONAL CLIMATE EXPOSURE

Exposure of people, ecosystems, and infrastructure to climate change could include:

- Extreme precipitation
- Extreme heat

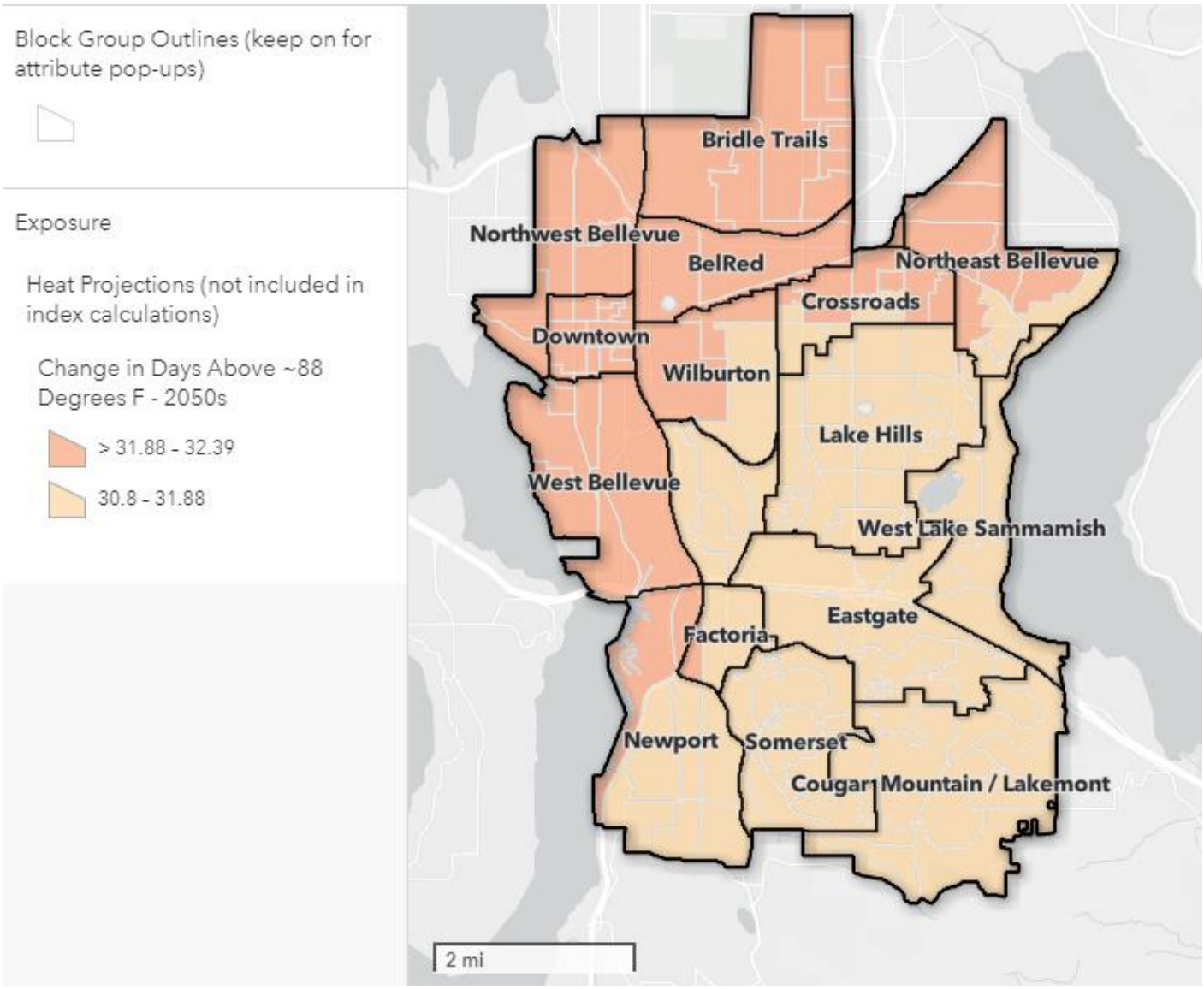
These are the regional exposures of focus in this Appendix. Other climate exposures such as wildfire smoke could also affect Bellevue and would be addressed in the Climate Vulnerability Assessment.

The projected changes are for the 2050s (2040–2069) or the 2080s (2070–2099), as compared to the historical period of 1981–2010. The climate projections are all based on Representative Concentration Pathway (RCP) 8.5, a global emissions scenario developed for the Intergovernmental Panel on Climate Change (IPCC), in which global emissions continue unabated throughout the rest of the century. There are other less extreme scenarios that were considered, namely RCP 4.5, in which emissions stabilize by mid-century, then decline sharply after. Projections also exist for the 2030s, however they show very little variability and as such, are not recommended for use in this project. For the purpose of long-range climate planning, the 2080s are used as the timeframe to look at climate projections.

Extreme Heat

Extreme high temperatures are anticipated to increase over historic conditions. In Bellevue by 2050 the change in the number of days above 88 degrees Fahrenheit humidex (heat and humidity) are projected to increase by 30.8 to 32.4 days (**Figure G-1**). Because the change in extreme heat days is less than 1 to 2 degrees across the city, it is not part of the CVI.

The change in the number of 88°F humidex days is an indicator of stress on public health. Local exposure data regarding heat islands can provide local geographic information where extreme heat would be more or less felt. Combined with impervious area, lack of tree canopy, and populations with age or health conditions, some areas of Bellevue could be more vulnerable.



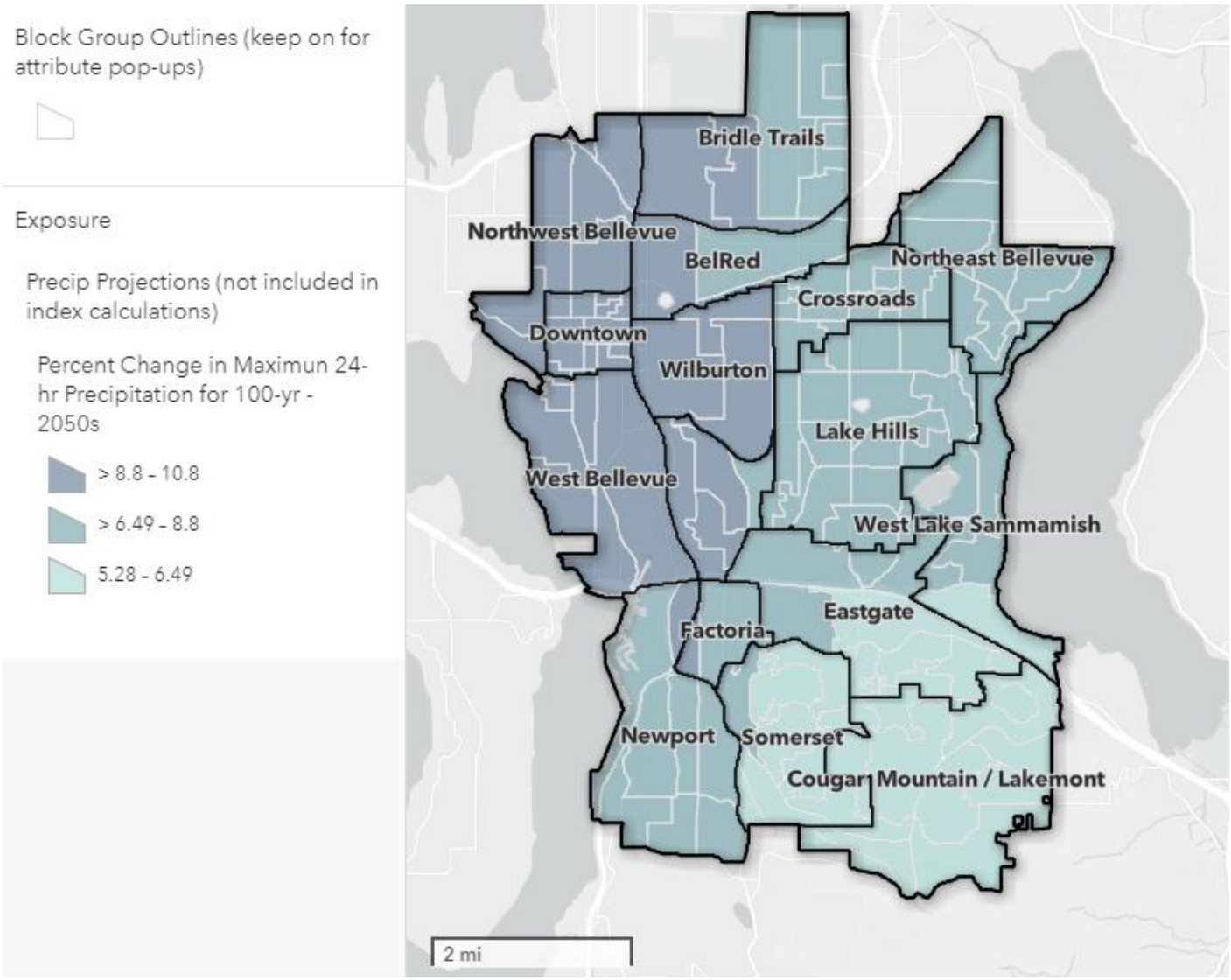
SOURCE: BERK 2023; DeVine et al. 2017

FIGURE G-1 **Extreme Heat Change in Days above 88 Degrees F Humidex – 2050s**

Extreme Precipitation

The intensity of rainstorms is anticipated to increase at greater likelihood intervals (2-year or 25-year) and at lesser likelihood storms (100-year) stressing stormwater systems. **Figure G-2** illustrates the percent change in the Maximum 24-Hour Precipitation for the 100-Year Storm by the 2050s. The percent change could differ by 5.3% to 10.8% from south to central to west Bellevue. Although the percentage change is measurable across the city, it is not part of the CVI. In the future if the city determines that the precipitation data is sufficiently granular, it could include it in the CVI in the future.

This indicator can be used to consider how climate change could affect stormwater system capacity, floodplain conditions, and erosion and landslide potential.



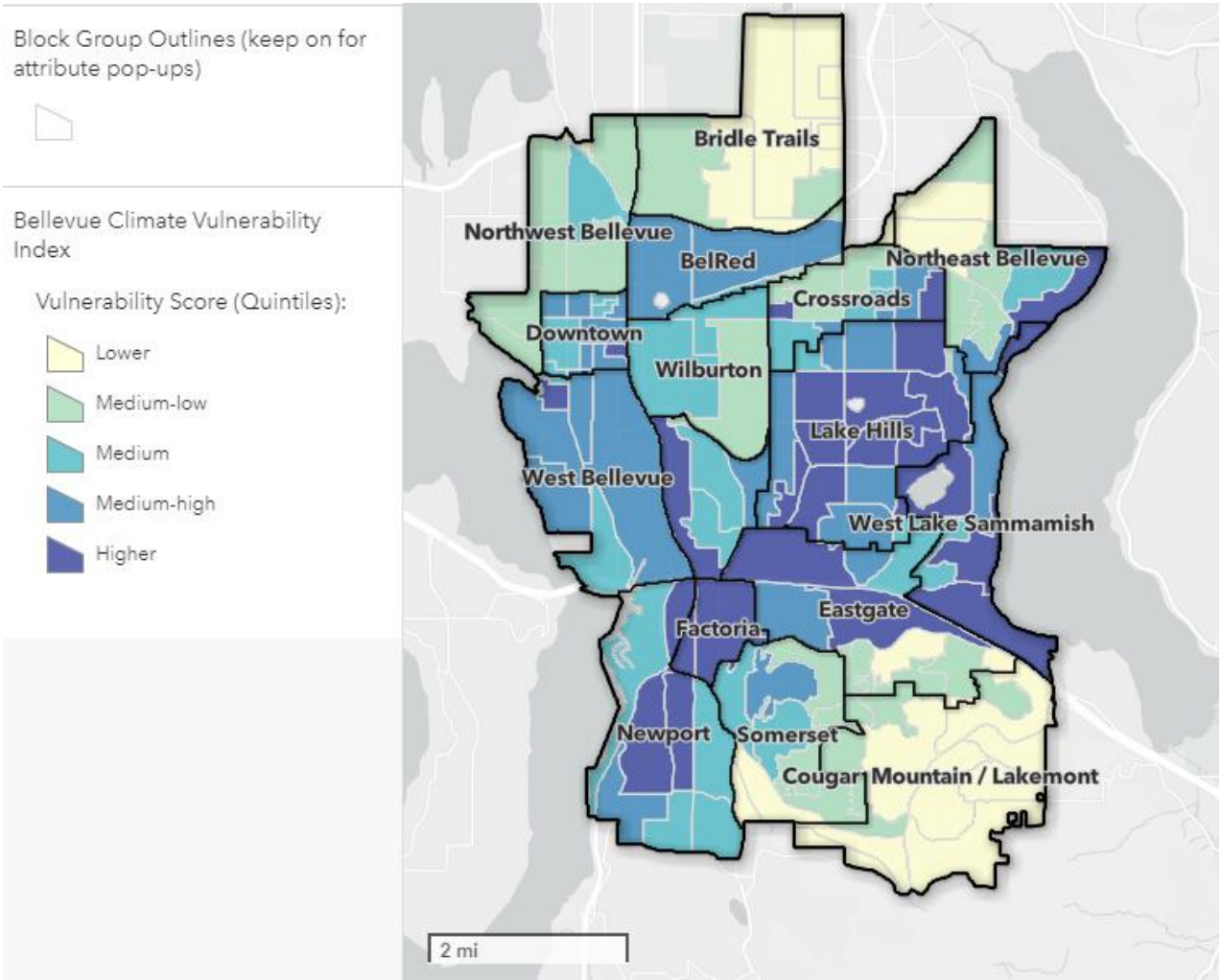
SOURCE: Climate Impacts Group 2022; BERK 2023

FIGURE G-2 **Extreme Precipitation Exposure**

CLIMATE VULNERABILITY INDEX

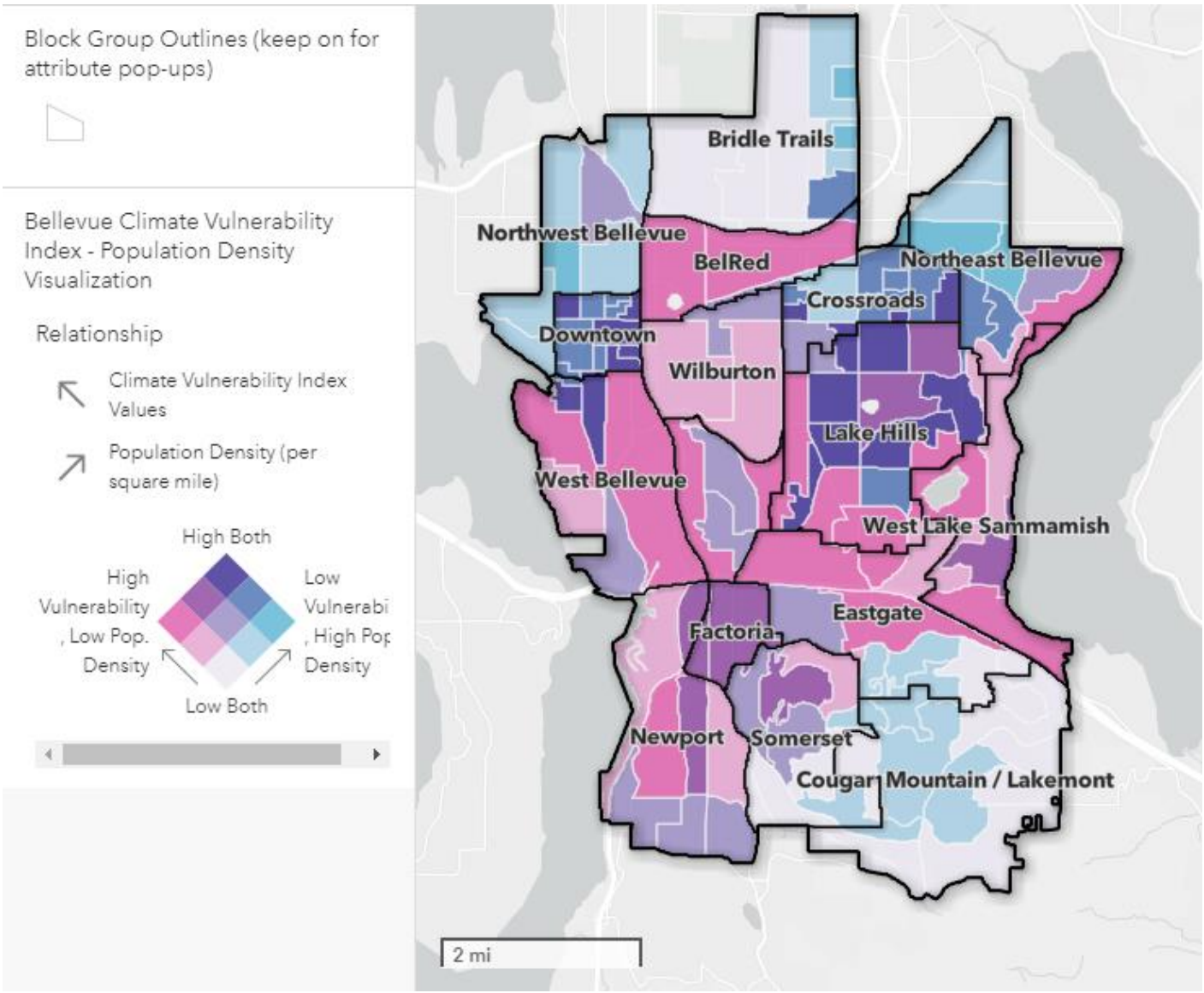
The indicators in Table G-1 were used to calculate index values and a **draft** Climate Vulnerability Index map is shared below without population density (**Figure G-3**) and with population density (**Figure G-4**). **These indices may change over time as the data changes or improves.** Maps showing individual exposures are also provided for additional context. This climate vulnerability information is meant to support the planning-level review of Comprehensive Plan growth alternatives. The city will consider multiple factors in its selection and refinement of a preferred alternative.

This map illustrates the effect of population density together with climate vulnerabilities. For example, BelRed has a medium-high index score on Figure G-3 without population density accounted for. With population accounted for in Figure G-4, BelRed is noted as a higher vulnerability and lower population density area. As the area grows, the city can consider the factors that identify this area as higher vulnerability (e.g., extreme heat exposure, urban heat island, and lower tree canopy) and employ strategies to reduce vulnerability (e.g., green infrastructure, passive cooling, etc.).



SOURCE: BERK 2023

FIGURE G-3 **Climate Vulnerability Index without Population Density**



SOURCE: BERK 2023

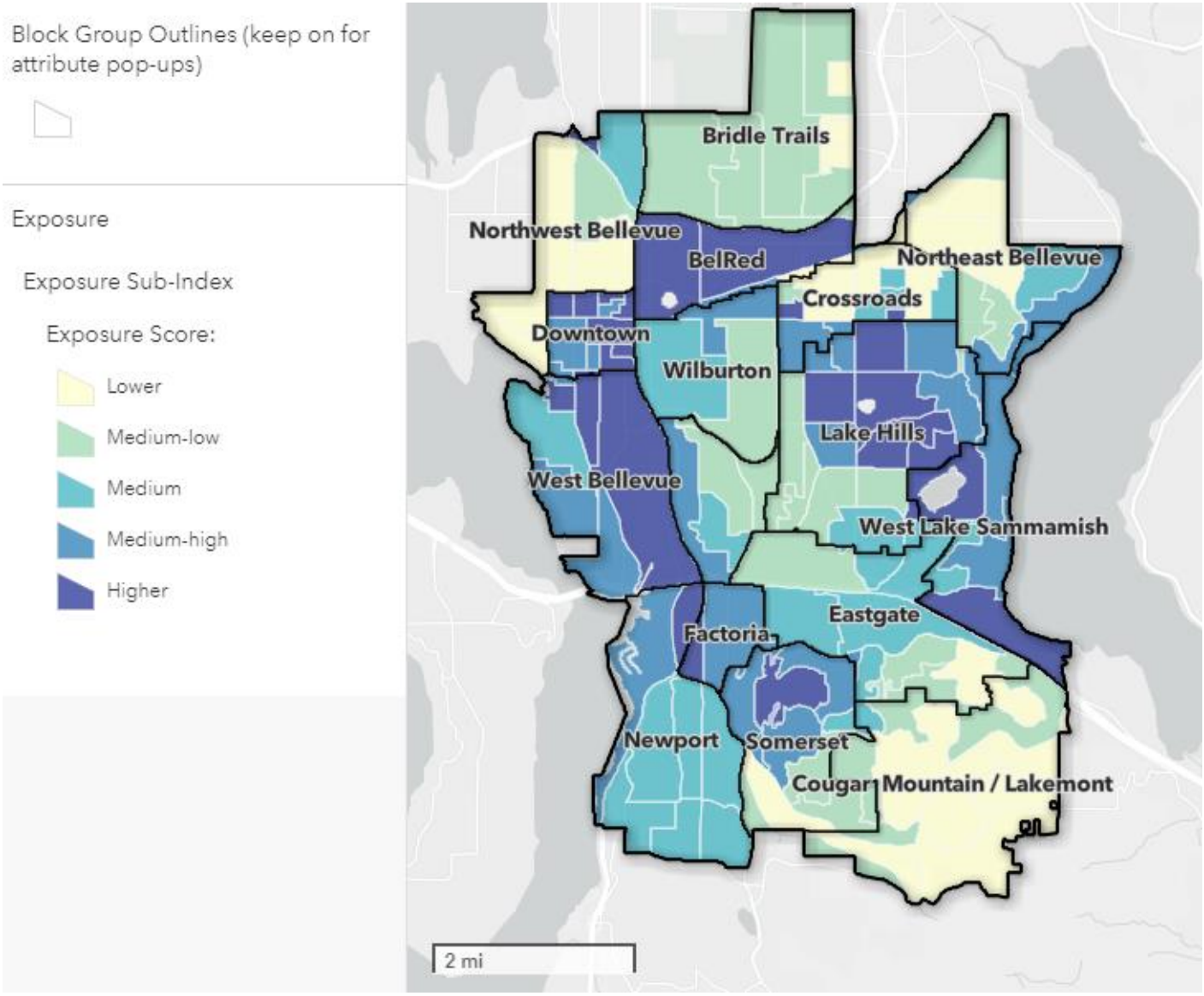
FIGURE G-4 **Climate Vulnerability Index with Current Population Density**

LOCAL EXPOSURE SUB-INDEX

Data in the sub-index includes the following, which are equally weighted by category:

- **Flooding:** Floodplains and Historical flooding hot spots
- **Air Quality:** CLINE modeled PM2.5 concentrations. This represents Average Modeled Concentration of Particulate Matter 2.5 (e.g., air particles that are 2.5 microns or less in width that pose a high risk to human health)
- **Heat:** King County evening heat index. Generally there are heat islands in west, central, and east Bellevue.

The results of the sub-index show relatively higher exposure to local environmental conditions in BelRed, Lake Hills, West Lake Sammamish, Somerset, Factoria, West Bellevue, and Downtown, in clockwise order (**Figure G-5**). In Downtown and BelRed there is greater local exposure to air pollution and heat islands. In Lake Hills and West Lake Sammamish there is local exposure to heat islands and floodplains. In West Bellevue and Factoria there is exposure to flooding hot spots, air pollution, and heat islands.

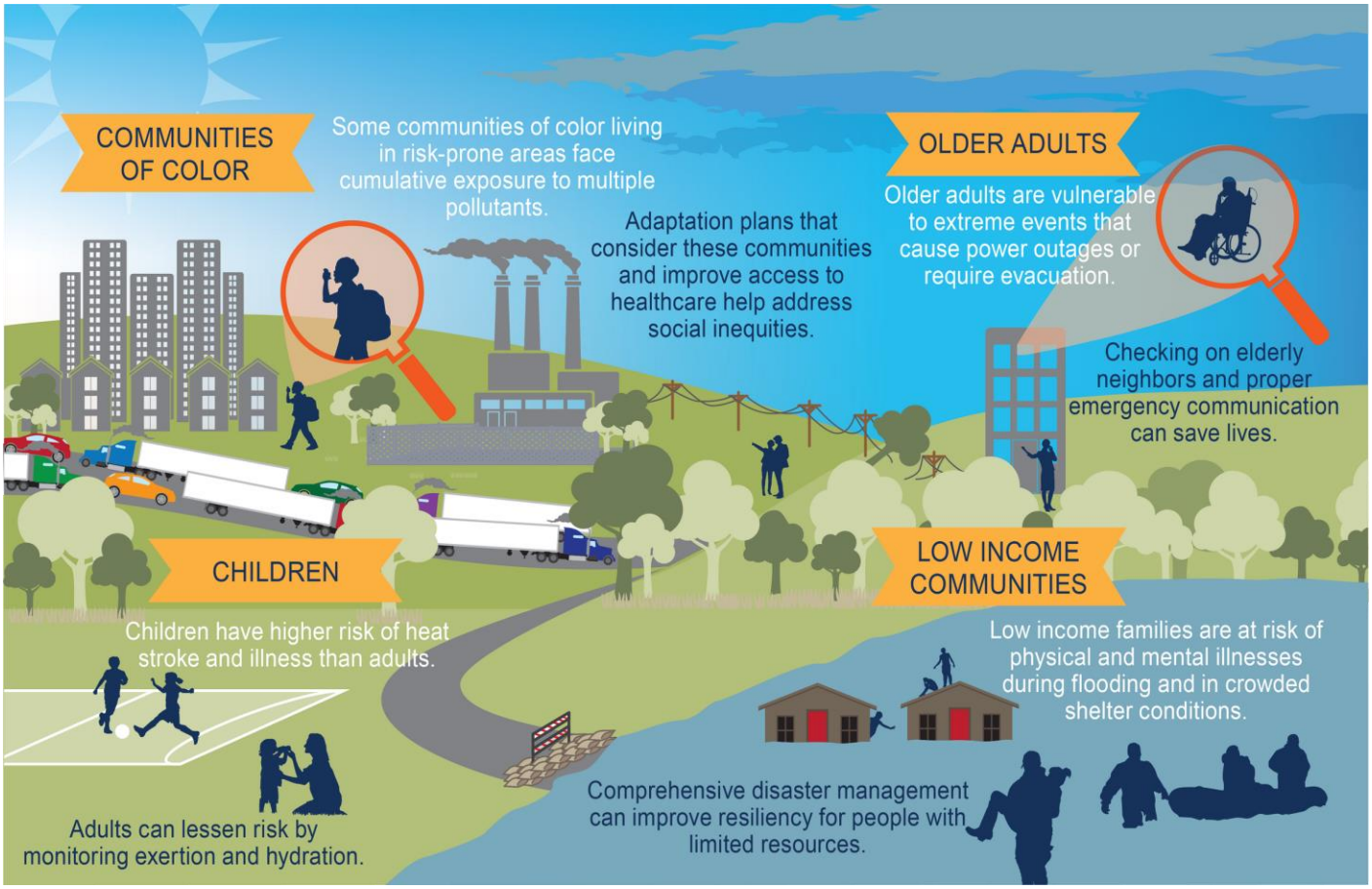


SOURCE: BERK 2023

FIGURE G-5 **Local Environmental Exposure Sub-Index**

SOCIAL VULNERABILITY AND SENSITIVITY AND ADAPTIVE CAPACITY SUB-INDICES

Based on social vulnerability and climate change research, communities that tend to be more sensitive to climate stressors include older people, children, low-income families, and people of color and immigrant communities (**Figure G-6**). People that are elderly may have more limited mobility or preexisting health conditions, and children under 5 years old may have a harder time regulating temperature and may have underdeveloped immune systems. Low-income households may be more susceptible to illnesses and have limited resources to adapt or respond to climate change. Communities of color may have cumulative exposures to pollution and health and social inequities. People who speak English less than very well may have more difficulties during evacuation and difficulties accessing post-disaster funding and other resources.



SOURCE: EPA 2018

NOTES: Examples of populations at higher risk of exposure to adverse climate-related health threats are shown, along with adaptation measures that can help address disproportionate impacts. When considering the full range of threats from climate change as well as other environmental exposures, these groups are among the most exposed, most sensitive, and have the least individual and community resources to prepare for and respond to health threats. White text indicates the risks faced by those communities, while dark text indicates actions that can be taken to reduce those risks.

FIGURE G-6 **Vulnerable Populations**

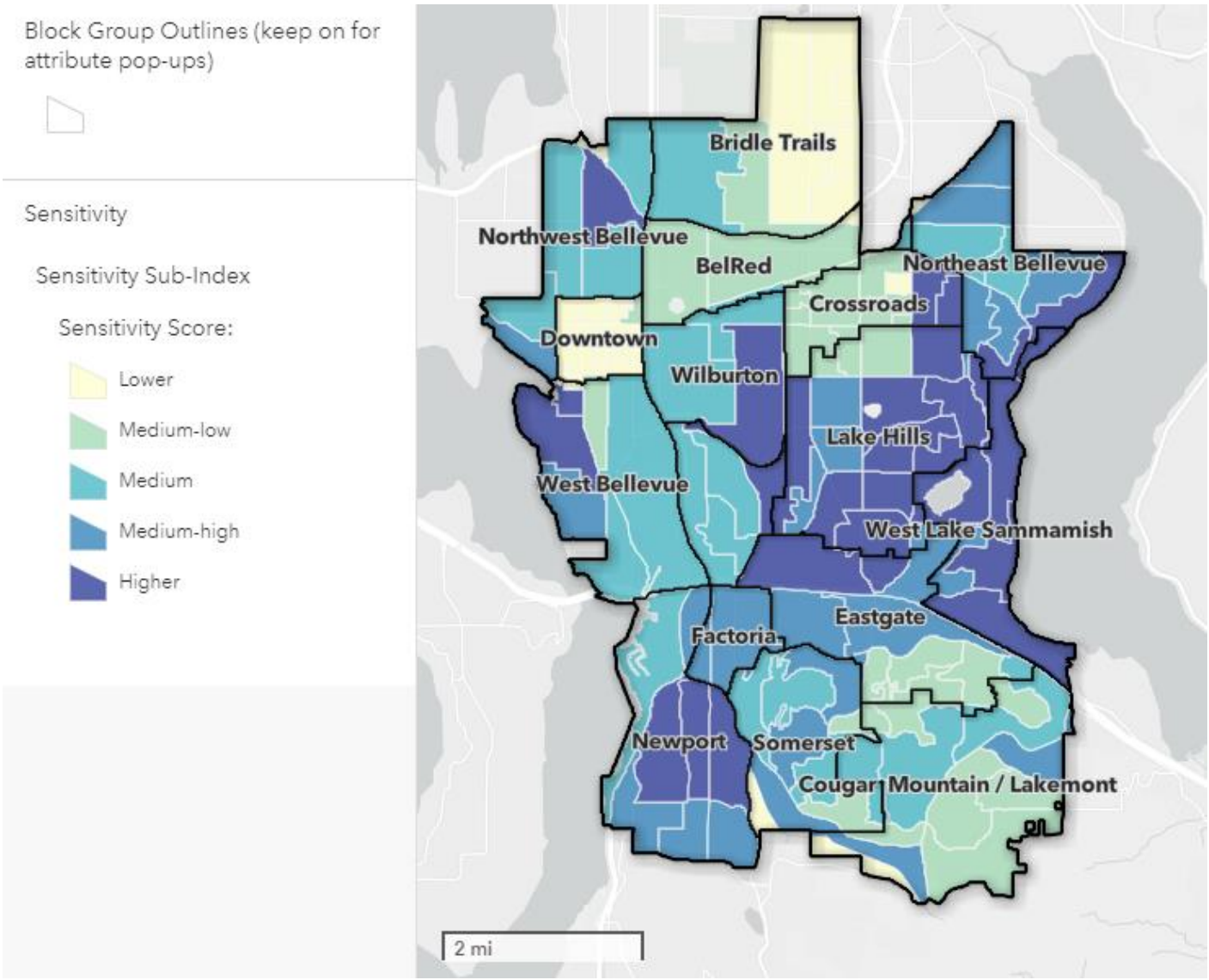
Understanding the location and number of populations that are more sensitive or less adaptable to climate change events can help communities develop strategies to increase resilience.

Examples of sensitivity indicators (e.g., under 5 years old, over 65 years old, air quality) and adaptive capacity indicators (e.g., heat island, linguistic isolation) in Bellevue are shared below in the sub-indices for sensitivity and adaptive capacity.

Sensitivity Sub-Index

The sensitivity sub-index addresses a variety of health or environmental conditions that represent conditions unchangeable at the time of the climate stressor (**Figure G-7**):

- **Age:** Under 5 years old and Over 65 years old:
  - *Population Age 65 Years or Older:* Generally higher shares in north and east Bellevue.
  - *Age under 5 Years:* Generally higher in central and west Bellevue.
- **Environment:** Steep Slopes/Geologic Hazards (liquefaction, erosion, steep slopes) and Poor Stream/Waterbody Health – 303d list for bacteria, dissolved oxygen, and temperature:
  - Seismic/liquefaction hazards are along West Lake Sammamish and West Bellevue.
  - Steep slopes are found in most neighborhoods with greater concentrations in east, south, and west areas of Bellevue.
  - Erosion is more prevalent in the northern half of Bellevue and along both lakes.
  - Poor waterbody health is found in Wilburton, West Bellevue, and the south end.
- **Health Conditions:** Diabetes, Asthma, Respiratory Disease – COPD, Coronary Heart Disease (Adults), Poor Physical Health (Adults), Poor Mental Health (Adults):
  - Poor Physical Health: Generally central and south Bellevue



SOURCE: BERK 2023

FIGURE G-7 **Sensitivity Sub-Index**

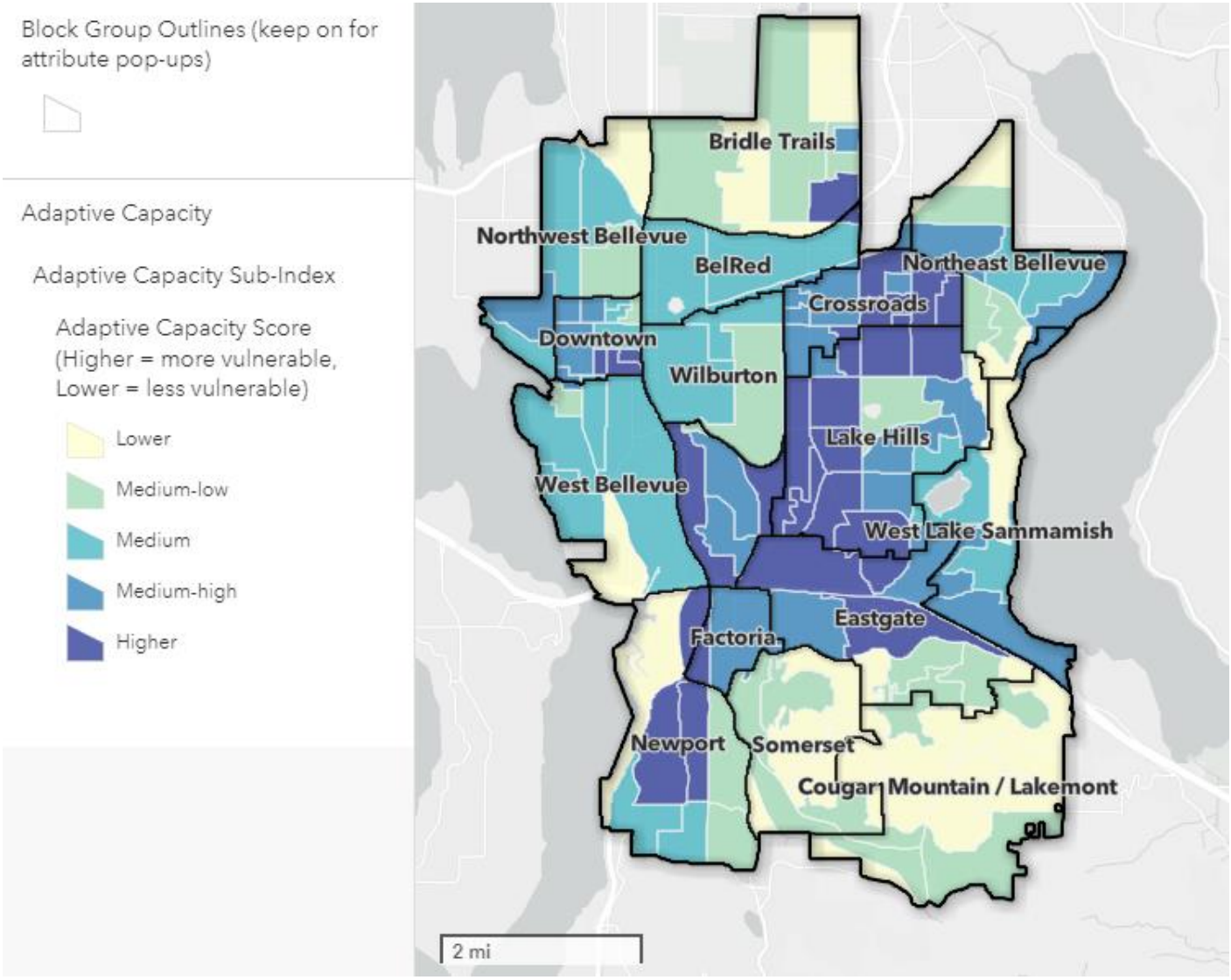
Adaptive Capacity Sub-Index

A wide variety of indicators are part of the adaptive capacity sub-index including:

- **Socioeconomic:** race, poverty, lesser education, linguistic isolation, lack of vehicle, other
- **Transportation:** Access to Frequent Transit (current)
- **Housing/Built Environment:** housing condition (built before 1960), affordable housing inventory, impervious surfaces, proximity to libraries, community centers, fire stations
- **Employment:** Unemployment, Outdoor Professions

- **Health:** Adult Population Without Health Insurance
- **Environment/Ecologic:** Tree Canopy Coverage, Access to Parks

The areas with more vulnerable populations and lower quality built environment conditions (e.g., less tree canopy, more impervious) are shown in **Figure G-8**. There are more areas with higher adaptive capacity in Crossroads, Lake Hills, Eastgate, Newport, Factoria, Woodridge, and Downtown.



SOURCE: BERK 2023

FIGURE G-8 **Adaptive Capacity Sub-Index**

Climate Vulnerability and Alternatives Analysis

For the Comprehensive Plan Periodic Update, Bellevue has identified four alternatives to test growth options: Alternative 0 (the No Action Alternative) and three Action Alternatives (Alternatives 1–3). Alternative 0 meets 2044 housing and job growth targets, and the Action Alternatives increase housing and jobs to address trends and affordable housing needs.

Under the Action Alternatives, more capacity for growth is proposed in Mixed Use Centers such as Downtown, BelRed, Wilburton-East Main, Crossroads, Eastgate, and Factoria; areas near transit corridors (referred to as transit-proximate areas) and Low Density Residential areas; and a smaller increase in Neighborhood Centers. See **Table G-2**, **Table G-3**, and **Figure G-9**.

TABLE G-2 **Housing and Job Growth Distribution by Alternative, Citywide**

Location	Alternative 0 No Action		Alternative 1		Alternative 2		Alternative 3	
	Housing	Jobs	Housing	Jobs	Housing	Jobs	Housing	Jobs
Citywide	**41,000**	**124,000**	**59,000**	**179,000**	**77,000**	**177,000**	**95,000**	**200,000**
Mixed Use Centers	31,500	119,500	45,900	171,200	52,600	168,500	60,900	184,500
Neighborhood Centers	100	2,900	100	2,800	1,600	3,800	1,700	3,800
Transit Proximate Areas	17,900	85,300	26,300	123,100	34,100	124,00	36,800	133,000
Low Density Residential	3,700	(200)	4,500	(200)	7,100	(200)	14,600	(200)

SOURCE: City of Bellevue 2023; BERK 2023

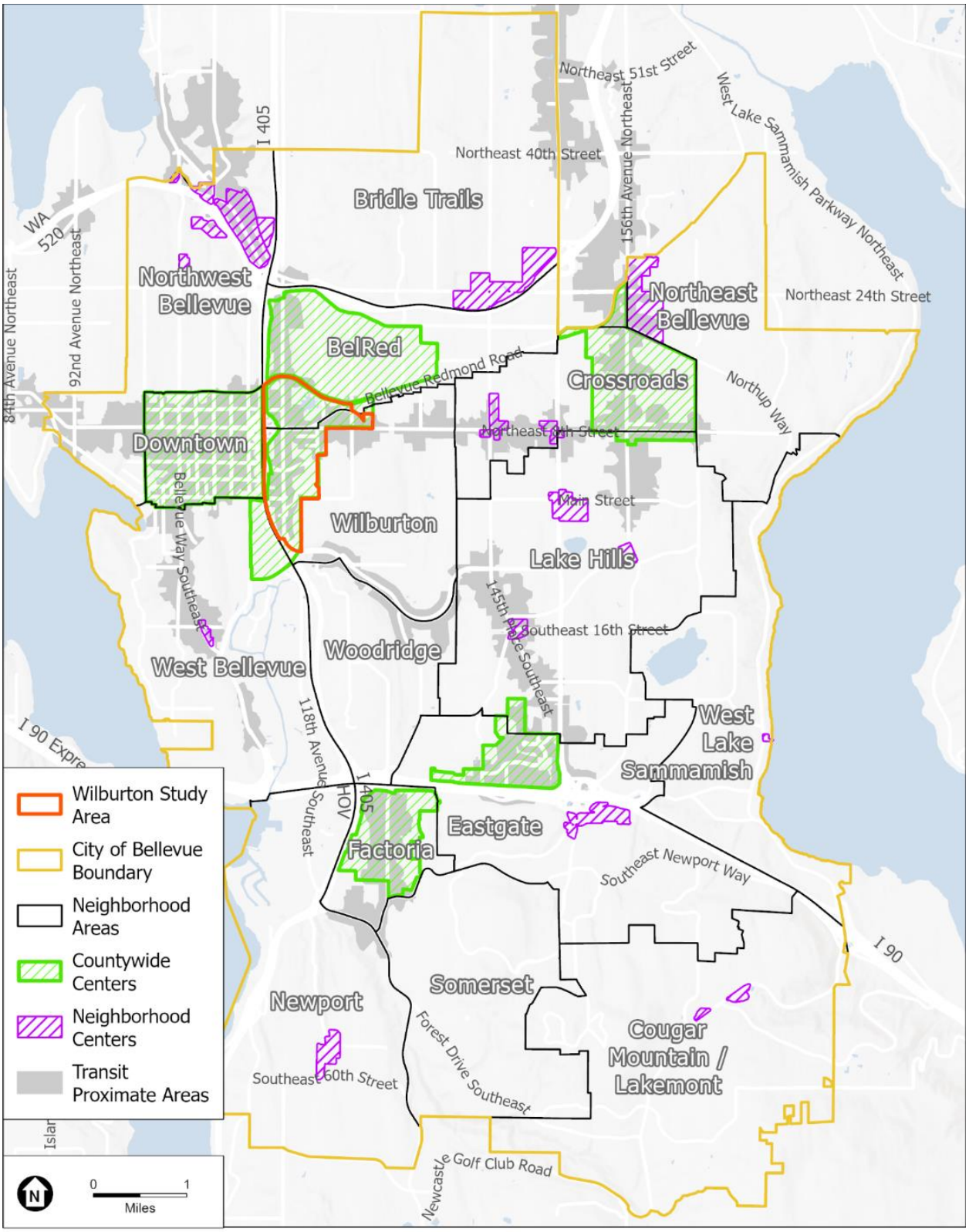
NOTE: Growth estimates are rounded to the nearest 1,000 citywide and 100 for geographic subareas. The actual pace of growth could differ or be less than what is shown.

TABLE G-3 **Comparison of Citywide Alternative Features**

Feature	Alternative 0 No Action	Alternative 1	Alternative 2	Alternative 3
Growth Pattern	Downtown and BelRed	Centers: Downtown, BelRed, Wilburton/ East Main, Eastgate, Factoria, Crossroads Other: Gentle density throughout	Mixed Use Centers, Neighborhood Centers, and areas with good access to transit/jobs Other: gentle density throughout	Mixed Use Centers, in and around Neighborhood Centers, areas with good access to transit/jobs and close to Major Employment Centers.
Housing Types	Apartments with studios, 1-bedroom units.	Apartments in Mixed Use Centers with units ranging from 0 to 2 or 3 bedrooms Duplexes, townhomes, and similar types across city	Apartments with studios, 1-bedroom units in Mixed Use and Neighborhood Centers Duplexes to small apartment buildings in areas with access to transit/jobs Duplexes on larger lots	Apartments with studios, 1-bedroom units in Mixed Use Centers. Duplexes to small apartment buildings in areas of high opportunity and near Neighborhood Centers Duplexes on larger lots Additional density allowed in existing lowest density areas
Housing Affordability	Less than 10%	Mandatory inclusionary affordability in growth corridor Increased incentives elsewhere	Tiered incentives in Mixed Use and Neighborhood Centers Increased incentives across city	Mandatory inclusionary affordability in Mixed Use Centers Increased incentives across the city
Transportation Investments	Current	6th Street Extension and multimodal investments in Wilburton study area	Similar to Alternative 1	Similar to Alternative 1 with greater extension of 6th Street.
Plan Policies	Current	Update	Updated	Updated
Code	Current	Updated	Updated	Updated

SOURCE: City of Bellevue 2023; BERK 2023

The Climate Vulnerability Assessment studies sectors including buildings and energy, zoning and development, cultural resources and practices, economic development, emergency management, human health, ecosystems, transportation, waste management, and water resources. This list of topics aligns with some, but not all, of the elements included in the Draft EIS. **Table G-4** summarizes how the alternatives may be affected by the climate-related vulnerabilities of each sector. In general, climatic changes may act as impact multipliers to the land use changes proposed in the alternatives.



SOURCE: City of Bellevue and BERK 2023

FIGURE G-9 **Bellevue Centers, Existing and Proposed**

TABLE G-4 **Climate Vulnerabilities and Comparison of Alternatives**

Sectors	Alternative 0 No Action	Alternative 1	Alternative 2	Alternative 3
Human Health	Lowest capacity for growth could increase risk of displacement of older adults, resulting in a smaller increase in demand for health services as population grows. Also less investment in infrastructure and services that could improve adaptive capacity (e.g., urban heat island and tree canopy).	Under all Action Alternatives, increases in population and employment densities (residents and commuters) and development in Bellevue. • More residents in specific areas (Downtown, BelRed, Factoria, Wilburton) may be exposed to air pollutants and diseases transmitted by food, water, and insects. • More extreme heat events will increase demand for medical services and cooling centers in the city. At-risk individuals, such as the elderly and those with existing health problems, will be more susceptible to these changes, and capacity may be constrained to provide adequate care. Action Alternatives include new policies and code and opportunities to build more resilience in buildings (e.g., building location and landscaping, passive cooling, clean air filters) and to increase human service/emergency services and information to vulnerable populations (e.g., seniors, people living alone, linguistic isolation).		
Buildings & Energy	Some growth capacity in centers and transit corridors. No new policies or code that could address adaptive capacity for tree canopy, parks, energy, and building design (e.g., passive cooling).	More growth capacity in centers and transit corridors. New policies or code that could address adaptive capacity for tree canopy, parks, energy, and building design (e.g., passive cooling).	More growth capacity and opportunity to employ improvements to buildings and infrastructure to be more resilient.	Most growth capacity in centers and transit-proximate areas. Greatest opportunity to build in energy conservation and green infrastructure in new development.
Zoning & Development	Climate stressors could damage housing and make it more challenging for lower income households to respond and exacerbate conditions for people already at risk of displacement. No Action provides the lowest increase in housing and less risk of displacement although also less housing affordability and choice measures; ability to improve adaptive capacity could be reduced. There could ultimately	Slightly greater risk of displacement but provides greater housing types and requires affordability in new units that can improve adaptive capacity and accommodate displaced households.	Greater housing supply and similar displacement risk as Alternative 1. Affordable housing options are incentive based, which may mean less improvement in cost burden.	Compared to Alternatives 0 and 1, greater likelihood of displacement but higher growth capacity and housing supply with which to accommodate displaced households. Given mandatory affordability in centers (and most growth capacity in centers), there should be improvement in cost burden adaptive capacity.

Sectors	Alternative 0 No Action	Alternative 1	Alternative 2	Alternative 3
	be greater risk of displacement as supply is constrained and prices rise, leading to households being priced out of their housing via increasing taxes or rents.			
Economic Development	Potential disruptions to job continuity due to hazards and impacts on business infrastructure. No Action provides substantial but lower growth capacity in jobs with fewer people affected (e.g., fewer commuters). Continuing existing land use, transportation, and other policies may not improve adaptive capacity to the same degree as other alternatives.	Greater capacity for job growth focused in centers with access to multimodal transportation choices (e.g., Wilburton study area). This greater amount of jobs may both expose more workers to climate stressors in Bellevue (although similar elsewhere in the Puget Sound region), but also improve adaptive capacity with greater connectivity and redundancy in systems (e.g., transportation). Improved policies and codes can potentially increase adaptive capacity as areas change and redevelop.	Similar to Alternative 1, with greater growth in jobs.	Similar to Alternative 1, with most growth in jobs focused in centers and corridors.
Cultural Resources & Practices	Lowest capacity for growth resulting in constrained supply and greatest pressure to the tear down and redevelopment of older buildings. No new policies or investments in cultural resources protection.	Under all Action Alternatives, increases in population and employment densities (residents and commuters) and development in Bellevue. • Increased growth capacity may put at risk cultural resources (e.g., historic period structures with pressure for redevelopment) that are also subject to climate-related stresses. However, increased population density may increase financial resources (e.g., taxes collected) to preserve the city's cultural and historic infrastructure (e.g., resources to retrofit existing structures). • Climate change impacts on cultural and historic infrastructure include potential damage from more extreme storms and flood events. These impacts will be especially severe for already aging or degraded infrastructure.		

Sectors	Alternative 0 No Action	Alternative 1	Alternative 2	Alternative 3
Emergency Management	Lowest capacity for growth could increase risk of displacement of older adults, resulting in a smaller increase in demand for emergency services as population grows. Also less investment in infrastructure and services that could improve adaptive capacity (e.g., urban heat island and tree canopy).	Under all Action Alternatives, increases in population and employment densities (residents and commuters) and development in Bellevue. • Increased population may increase the need for emergency management service calls, equipment, and staff capacity. Existing emergency management policies and plans will likely need to be updated and adapted to accommodate this increased population. • With climate change, emergency management response times will likely increase as access to local roads and major transportation routes in the city is disrupted, or there is structural damage from extreme weather events and flooding. Increased risk of damage to emergency management facilities from extreme storms and flooding will further strain resources. • Action Alternatives include new policies and code and opportunities to build more resilience in buildings (e.g., passive cooling, clean air filters) and stormwater systems (e.g., improvements to natural drainage and stormwater facilities), to increase tree canopy coverage and pervious surface in Mixed Use Centers and other infrastructure, and to increase information and services to vulnerable populations (e.g., seniors, people living alone, linguistic isolation).		
Ecosystems	Lower growth capacity, and similar critical area policies and codes for protection.	Under all Action Alternatives, increases in population and employment densities (residents and commuters) and development in Bellevue. • Increased development for housing and jobs under all alternatives could increase the risk that existing species and habitats may be degraded or displaced. Climate change impacts, including warming air and water temperatures, floods, and extreme storms, may affect the growth and survival of many species and will place greater stress on existing green infrastructure and open space. This includes increased drought conditions that may affect the health and survival of Bellevue's tree canopy. • Opportunity with new policies and codes to building more resilience in stormwater and landscaping requirements, addition of trees and native species, and new critical area regulations.		

Sectors	Alternative 0 No Action	Alternative 1	Alternative 2	Alternative 3
Transportation	Lower growth capacity than Action Alternatives. Continuation of city policies on transportation. Growth capacity is focused in major centers. The city would continue to implement multimodal policies.	Under all Action Alternatives, increases in population and employment densities (residents and commuters) and development in Bellevue. • Increased development and population will concentrate more people and traffic in specific neighborhoods. • With climate change, travel will likely be disrupted by extreme weather events and flooding. Aging transportation infrastructure (e.g., bridges, roads) will be at increased risk of damage from climate change. • All Action Alternatives promote more growth capacity in Mixed Use Centers and along transit corridors, particularly Alternative 3. All promote more multimodal connections (e.g., Wilburton study area), which could improve redundancy and evacuation.		
Waste Management	Lower growth capacity than Action Alternatives. Continuation of current waste and emergency response efforts.	Under all Action Alternatives, increases in population and employment densities (residents and commuters) and development in Bellevue. • Increased population will create greater demands on waste, stormwater, and wastewater collection, conveyance, and treatment services and facilities. • More extreme heat events and storms will likely stress the ability of some infrastructure to withstand more extreme conditions. There may also be constraints on residential waste pickup operations due to storms. • Opportunity with new policies and codes to address emergency recovery to greater extent.		
Water Resources	Lower growth capacity than Action Alternatives. Lower water demand. Current policies on conservation continue.	Under all Action Alternatives, increases in population and employment densities (residents and commuters) and development in Bellevue. • Increased population will likely increase demand for water resources. • There will likely be changes in impervious surface cover under all alternatives, although new and redevelopment projects in the city require stormwater runoff best management practices. Increased impervious surface cover would exacerbate the urban heat island effect and stormwater runoff. Certain redevelopment areas (e.g., BelRed and Wilburton) could result in a net gain in tree canopy and pervious surface as large parking lots are transformed into livable high-density neighborhoods. • More extreme heat events will create further demand for water for drinking water and irrigation and exacerbate the urban heat island effect. • Opportunity to improve stormwater design, water conservation, stream protections, and resilience of systems. More opportunity to integrate green infrastructure and tree canopy as redevelopment occurs (e.g., rights-of-way, parks, parking lots).		

References

ACS (American Community Survey). 2021. 5-year Estimates. Accessed March 2023. https://www.census.gov/programs-surveys/acs/.

American Public Health Association. 2021. Climate Changes Health: Vulnerable Populations. Accessed March 2023. https://www.apha.org/topics-and-issues/climate-change/vulnerable-populations.

CAPA/NIHHIS (Climate Adaptation Planning and Analytics Strategies/National Integrated Heat Health Information System). 2021. Heat Watch Seattle & King County. Accessed March 2023. https://osf.io/mz79p/.

CDC (Centers for Disease Control and Prevention). 2023. *PLACES: Local Data for Better Health*. Accessed March 2023. https://www.cdc.gov/places/index.html.

Climate Impacts Group. 2009. *The Washington Climate Change Impacts Assessment*. M. McGuire Elsner, J. Littell, and L. Whitely Binder (eds). Center for Science in the Earth System, Joint Institute for the Study of the Atmosphere and Oceans, University of Washington, Seattle, Washington.

Climate Impacts Group. 2022. Climate Mapping for a Resilient Washington Webtool. Accessed April 2023. https://data.cig.uw.edu/climatemapping/.

Cutter, S.L., B.J. Boruff, and W.L. Shirley. 2003. Social Vulnerability to Environmental Hazards. *Social Science Quarterly* 84(2): 242–261.

DeVine, A., P.T. Vu, M.G. Yost, E.Y.W. Seto, and T.M. Busch Isaksen. 2017. A geographical analysis of emergency medical service calls and extreme heat in King County, WA, USA (2007–2012). *International Journal of Environmental Research and Public Health* 14(8), 937.

EPA (U.S. Environmental Protection Agency). 2018. Vulnerable Populations. *In* Ebi, K.L., J.M. Balbus, G. Luber, A. Bole, A. Crimmins, G. Glass, S. Saha, M.M. Shimamoto, J. Trtanj, and J.L. White-Newsome, 2018: Human Health. In Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 539–571. doi: 10.7930/NCA4.2018.CH14.

EPA (U.S. Environmental Protection Agency). 2021. Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts. Social Vulnerability Report. Accessed March 2023. https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september-2021_508.pdf.

EPA (U.S. Environmental Protection Agency). 2022. Community-LINE (CLINE) Source Model. Accessed March 2023. https://www.epa.gov/healthresearch/community-line-source-model-c-line-estimate-roadway-emissions.

FEMA (Federal Emergency Management Agency). 2023. Accessed March 2023. https://www.fema.gov/flood-maps.

Lundgren, L., and A. Jonsson. 2012. Assessment of social vulnerability: a literature review of vulnerability related to climate change and natural hazards. CSPR Briefing No 9.

Reid, C.E., M.S. O'Neill, C.J. Gronlund, S.J. Brines, D.G. Brown, A.V Diez-Roux, and J. Schwartz. 2009. Mapping Community Determinants of Heat Vulnerability. *Environmental Health Perspectives* 117(11).

Roop, H.A., G.S. Mauger, H. Morgan, A.K. Snover, and M. Krosby. 2020. Shifting Snowlines and Shorelines: The Intergovernmental Panel on Climate Change's Special Report on the Ocean and Cryosphere and Implications for Washington State. Briefing paper prepared by the Climate Impacts Group, University of Washington, Seattle. DOI: doi.org/10.6069/KTVN-WY66.

Yu, J., K. Castellani, K. Forysinski, P. Gustafson, J. Lu, E. Peterson, M. Tran, A. Yao, J. Zhao, and M. Brauer. 2021. Geospatial indicators of exposure, sensitivity, and adaptive capacity to assess neighbourhood variation in vulnerability to climate change-related health hazards. *Environmental Health* 20(31).

INTENTIONALLY BLANK

APPENDIX H

Equity and Environmental Sustainability Performance Metrics

Bellevue Comprehensive Periodic Plan EIS: Equity and Environmental Sustainability Performance Metrics

Introduction

This document includes performance metrics that allow current conditions and future alternatives to be screened for their environmental impacts and advancement of, or hurdles to, racial equity and displacement. Using the performance metrics described below, the consultant team considered how each alternative affects the elements of the environment and equitable outcomes across the EIS topics. This effort provides a cohesive evaluation framework for equity while advancing EIS topics in the context of SEPA requirements. Within the chapters of the EIS, these performance metrics are incorporated into the "Thresholds of Significance" sections.

The performance metrics selected for the EIS are informed by the Comprehensive Plan Racial Equity Toolkit as well as the community engagement that gathers and elevates the voices of marginalized communities. Using the performance metrics, for each topic, the consultant team has identified:

- **Equitable Outcomes:** Evaluate outcomes for equity.
- **Context and Conditions:** As part of a separate Region Development Index (RDI) analysis report, describe historical context and the current situation the Comprehensive Plan Periodic Update seeks to change, including disparate conditions and actions that may be needed to address gaps.
- **Relationship to Engagement:** Integrate EIS Scoping comments and Comprehensive Plan Periodic Update engagement results in terms of issues addressed and mitigation offered.
- **Strategies, Recommendations, and Implementation:** Identify community-centered, actionable strategies particularly in terms of potential policies that serve as mitigation measures.

Equity and Environmental Sustainability Performance Metrics by Plan Outcomes

Exhibit 1 includes the four themes for the Bellevue 2044 Comprehensive Plan Periodic Update and the desired outcomes for each. These themes inform the equity and environmental sustainability performance metrics (**Exhibit 2**).

Exhibit 1: Bellevue 2044 Themes and Desired Outcomes

Comprehensive Plan Themes	Desired Outcomes
Housing	A. Plan for a range of housing types and densities that allow us to maximize recent investments in transit.
	B. Prioritize affordable housing for very low income families.
	C. Address past inequities that have shaped the city.
	D. Plan for residential neighborhoods that protect and promote the health and well-being of residents by supporting equitable access to parks, a clean environment, educational and economic opportunity, and transportation options.
Placemaking	E. Support small, locally owned businesses.
	F. Increase the ability to walk and bike to places close to home.
	G. Create more community gathering spaces.
Sustainability	H. Provide access to open space.
	I. Reduce our environmental impact.
	J. Support health, well-being, and resilience.
	K. Reduce greenhouse gas emissions.
Access	L. Focus housing and job growth in places that have good access to a variety of transportation options.
	M. Enhance the ability to access stores, cafes, services, parks, and other amenities close to home.
	N. Variety of approaches to manage traffic and give people options for getting around the city and the region.

Exhibit 2 lists metrics for equity and environmental sustainability relevant to the desired outcomes identified by the city through regional planning requirements and community engagement. Metrics are incorporated into specific chapters of the EIS through the thresholds of significance used to identify impacts. In some instances, metrics are addressed in a separate Racial Disparity Index (RDI) analysis report. The column on the right identifies the chapters of the EIS the metrics map to or point to the ones included in the RDI analysis report. Metrics listed here include both equity and environmental sustainability metrics. Metrics that address equity are *italicized*.

Exhibit 2: Performance Metrics for Equity and Environmental Sustainability

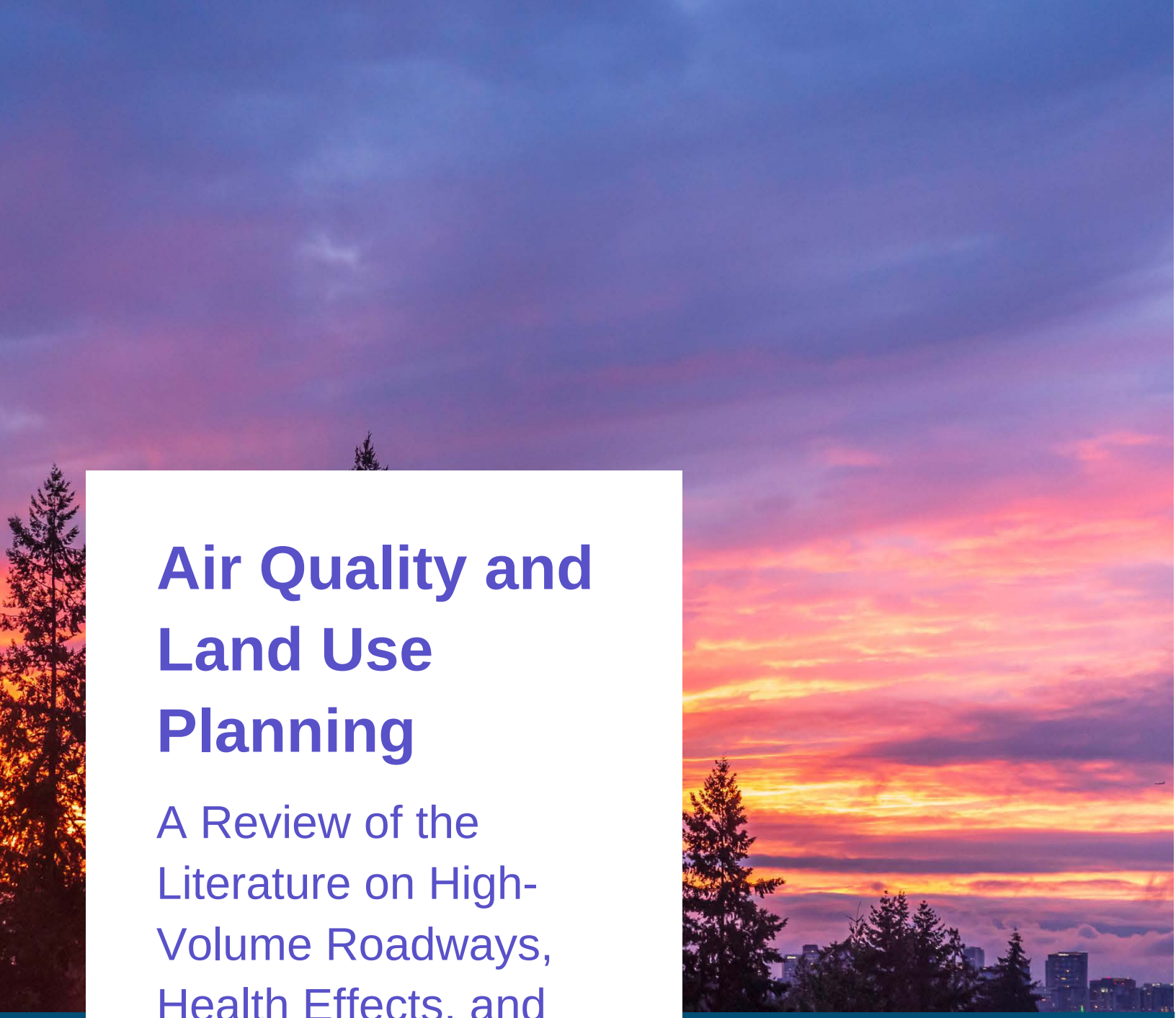
EIS Element	Metric	Comprehensive Plan Theme/Desired Outcome	Notes
Land Use	Land use compatibility – potential for incompatible land use transitions between uses.	Placemaking (outcomes A and D)	
	Extent to which alternatives demonstrate housing and job capacity to accommodate growth targets.	Housing (outcome A)	
	Qualitative discussion on the extent of the following across alternatives: affordable commercial space (defined as 80% of median commercial rent for Bellevue from CoStar); zoning that encourages small-scale commercial pockets in residential or mixed-use areas.	Housing (outcome D), Placemaking (outcomes E, F, G), Access (outcome M)	
	City resources applied to commercial anti-displacement programs.	Placemaking (outcome E)	Included as a mitigation measure
	Estimated commercial displacement	Housing (outcomes A and D)	Addressed qualitatively in Land Use chapter
	Qualitative discussion on access to community gathering spaces and amenities, including grocery stores.	Placemaking (outcome G)	
	At least seven diverse uses allowed/present within ¼ mile of major transit stops.	Access (outcomes L and M)	
Aesthetics	Qualitative discussion about urban form impacts.	Housing (outcomes D), Sustainability (outcomes H and J)	
	Discussion of citywide view impacts and impacts at specific locations in the Wilburton study area.	Housing (outcome D)	
	Discussion of shadow impacts on public spaces and to specific locations in the Wilburton study area.	Placemaking (outcome G)	
	Discussion of light and glare impacts that could hinder public enjoyment of public spaces.	Placemaking (G)	

EIS Element	Metric	Comprehensive Plan Theme/Desired Outcome	Notes
Relationship to Plans and Policies	Alignment with Washington State Growth Management Act.	Housing (outcome A), Transportation (outcome L)	
	Alignment with VISION 2050 Growth Strategy for Bellevue (share of growth in various geographies).	Housing (outcome A), Transportation (outcome L)	
	Alignment with King County Countywide Planning Policies.	Housing (outcome A), Transportation (outcome L)	
Population, Employment	*Amount of population growth in areas with high exposure to contaminated sites and areas near traffic.*	Housing (outcomes C and D), Sustainability (outcome J)	
	Job mix alignment with the city's economic vision.	Housing (outcome D)	
Housing	Number of new units by type and area median income (AMI).	Housing (outcome A)	Qualitative discussion of supply, diversity, and affordability of housing under each alternative
	Qualitative discussion of affordability based on the package of incentives or policy options in each alternative.	Housing (outcome B)	
	Availability of units that are appropriate for families and multi-generational households.	Housing (outcome A)	
	Extent to which low-density, single-family zoning is modified to allow for "Missing Middle" (duplex/triplex/townhome/fourplex/stacked flats) housing.	Housing (outcomes A and I)	
	Amount of new housing in areas at high risk of displacement.	Housing (outcome C)	
	Percentage of housing units within 10-minute walkshed of grocery store.	Housing (outcomes C and D), Placemaking (outcomes F and G), Environment (outcome J), Access (outcome M)	Addressed in Land Use chapter under access to community amenities
	Allowed housing units within 10-minute walkshed of existing and planned high-capacity transit.	Housing (outcomes A and D), Access (outcomes L and N)	

EIS Element	Metric	Comprehensive Plan Theme/Desired Outcome	Notes
Transportation	Jobs/housing within a quarter mile of sidewalk network.	Housing (outcome D), Placemaking (outcome F), Sustainability (outcomes I, J, K), Access (outcomes L and N)	
	Jobs/housing within a quarter mile of bicycle network.	Housing (outcome D), Connection (outcome F), Sustainability (outcomes I, J, K), Access (outcomes L and N)	
	Vehicle miles traveled (VMT).	Environment (outcomes I, K)	
	Qualitative discussion of safety.	Housing (outcome D), Sustainability (outcome F), Access (outcomes M and N)	
Public Services (schools, parks):	Percentage of housing units within 10-minute walking distance of existing or planned park or trail access point.	Housing (outcomes C and D)	RDI report includes park access
	Alternative result in increases in students and lack of facilities.	Housing (outcomes C and D)	
Utilities	Inconsistency with utility system planned growth and capital plans.	Housing (outcomes C and D), Access (outcome M)	
	Qualitative discussion of gaps in sewer infrastructure and where capacity is increasing in combination with the location of septic systems.	Housing (outcomes C and D)	

EIS Element	Metric	Comprehensive Plan Theme/Desired Outcome	Notes
Air, Noise, Water, and Plants and Animals	Air quality and greenhouse gas emissions: Increase in greenhouse gases above the No Action Alternative.	Housing (outcome D), Sustainability (outcomes I, J, K)	
	Increase in housing units within 1,500 feet of major roadways.	Housing (outcomes C and D), Sustainability (outcome J)	
	Traffic noise levels of 10 dBA or more above existing noise levels.	Housing (outcome D), Sustainability (outcome J)	
	Impervious surfaces and overall tree canopy.	Housing (outcomes C and D), Sustainability (outcomes I and J)	
	Amount and percentage of population living in areas with high exposure to flooding and landslides.	Housing (outcomes C and D), Sustainability (outcome J)	
None	*Concentration or dispersion of affordable housing within the city.*	Housing (outcomes A, B, C)	Included in RDI Analysis report
None	*Planned housing growth relative to location of higher performing schools and existing racial composition of neighborhood.*	Housing (outcomes C, D)	Included in RDI Analysis report

APPENDIX J Air Quality and Land Use Planning Report



Air Quality and Land Use Planning

A Review of the Literature on High-Volume Roadways, Health Effects, and Mitigation Strategies

January 2023

SUSTAINABLE BELLEVUE

CITY OF BELLEVUE WASHINGTON

Cover photo by Sandip Sinha, "Sunset at Bellevue," acquired through Flickr via Creative Commons licensing.

Table of Contents

Acknowledgements

This report was developed by the City of Bellevue in consultation with Broadview Planning:

Gwen Rousseau, City of Bellevue
Jennifer Ewing, City of Bellevue
Valerie Pacino, Broadview Planning
Andrea Petzel, Broadview Planning

The following subject matter experts also contributed:

Emil King, City of Bellevue
Liz Stead, City of Bellevue
Trisna Tanus, City of Bellevue
Matt McFarland, City of Bellevue
Janet Shull, City of Bellevue
Thara Johnson, City of Bellevue
Elizabeth Erickson, City of Bellevue
Nate Tilson, City of Bellevue
Karin Landsberg, Washington State Department of Transportation
Lindsay Taylor, Washington State Department of Transportation
Richard Gelb, Seattle-King County Public Health
Erik Saganić, Puget Sound Clean Air Agency
Saba Rahman, Puget Sound Clean Air Agency
Joanna Gangi, Puget Sound Clean Air Agency
Kelly McGourty, Puget Sound Regional Council
Kathleen Petrie, King County Green Building Program
Nori Catabay, King County Green Building Program

I. Introduction

Report Summary

Today, Bellevue is at a critical juncture in its evolution where the local need for housing and services across the city is growing, yet the amount of unconstrained developable land in the city is shrinking. The city will plan and adopt policy changes to accommodate an increase of at least 35,000 new housing units for the 2019-2044 planning period. This housing target is significantly higher than the city's previous 25-year housing target of 17,000 new units for the period between 2006-2031.


SUSTAINABLE BELLEVUE

C.1.6. Air quality. Pilot air quality monitoring sensors and incorporate air quality considerations into planning for major rezonings.

As directed by the regional growth management strategy Vision 2050, Bellevue's growth over the next 30 years will be directed to the city's growth center and mixed-use areas. These targeted growth areas, including downtown, BelRed, Eastgate, and Wilburton, are all located in close proximity to major freeways. Bellevue has limited air quality data for the city, and better air quality data will help to support land use planning and development to prevent negative public health impacts from residential development in proximity to major transportation corridors.

Piloting air quality monitoring sensors will help to determine the need for a more robust air quality monitoring program in Bellevue, particularly in high-priority locations undergoing development in proximity to freeways. This action will also involve consideration for policy and land use code updates to account for environmental justice and air quality issues, to ensure that housing and open spaces are sited at a safe distance from major transportation emissions sources, and that mitigation steps are taken for development closer to freeways.

Considerations for air quality will be taken into account for upcoming land use projects, such as Wilburton, BelRed, and the Grand Connection, and for all neighborhoods adjacent to freeways.

As Bellevue plans for and encourages the creation of new housing affordable to all income levels, it must balance a variety of factors, including market factors, buildable land capacity, the location of mass transit, and environmental health considerations, when making planning and land use policy decisions about where to locate these residential land uses and their development intensity. None of these factors should be considered in a vacuum.

This report provides environmental health information for the city to consider, along with other factors, when making long-range planning decisions to increase development capacity. Specifically, this report focuses on air pollution that exists around high-volume roadways at concentrations that can be harmful, with analysis informed by studies which have shown that health impacts associated with traffic-related air pollution (TRAP) can be minimized by reducing exposure to high pollutant concentrations. The Annotated Bibliography attached to this report summarizes key findings from the studies referenced and relied upon herein.

States around the nation, as well as local jurisdictions in King County, have been taking a closer look at the health risks associated with exposure to TRAP and have developed mechanisms and guidance to protect vulnerable populations. These planning and land use considerations have focused on Air Pollutant Exposure Zones (APEZs), which are areas within 500 feet of high-volume roadways. Noting these advances plus the historical gap that has existed in the city, Sustainable Bellevue, the City's Environmental Stewardship Plan, adopted action C.1.6 in December 2020 calling for air quality to be considered during land use planning around freeways.

Bellevue will be developing and evaluating different growth alternatives during its periodic update to the City's Comprehensive Plan and the Wilburton Vision Implementation initiative, and the health effects associated with exposure to TRAP should be a consideration. Growth alternatives that increase capacity for sensitive uses outside of APEZs should be explored, and when growth is located within APEZs, specific mitigation measures should be considered. As Bellevue continues to grow, the city should also fill in a historical gap and use available information, including air quality reports and studies, to balance the desire to limit exposure to air pollution with the need to increase growth, particularly housing for all income levels, throughout the city.

A primary purpose of this report is to provide a review of the literature on traffic-related air pollution, its impacts on health, and an overview of planning practices for reducing vulnerable populations' risks of exposure to harmful traffic-related air pollutants. Two documents – the California Air Resources Board's *Air Quality and Land Use Handbook* (2005)[1] and the Environmental Protection Agency's *Best Practices for Reducing Near-Road Pollution Exposure at Schools* (2015)[2] – have informed the guidance, strategies, and mitigation measures identified throughout this report. To support the City's long-range planning efforts, this report aims to increase awareness and understanding of:

- TRAPs and where they tend to concentrate,
- Pollutant impacts on health, especially on the health of vulnerable populations, and
- Potential planning and land use practices the city should consider to minimize and mitigate exposure to TRAP.

Chapter I is an introduction to air quality and traffic-related air pollution with reference to relevant local and regional policy guidance. Chapter II provides an overview of how air quality is measured and the impacts of air quality on public health. Chapter III provides more context on air quality and land use in Bellevue, identifying air pollutants, locations, and populations of concern. Chapter IV provides an overview of strategies to avoid, minimize, and mitigate impacts associated with the siting of land uses next to high-volume roadways along with a summary of strategies from other local governments, primarily for illustrative purposes. Finally, in Chapter V, the report provides additional information for Bellevue to consider when developing different growth alternatives to balance the desire to limit exposure to air pollution with the need to increase growth throughout the city.

[1] California Environmental Protection Agency, Air Resources Board, 2005, Air Quality and Land Use Handbook, accessed https://www.arb.ca.gov/ch/handbook.pdf

[2] Environmental Protection Agency, 2015, Best Practices for Reducing Near-Road Pollution Exposure at Schools, accessed https://www.epa.gov/sites/default/files/2015-10/documents/ochp_2015_near_road_pollution_booklset_v16_508.pdf

Ultimately, the goal of this report is to provide a framework for the city to consider and evaluate air quality when planning for growth next to freeways. The information provided in this report is intended to inform the process by which planning decisions are made and support informed decision making so that the city may incorporate air quality considerations into its growth management strategies and policies.

Overview of Bellevue Context

With three major freeways each carrying upwards of 100,000 average annual daily vehicle trips, Bellevue has a comparatively high proportion of land within APEZs relative to other cities. Nevertheless, the proportion of overall city land falling within these areas is still relatively small at 13 percent. In contrast to older jurisdictions where freeways cut through the middle of dense existing neighborhoods, Bellevue's freeways were placed where development intensity was low. As a result of these growth patterns, APEZs in Bellevue have had low intensity development historically, and the build-out of the city over time has resulted in relatively few people being at risk of exposure to high concentrations of air pollutants. As potential locations for additional housing of a variety of types are considered in the future, this balance could shift if that exposure is not taken into account.

While all areas within 500 feet of a high-volume roadway are in an APEZ, factors such as high traffic volumes, low elevations, prevailing wind patterns, and high levels of congestion can result in certain areas having even higher pollutant concentrations resulting in greater risks of exposure. Higher risk areas exist in portions of all Bellevue's neighborhood areas adjacent to freeways – Newport Hills, Factoria, Eastgate, West Lake Sammamish, Woodridge, West Bellevue, Wilburton, Downtown, Northwest Bellevue, BelRed and Bridle Trails.

Recently, the city began processing the periodic update to its Comprehensive Plan as well as initiatives to update plans for neighborhoods adjacent to freeways, such as the western portion of Wilburton and the BelRed Subarea. Additionally, in the future, the city's housing strategy may

NATIONAL IMPACTS OF AIR POLLUTION

According to the American Lung Association, 4 in 10 Americans – more than 135 million people – live where pollution levels frequently make the air too dangerous to breathe. [1] However, exposure to air pollution is not evenly shared. It depends on the concentration of pollutants in the air and how long a person breathes them in over time. Health risks from air pollution vary depending on exposure and a person's health condition, age, and genetic background. Other factors may also increase vulnerability to health effects, such as income, race/ethnicity, and health insurance status. Low-income communities and communities of color bear a disproportionate burden of breathing polluted air. [1]

include targeted efforts to partner, purchase, or otherwise create housing opportunities aimed at vulnerable populations such as those at risk of being homeless. This report will inform and support the city's consideration of exposure to air pollutants and equity analyses in these long-range planning efforts.

Overview of Environmental Health Impacts

The California Air Resources Board's *Air Quality and Land Use Handbook* (2005)[3] and the Environmental Protection Agency's *Best Practices for Reducing Near-Road Pollution Exposure at Schools* (2015)[4] provide guidance on how to evaluate and mitigate the potential health impacts associated with exposure to air pollution around high-volume roadways, especially for sensitive land uses.

The most effective strategy for reducing exposure to air pollutants is limiting the siting of sensitive uses in APEZs. For example, the California Air Resources Board's *Air Quality and Land Use Handbook* (2005)[5], recommends against siting new sensitive land uses, such as residences, schools, daycare centers, playgrounds, or medical facilities, within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.[6] Given the collaboration, trade-offs, and difficult choices that the city will face about the location of growth, the type of growth to be encouraged and supported, environmental health and protection, and the quality of life throughout the city, outright avoidance of APEZs may not always be achievable or desirable.

When avoidance of exposure to air pollutants is not feasible or achievable due to competing policy considerations, other strategies may mitigate exposure risk, and new non-sensitive uses locating within APEZs may reduce exposure to air pollution through mitigation measures, including the following:

- Increasing the distance between sensitive uses and high-volume roadways,
- Installing physical and/or vegetative buffers between buildings and high-volume roadways,
- Siting air intakes so that they are farthest from or shielded from TRAP, and

[3] California Environmental Protection Agency, Air Resources Board, 2005, Air Quality and Land Use Handbook, accessed https://www.arb.ca.gov/ch/handbook.pdf

[4] Environmental Protection Agency, 2015, Best Practices for Reducing Near-Road Pollution Exposure at Schools, accessed https://www.epa.gov/sites/default/files/2015-10/documents/ochp_2015_near_road_pollution_booklset_v16_508.pdf

[5] California Environmental Protection Agency, Air Resources Board, 2005, Air Quality and Land Use Handbook, accessed https://www.arb.ca.gov/ch/handbook.pdf

[6] California Environmental Protection Agency, Air Resources Board, 2005, *Air quality and land use handbook: A community health perspective,* accessed https://www.arb.ca.gov/ch/handbook.pdf

- Installing and regularly maintaining air filters with Minimum Efficiency Reporting Values (MERV) ratings at 13 or above.

Overview of Air Quality Impacts

Despite air quality improving dramatically over the last several decades, air pollution is still one of the greatest environmental risks to health.[7] According to the American Lung Association, 4 in 10 Americans – more than 135 million people – live where pollution levels of particulate matter and ozone are unhealthy.[8]

In addition, research has demonstrated that vehicles burning fossil fuels – particularly diesel-powered vehicles – create pollution hot spots near high-volume roadways. Other sources of TRAP include tire and brake wear, which contribute to ultrafine particles (UFPs). Studies have found that health risks can be attributed to being as far as 1,500 feet from freeways, freight corridors, and other major roadways, with 100,000 average annual daily trips or above, though most pollution levels tend to improve beyond 500 feet.[9,10,11] Areas that fall within 500 feet of a high-volume roadway are considered APEZs.

In Bellevue, about 13 percent of the city's land area is within an APEZ, and about 18 percent of that area is zoned for multifamily or mixed-use residential use. However, this may change as the city plans for minimum growth targets of an additional 70,000 jobs and 35,000 housing units between 2019 and 2044. Over the past 15 years, the city has added additional development capacity to areas adjacent to freeways through updates to several subarea/neighborhood area plans. Residential uses are allowed in some of these subareas—including within the APEZ—as are office/commercial uses.

This increased capacity in areas next to freeways may continue because the city does not have sufficient capacity of land under current zoning to meet its residential growth targets, and the city will need to plan for a significant increase in housing across all income levels over the next 20 years. Similarly, portions of the city's growth centers and areas where transit-oriented development may be desirable and appropriate, are adjacent to freeways.

---

[7] World Health Organization, accessed https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health

[8] American Lung Association, 2022, *State of the Air Report*, accessed https://www.lung.org/research/sota/

[9] Bae et al., 2007, *The exposure of disadvantaged populations in freeway air-pollution sheds: A case study of the Seattle and Portland regions.*

[10] Gauderman et al., 2005, *Childhood asthma and exposure to traffic and nitrogen dioxide.*

[11] Health Effects Institute, 2010, *Traffic-related air pollution: A critical review of the literature on emissions, exposure, and health effects.*

The city's 2022-2023 planning work includes the city's periodic update to its Comprehensive Plan, which will plan for at least 35,000 new housing units, as well as initiatives to update plans for neighborhoods adjacent to freeways, such as the western portion of Wilburton and the BelRed Subarea. The city will need to intensify residential development, while maintaining livability, and keeping the city economically viable. The city's growth centers, including Downtown, Wilburton, and BelRed, are the few places within the city where increased density is possible without significant changes to the qualities that the city strives to maintain within its existing neighborhoods.

Relevant Local and Regional Policy Direction

The following policies are related to environmental health and provide Bellevue's current policy context.

2021-2025 Sustainable Bellevue Environmental Stewardship Plan[12]

C.1.6. Air quality. Pilot air quality monitoring sensors and incorporate air quality considerations into planning for major rezonings.

"As directed by the regional growth management strategy Vision 2050, Bellevue's growth over the next 30 years will be directed to the city's growth center and mixed-use areas. These targeted growth areas, including Downtown, BelRed, Eastgate, and Wilburton, are all located in close proximity to major freeways. Bellevue has limited air quality data for the city, and better air quality data will help to support land use planning and development to prevent negative public health impacts from residential development in proximity to major transportation corridors.

Piloting air quality monitoring sensors will help to determine the need for a more robust air quality monitoring program in Bellevue, particularly in high-priority locations undergoing development in proximity to freeways. This action will also involve consideration for policy and land use code updates to account for environmental justice and air quality issues, to ensure that housing and open spaces are sited at a safe distance from major transportation emissions sources, and that mitigation steps are taken for development closer to freeways.

Considerations for air quality will be taken into account for upcoming land use projects, such as Wilburton, BelRed, and the Grand Connection, and for all neighborhoods adjacent to freeways."

[12] City of Bellevue, 2021-2025 Environmental Stewardship Plan; Adopted December 14, 2020. Bellevue Environmental Stewardship Plan_Adopted.pdf (bellevuewa.gov)

2021 King County Countywide Planning Policies[13]

The Countywide Planning Policies (CPPs) provide direction for Bellevue's Comprehensive Plan and include both policies and suggested strategies to advance the implementation of those policies. Three relevant policies are outlined below, along with the pertinent suggested strategy from the CPPs.

H-18 Adopt inclusive planning tools and policies whose purpose is to increase the ability of all residents in jurisdictions throughout the county to live in the neighborhood of their choice, reduce disparities in access to opportunity areas, and meet the needs of the region's current and future residents.

> Suggested Strategy: Plan for moderate or high-density housing and complete neighborhoods within a half-mile walkshed of high capacity or frequent transit service in areas already zoned for residential housing and where **exposure to air pollution and particulate matter is low to moderate**.

H-24 Plan for residential neighborhoods that protect and promote the health and well-being of residents by supporting equitable access to parks and open space, safe pedestrian and bicycle routes, clean air, soil and water, fresh and healthy foods, high-quality education from early learning through K-12, affordable and high-quality transit options and living wage jobs and by avoiding or mitigating exposure to environmental hazards and pollutants.

H-10 Adopt intentional, targeted actions that repair harms to Black, Indigenous, and People of Color (BIPOC) households from past and current racially exclusive and discriminatory land use and housing practices.

> Suggested Strategy: Consider environmental health of neighborhoods where affordable housing exists or is planned and plan for environmentally healthy neighborhoods.

Puget Sound Regional Council, Vision 2050 Multi-County Planning Policies (MPP)[14]

MPP-DP-16 Address and integrate health and well-being into appropriate regional, countywide, and local planning practices and decision-making processes.

MPP-DP-18 Address existing health disparities and improve health outcomes in all communities.

MPP-En-22 Meet all federal and state air quality standards and reduce emissions of air toxics and greenhouse gases.

---

[13] 2021 King County Countywide Planning Policies, accessed 2021 Proposed CPPs (kingcounty.gov).

[14] Puget Sound Regional Council, Vision 2050, A Plan for the Central Puget Sound Region accessed VISION 2050 | Puget Sound Regional Council (psrc.org).

II. Air Quality and Public Health

This chapter provides an overview of how air quality is measured and the impacts of air quality on public health. The following chapter then provides more context on air quality and land use in Bellevue. Please note that from here on, the term "environmental health" is used in place of "public health" since environmental health is the branch of public health that: focuses on the relationships between people and their environment; promotes human health and well-being; and fosters healthy and safe communities. The field of environmental health works to advance policies and programs to reduce chemical and other environmental exposures in air, water, soil and food to protect people and provide communities with healthier environments. [15]

What is air quality?

Air quality is the degree to which air is free of pollutants. When air quality is good, pollutants represent only a small fraction of the air we breathe and have little to no effect on our health. When air quality is poor, the high concentration of pollutants can interfere with the healthy functioning of our systems. In addition to health effects, poor air quality can also contribute to haziness or poor visibility. However, some pollutants are invisible and can only be measured using air quality sensors.

Air quality is assessed by measuring several indicators of pollution. The Air Quality Index (AQI) was developed to translate data collected from air monitoring stations into a scale that lay audiences could use.[16] The AQI is a number that ranges from 0 to 500 and indicates how clean or polluted air is, and what associated health effects might be of concern to diverse individuals within a population (see Figure 1).

What is air pollution?

Air pollution is a complex and dynamic mixture of gases and small particles suspended in the air. There are natural processes that create air pollution, including volcanic activity, smoke and ash from wildfires, dust storms, and biological decay. However, most air pollution comes from human generated sources, especially from the burning of fossil fuels for transportation, electricity, and

[15] American Public Health Association, accessed https://www.apha.org/topics-and-issues/environmental-health#:~:text=Environmental%20health%20is%20the%20branch,any%20comprehensive%20public%20health%20system.

[16] AirNow, Air Quality Index (AQI) Basics, accessed https://www.airnow.gov/aqi/aqi-basics/

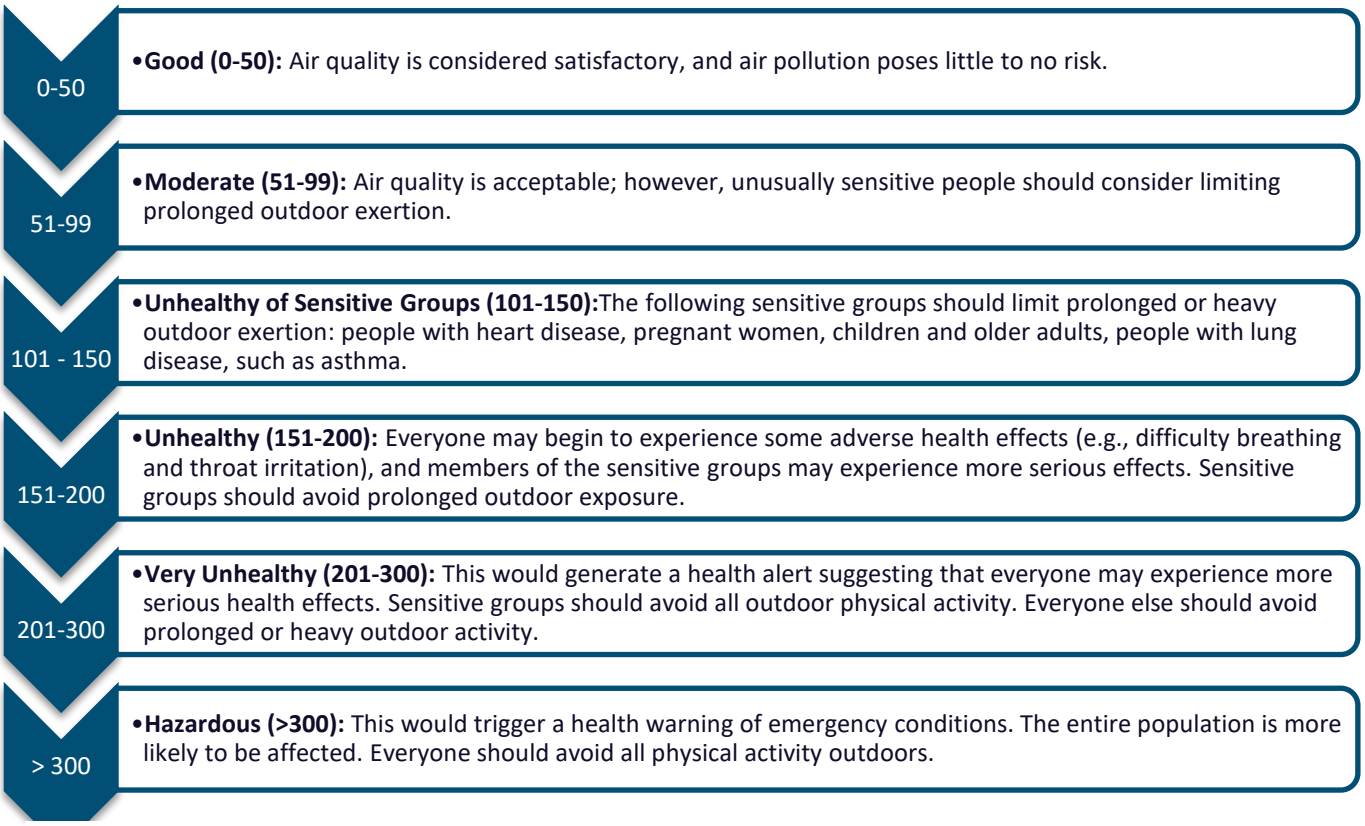


Figure 1. Air Quality Index.

industry. Because Bellevue has no heavy industry and its electricity is generated elsewhere, most of Bellevue's human generated air pollution comes from the burning of fossil fuels for transportation.

The Clean Air Act, landmark legislation passed in 1970 and last amended in 1990, requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six common pollutants (also known as "criteria pollutants"), described in Table 1 below.

Pollutant	*What is it?*	*Where does it come from?*	*How does it harm health?*
Ozone	Also known as smog, ozone (O_3) is a gas composed of three atoms of oxygen.	Ground-level ozone forms when a combination of other pollutants from vehicles, power plants, and other sources "cook" together in sunlight.	O_3 irritates the delicate lining of the airways, causing inflammation and other damage. When O_3 levels are high, even healthy people can experience chest tightness, coughing, and shortness of breath. It can also cause or aggravate conditions like asthma, allergic response, and chronic obstructive pulmonary disease (COPD), as well as

Pollutant	*What is it?*	*Where does it come from?*	*How does it harm health?*
			metabolic disorders like diabetes, brain inflammation, preterm birth, and possibly heart disease.
Particulate matter	Also known as soot, particulate matter (PM) includes tiny chemicals, acids, metals, soils, and dust, which are suspended in the air.	Course particles (PM_{10}) can include dust, ash, pollen, and smoke; fine particles ($PM_{2.5}$) and ultrafine particles ($PM_{0.1}$), including brake and tire dust, are often a by-product of cars, trucks, trains, aircraft, factories, power plants, and wood burning.	Due to their small size, course, fine, and ultrafine particles can travel into the deepest parts of our lungs, enter the bloodstream, and then travel to other organs of the body. They can trigger a range of health effects, including heart attacks, stroke, COPD, asthma, diabetes, lung cancer, and dementia, and they are responsible for nearly 48,000 premature deaths in the U.S. every year.
Nitrogen dioxide	Nitrogen dioxide (NO_2) is a reactive gas composed to nitrogen and oxygen and is one of a group of related gases called nitrogen oxides (NO_x).	Cars, trucks, buses, power plants, diesel-powered heavy construction equipment, and off-road equipment are the primary sources of NO_2, as well as sources inside the home.	NO_2 can irritate the lungs and lower resistance to respiratory infections, contribute to acute respiratory symptoms, like coughing and wheezing, and chronic respiratory conditions, including asthma and COPD, and are linked to cardiovascular harm, low birth weight in babies, and premature death. All NO_x can react with other chemicals in the air to form particulate matter and ozone.
Sulfur dioxide	Sulfur dioxide (SO_2) is a colorless gas composed of sulfur and oxygen with a pungent odor.	SO_2 is caused by burning of fossil fuels, particularly coal-fired power plants, ports, and smelters, and from diesel engines in old buses, trucks, and off-road equipment.	SO_2 causes wheezing, shortness of breath, chest tightness, reduced lung function, and asthma. Even in areas without major industrial uses, SO_2 can be a threat when it gets trapped by inversions in the atmosphere and change chemically into sulfates, particulate matter pollution, that can travel great distances.

Pollutant	*What is it?*	*Where does it come from?*	*How does it harm health?*
Carbon monoxide	Carbon monoxide (CO) is a colorless, odorless, tasteless gas composed of carbon and oxygen.	CO comes from vehicle exhaust, machinery that burn fossil fuels, and appliances and other sources inside the home.	CO attaches to hemoglobin in red blood cells and blocs the ability of blood to carry oxygen throughout the body. High levels of CO can cause loss of consciousness and death, while low levels over time may cause permanent mental and physical problems.
Lead	Lead (Pb) is a toxic metal and a naturally occurring element, and it does not dissipate over time.	Until the late 1970s, Pb was used in many industrial processes and was added to gasoline, paint, water pipes, and fertilizers.	Exposure to Pb results in profound effects on nearly every organ system, but the nervous system is its main target. EPA's regulatory efforts to remove lead from gas decreased levels of lead in the air by 98 percent from 1980 to 2014.

Table 1. Six Criteria Pollutants (sources: U.S. Environmental Protection Agency, American Lung Association[17],[18])

Beyond these six common pollutants, air toxics are a group of over 400 other air pollutants.[19] People can inhale air toxics from the air where they live, work, learn, and play. Air toxics can also settle into waterways, streams, rivers, and lakes, so they can pass into the body when people drink them or eat them in fish.

Cars and trucks are the primary sources for ozone, particulate matter, nitrogen dioxide, and carbon monoxide, and they also emit air toxics including diesel, benzene, and formaldehyde.[20] The World Health Organization (WHO) declared diesel exhaust carcinogenic, a cause of lung cancer in the same category as asbestos and mustard gas.[21] The EPA has classified 187 air pollutants as hazardous.[22]

[17] United States Environmental Protection Agency, Criteria Air Pollutants, accessed https://www.epa.gov/criteria-air-pollutants

[18] American Lung Association, 2022, *State of the Air Report*, accessed https://www.lung.org/research/sota/

[19] U.S. EPA, About Urban Air Toxics, accessed https://www.epa.gov/urban-air-toxics

[20] U.S. EPA, Smog, Soot, and Other Air Pollution from Transportation, accessed https://www.epa.gov/transportation-air-pollution-and-climate-change/smog-soot-and-other-air-pollution-transportation

[21] World Health Organization, International Agency for Research on Cancer, 2012, Diesel engine exhaust carcinogenic, accessed https://www.iarc.who.int/wp-content/uploads/2018/07/pr213_E.pdf

[22] U.S. EPA, About Urban Air Toxics, accessed https://www.epa.gov/urban-air-toxics

Air quality in the United States has improved dramatically over time

Over the last 50 years, air quality in the U.S. has improved dramatically – despite huge population growth (particularly in urban areas), increased economic activity, and more vehicle miles traveled per person.[23] This improved air quality is primarily the result of landmark legislation passed by Congress in 1970 that gave the newly-formed EPA the legal authority to regulate pollution from vehicles and other sources. The EPA and the State of California have led national efforts to reduce air pollution from vehicles, by adopting increasingly stringent standards over the years.[24]

Improved air quality has resulted in significant environmental and public health benefits across the country. Since 1990, concentrations of air pollutants have dropped significantly (see Appendix B, Air Quality Trends):[25]

- Carbon monoxide (8-hour average) has declined by 74 percent
- Lead (3-month average) has declined by 82 percent
- Nitrogen dioxide (annual) has declined by 57 percent
- Nitrogen dioxide (1-hour average) has declined by 50 percent
- Ozone (8-hour average) has declined by 21 percent
- Particulate matter 10 (24-hour average) has declined by 26 percent
- Particulate matter 2.5 (annual) has declined by 39 percent
- Particulate matter 2.5 (24-hour average) has declined by 34 percent
- Sulfur dioxide (1-hour average) has declined by 89 percent

Additionally, numerous air toxics have declined with percentages varying by pollutant.

In addition to historic improvements, replacing vehicles that burn fossil fuels with vehicles powered by electricity, hydrogen, or other cleaner fuels is predicted to significantly reduce air pollution, particularly in urban centers.[26] Though electric cars are charged using a power grid that in parts of the country is fueled by coal or natural gas, they still provide health benefits by reducing emissions at the street level, where people tend to be most impacted.[27] In Washington State, due to the Clean

[23] U.S. EPA, History of Reducing Air Pollution from Transportation in the United States, https://www.epa.gov/transportation-air-pollution-and-climate-change/history-reducing-air-pollution-transportation

[24] Daley, B. Why California gets to write its own auto emissions standards: 5 questions answered, *The Conversation*. Accessed https://theconversation.com/why-california-gets-to-write-its-own-auto-emissions-standards-5-questions-answered-94379

[25] U.S. EPA, 2019, *Our Nation's Air*, accessed https://gispub.epa.gov/air/trendsreport/2019/

[26] Choma et al., 2020, *Assessing the health impacts of electric vehicles through air pollution in the United States.*

[27] Harvard TH Chan School of Public Health News, 2021, *Increasing the use of electric cars could improve health outcomes.*

Energy Transformation Act[28] (SB 5116, 2019), utilities are required to transition to 100 percent renewable energy by 2045. In addition, Washington has followed California's vehicle emissions standards to accelerate the transition to electric vehicles, passing a law to require all new cars sold in Washington state to be electric by 2035[29]. Researchers and policymakers have found that vehicle electrification in urban areas is an opportunity to both reduce greenhouse gas emissions and achieve large public health benefits in a relatively short timeframe.[30]

Fleet turnover and electrification efforts are expected to continue improving air quality, but many threats are on-going. For example, diesel is a known carcinogen, and heavy-duty diesel-powered vehicles, like buses, trucks, and construction vehicles, are expected to be the last to be electrified, due the costs of batteries for the largest vehicles.[31] Emissions from tire and break dust will also continue, despite vehicle electrification progress. Climate change may also increase risks of air pollution, particularly because of the synergistic health effects of air pollution, temperature, and pollen exposure.[32] In the Pacific Northwest, risks may be compounded by longer and more intense wildfire seasons. More ongoing research will be needed to track the impact of vehicle electrification on near-road air pollution, and how that might impact pollutant concentrations near freeways. Air quality in King County[33] and Bellevue has improved over the last 20 years as well, however the number of days with particle pollution has increased in the last several years, due to increased forest fires.

Despite the overall trends of improved air quality over time in major U.S. cities and throughout King County, the Puget Sound Clean Air Agency's (PSCAA's) *Near-Road Air Toxics Study in the Chinatown-International District*[34] from 2018, demonstrates that air pollution is a more localized concern and the Chinatown-International District's (CID's) greatest air toxic risk is from diesel particles from I-5 and I-90. PSCAA's modeling of cancer risk due to direct diesel exhaust, based on data collected in the CID study, illustrates a significantly increased risk of cancer in areas near high-volume roadways.

---

[28] Washington State Legislature, Clean Energy Transformation Act, 2019. 5116-S2.SL.pdf (wa.gov).

[29] Washington State Legislature, Motor Vehicle Emissions Standards – Zero Emission Vehicles, 2020; 5811.SL.pdf (wa.gov)

[30] Choma et al., 2020, *Assessing the health impacts of electric vehicles through air pollution in the United States.*

[31] NRDC, 2021, *Medium- and Heavy-Duty Vehicle Electrification 101*, accessed https://www.nrdc.org/experts/shelby-parks/medium-and-heavy-duty-vehicle-electrification-101

[32] Annenberg et al., 2020, *Synergistic health effects of air pollution, temperature, and pollen exposure: A systematic review of epidemiological evidence*

[33] American Lung Association, State of the Air Report Card, King | American Lung Association.

[34] Puget Sound Clean Air Agency, *Near-Road Air Toxics Study in the Chinatown-International District*, 2018; Air-Toxics-Study-in-the-Chinatown-International-District-Reduced (pscleanair.gov).

What are the health impacts of air pollution?

While exposure to air pollution contributes to impaired lung development, reduced lung function, and chronic lung diseases (like asthma, chronic obstructive pulmonary disease, and cystic fibrosis), respiratory impacts are just one of many health effects linked to air pollution.[35]

Over the last couple decades, more health studies have highlighted the association between various air pollutants and non-respiratory health effects. For instance, fine particle pollution has particularly harmful cardiovascular effects, including myocardial infarctions, arrhythmias, congestive heart failure, hypertension, stroke, and death.[36]

Additionally, many air toxics are classified as carcinogens, and diesel engine exhaust is linked to increased risk of lung and bladder cancer.[37] Emerging evidence has also linked air pollution with pulmonary malignancies, adverse birth outcomes (including low birthweight and preterm birth), diabetes, deep venous thrombosis, neuropsychiatric disease, neurological and brain development impacts, ear infections, and other adverse health

Key Health Findings

Reduced lung function in children was associated with traffic density, especially trucks, within 1,000 feet and the association was strongest within 300 feet (Brunekreef, 1997).

Increased asthma hospitalizations were associated with living within 650 feet of heavy traffic and heavy truck volume (Lin, 2000).

Asthma symptoms increased with proximity to roadways and the risk was greatest within 300 feet (Venn, 2001).

Asthma and bronchitis symptoms in children were associated with proximity to high traffic in a San Francisco Bay Area community with good overall regional air quality (Kim, 2004).

A San Diego study found increased medical visits in children living within 550 feet of heavy traffic (English, 1999).

[35] American Lung Association, 2022, Health Impacts, *State of the Air Report*, accessed https://www.lung.org/research/sota

[36] Du et al., 2016, *Air particulate matter and cardiovascular disease: The epidemiological, biomedical, and clinical evidence.*

[37] American Cancer Society, *Diesel exhaust and cancer risk,* accessed https://www.cancer.org/healthy/cancer-causes/chemicals/diesel-exhaust-and-cancer

effects.[38],[39],[40],[41],[42],[43],[44] The growing body of evidence has been building slowly over time, and researchers have replicated studies across diverse populations and contexts (see Figure 2).

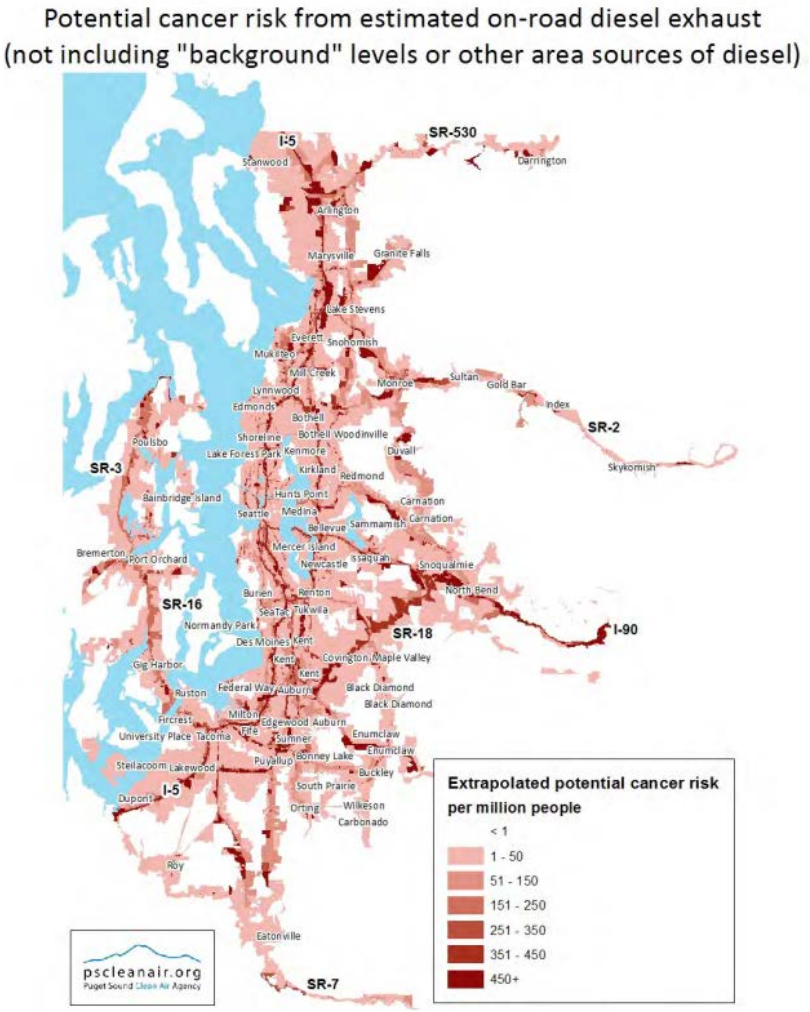


Figure 2. Extrapolated Potential Cancer Risk due to Direct Diesel Exhaust from On-Road Vehicles at Census Block Level, PSCAA Chinatown-International District Study, 2018.

[38] American Lung Association, 2016, *The connection between lung cancer and outdoor air pollution*, accessed https://www.lung.org/blog/lung-cancer-and-pollution

[39] Shah et al., 2010, *Air pollution and birth outcomes: A systematic review*

[40] Li et al., 2019, *Association between air pollution and type 2 diabetes: An updated review of the literature*

[41] Baccarelli et al., 2011, *Exposure to particulate air pollution and risk of deep vein thrombosis*

[42] Hahad et al., 2020, *Ambient air pollution increases the risk of cerebrovascular and neuropsychiatric disorders through induction of inflammation and oxidative stress*

[43] Kim et al., 2020, *Air pollution and central nervous system disease: A review of the impact of fine particulate matter on neurological disorders*

[44] Bhattacharyya et al., 2010, *Air quality improvement and the prevalence of frequent ear infections in children*

Who is affected by air pollution?

Clean air is essential for health, so *everyone* can be affected by air pollution. However, exposure to air pollution varies depending on the concentration of pollutants in the air and how long a person breathes in toxins over time. Health risks from air pollution also depend on a person's sensitivity due to their health condition, age, and/or genetic background. Infants and small children are more vulnerable because of their small body size and increased inhalation rate as compared to adults. Expectant mothers, developing fetuses, children, older adults, and people with certain health conditions, including diabetes, heart disease, and lung disease, are also more sensitive to the health effects of air pollution.

Other factors may also increase a person's vulnerability by lowering their adaptive capacity. Factors such as income, race and ethnicity, and health insurance status may hinder people's ability to respond effectively to exposure risks thereby making them more vulnerable to the effects of air pollution.[45] Poor communities and communities of color, for example, are more likely to be exposed to and more likely to suffer harm from air pollution.[46] People in poverty are also more likely to have one or more chronic conditions making them more vulnerable to the effects of air pollution.[47] [48]

In 2019, about 7.9 percent of children, 7.5 percent of adults 65 years and over, and 14.6 percent of female single-parent families in Bellevue were in poverty, and about a fifth of Bellevue's households had incomes less than $50,000 per year[49]. In the 2021 Community Healthy Assessment by Overlake Hospital[50], one of the primary medical facilities serving Bellevue and the Eastside of Lake Washington, the study notes a 5 percent asthma rate for children in East King County, compared to a 6 percent rate in all of King County. Asthma hospitalization rates for children in East King County

[45] Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved 11/30/2022, from https://health.gov/healthypeople/objectives-and-data/social-determinants-health

[46] American Lung Association, Disparities in the Impact of Air Pollution. Retrieved 11/30/2022, from https://www.lung.org/clean-air/outdoors/who-is-at-risk/disparities

[47] Apelberg BJ, Buckley TJ, White RH. Socioeconomic and racial disparities in cancer risk from air toxics in Maryland. Environ Health Perspect. 2005 Jun;113(6):693-9. doi: 10.1289/ehp.7609. PMID: 15929891; PMCID: PMC1257593.

[48] United States Environmental Protection Agency. Research on Health Effects from Air Pollution, accessed 11/22/2022 from https://www.epa.gov/air-research/research-health-effects-air-pollution

[49] City of Bellevue, Human Services Community Profile, 2021, accessed hs-needs-2021-2022-community_profile.pdf (bellevuewa.gov)

[50] Overlake Hospital Community Health Needs Assessment, 2021: Overlake Community Health Needs Assessment 2021.pdf (overlakehospital.org)

were lower than for the entire county, with a rate of 90.8 per 100,000 persons for East King County, compared to 131 per 100,000 for King County.[51]

As Bellevue grows over time and seeks to be a welcoming place for diverse communities, it is incumbent upon the city to consider environmental health in connection with its planning and land use decisions.

How does proximity to high-volume roadways affect pollutant levels?

Air pollutant concentrations are highest closest to their source and begin dissipating as pollutants fall out of the atmosphere and settle on the ground, vegetation, or structures, and/or as they disperse and mix with less concentrated volumes of air until they match background level concentrations. Pollutants emitted by vehicles come from exhaust, wear from brake pads and tires, and dust from disturbing the road surface.

Research has demonstrated that traffic – particularly diesel-powered vehicles – create pollution hot spots near high-volume roadways. Studies have found that health risks can be attributed to being as far as 1,500 feet from freeways, freight corridors, and other major roadways, though most pollution levels tend to improve beyond 500 feet, though their rates of decline vary by pollutant (see Figure 3).[52],[53],[54]

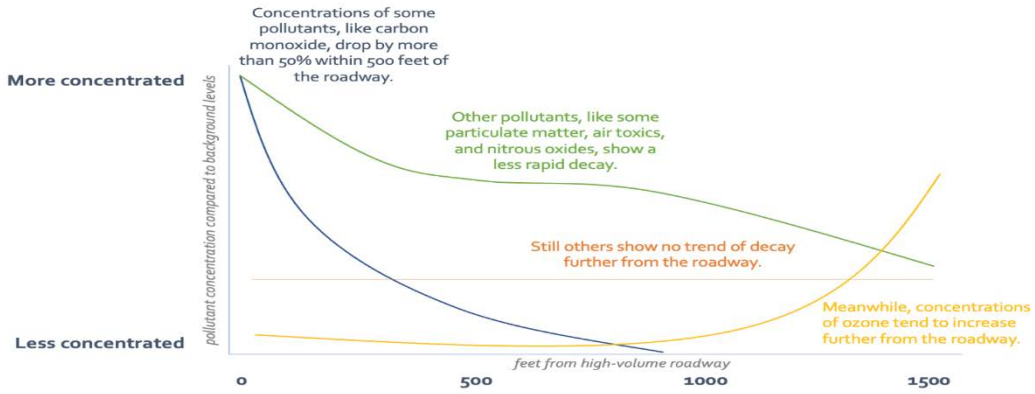


Figure 2. Rates of decline of different pollutants, adapted from Karner et al., 2010.

[51] Overlake Hospital Community Health Needs Assessment, 2021, page 50: Overlake Community Health Needs Assessment 2021.pdf (overlakehospital.org)

[52] Bae et al., 2007, *The exposure of disadvantaged populations in freeway air-pollution sheds: A case study of the Seattle and Portland regions.*

[53] Gauderman et al., 2005, *Childhood asthma and exposure to traffic and nitrogen dioxide.*

[54] Health Effects Institute, 2010, *Traffic-related air pollution: A critical review of the literature on emissions, exposure, and health effects.*

California's Air Resources Board recommends against siting new sensitive land uses, such as residences, schools, daycare centers, playgrounds, or medical facilities, within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.[55] This recommendation is to avoid the worst of the pollution hot spots generated by traffic. Currently, Bellevue's busiest arterial is NE 8th Street in the vicinity of 116th Avenue NE with approximately 40,000 vehicles/day, and the freeways in Bellevue, I-405, I-90, and SR-520 all carry over 100,000 vehicles per day (see Appendix C, Traffic Volumes).

What factors influence the creation of air pollution hot spots?

A variety of factors influence air pollution hot spots, and air pollution hot spots created by vehicles vary by traffic volume, speed, and mix of fleet. Roadways with 100,000 annual average trips per day generate air pollution at concentrations harmful to people's health, and areas where vehicles travel at slower speeds, such as on and off ramps and other places of congestion, increase the density of vehicles leading to higher concentrations of pollutants. Brake and tire wear dust are also more likely during acceleration and deceleration, which is more common at on and off ramps[56] and in stop and go traffic.

The mix of fleet in terms of the type of fuel burned and the age of vehicles also influences the amount of pollution along high-volume roadways. According to the EPA, buses, trucks, and construction vehicles produce at least half of the hydrocarbons and nitrogen oxides generated by high-volume roadways.[57] These types of vehicles tend to be diesel-powered. In an effort to lessen impacts within the region, King County Metro has committed to electrifying the King County bus fleet by 2035[58].

In terms of vehicle age, new cars, SUVs and pickup trucks are roughly 99 percent cleaner compared to 1970 vehicle models for common pollutants (hydrocarbons, carbon monoxide, nitrogen oxides and particle emissions).[59] Yet, while newer vehicles – especially hybrid and electric vehicles – emit

---

[55] California Environmental Protection Agency, Air Resources Board, 2005, *Air quality and land use handbook: A community health perspective,* accessed https://www.arb.ca.gov/ch/handbook.pdf

[56] Kumar, World Economic Forum, 2015, *Why traffic lights are pollution hotspots,* accessed https://www.weforum.org/agenda/2015/02/why-traffic-lights-are-pollution-hotspots/

[57] U.S. EPA, *History of Reducing Air Pollution from Transportation in the United States*, https://www.epa.gov/transportation-air-pollution-and-climate-change/history-reducing-air-pollution-transportation

[58] King County Metro Transit's Zero Emission Fleet Transition Plan, 2022; Microsoft Word - FTA_draft_052022 (kingcounty.gov).

[59] U.S. EPA, *History of Reducing Air Pollution from Transportation in the United States*, https://www.epa.gov/transportation-air-pollution-and-climate-change/history-reducing-air-pollution-transportation

fewer pollutants, they can still contribute to air pollution through tailpipe emissions, brake and tire dust. One study found that emissions from particulate matter from tire wear can be 1,000 times worse than emissions from tailpipes, which underscores the need to continue to support multi-modal transportation options to address transportation related greenhouse gas emissions and air pollution.[60]

Other factors contributing to hot spots include wind direction and topography. Intuitively, wind direction and wind speed influence where air pollutants travel and how quickly they disperse. At higher elevations and in more exposed areas, moderate wind will cause pollutants to disperse more quickly. Conversely, in low-lying areas where it is harder for wind to penetrate, air pollutants can become trapped causing levels of air pollution to rise.

Meteorology and micrometeorology, which are influenced by time of year, topography, and nearby land use, can also contribute to the formation of air pollution hot spots.

Many of these factors also vary by time of day. For example, traffic congestion is a daily feature of many people's morning and evening commutes. These traffic patterns are predictable, and so are pollution hot spots – they are more likely during morning and evening hours, as well as on weekends.[61]

8 Lessons of Traffic-Related Air Pollutants
(Adapted from Brugge et al., 2014)

1. Vehicles on highways emit high levels of gases and particles.
2. Pollutants behave in different ways, so interventions must be targeted to specific pollutants of concern.
3. Highway traffic patterns are predictable.
4. Wind direction and wind speed affect exposure.
5. Distance from highways affects exposure.
6. Time of day and time of year affect exposure.
7. Pollutants can penetrate building envelopes.
8. Exposure to pollutants can be estimated.

What can local governments do?

Beyond the ability of individuals to limit their exposure to air pollution, municipalities and local agencies have opportunities – in connection with long-range land use planning, zoning, site design, building design review, code regulations, health risk assessments, and community risk reduction plans – to consider environmental health factors, including but not limited to air quality impacts

[60] Emissions Analytics, 2020, *Pollution from tire wear 1,000 times worse than exhaust emissions,* accessed https://www.emissionsanalytics.com/news/pollution-tyre-wear-worse-exhaust-emissions
[61] Brugge et al., 2014, Improving Health in Communities Near Highways, accessed https://sites.tufts.edu/cafeh/files/2011/10/CAFEH-Report-Final-2-26-15-hi-res1.pdf

associated with freeways. By way of example, Appendix E includes a selection of related policies that have been implemented in other municipalities.

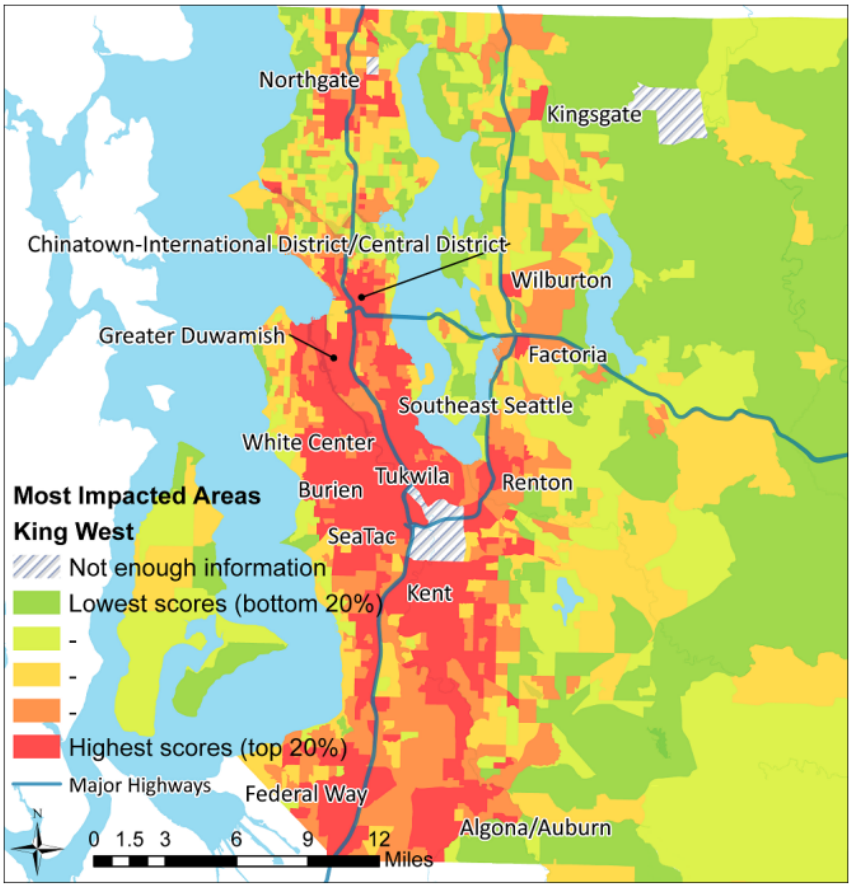


Figure 3. Most Impacted Areas in King County, Puget Sound Clean Air Agency, Highly Impacted Communities, 2014. Accessed at: Highly-Impacted-Communities-HI-C-ReportPDF (pscleanair.gov).

Technical reports can provide guidance and support for local planning decisions, including decisions that seek to balance environmental health with competing factors. Key reports from the Puget Sound Clean Air Agency, for example, have identified air pollution hot spots in highly impacted communities around King County[62] (see Figure 4). Additionally, guidance from state and federal authorities, like the California Air Resources Board's *Air Quality and Land Use Handbook* (2005)[63] and the Environmental Protection Agency's *Best Practices for Reducing Near-Road Pollution Exposure at*

[62] Park et al., 2014, Puget Sound Clean Air Agency, Highly Impacted Communities, PS Clean Air Committee Recommendations, accessed https://www.pscleanair.gov/DocumentCenter/View/2323/Highly-Impacted-Communities-HI-C-ReportPDF?bidId=

[63] California Environmental Protection Agency, Air Resources Board, 2015, Air Quality and Land Use Handbook, accessed https://www.arb.ca.gov/ch/handbook.pdf

Schools (2015),[64] can help foster informed decision-making when policymakers are evaluating the appropriate level of growth, the location of growth, the regional transportation system, the type of growth to be encouraged, public spending, environmental protection, and the quality of life throughout the municipality.

Ultimately, the balancing of a variety of local considerations will determine the appropriate suite of air quality policies that may be implemented in a particular municipality. Local circumstances, market factors, the location of transit, or the local need for specific land uses may result in unique choices and solutions by individual cities. For instance, whether a city wants to emphasize the creation of housing stock over environmental health considerations is a policy choice that may or may not be mutually exclusive. In Bellevue, the city's growth centers, including Downtown, Wilburton, and BelRed, are the few places within the city that have access to excellent transportation infrastructure to support increased growth, and they are places where increased density is possible without significant changes to the qualities that the city strives to maintain within its existing neighborhoods. Yet, parts of those areas are proximate to freeways resulting in a need to consider the risk of exposure to air pollutants as well. These types of policy choices will almost always require the balancing of competing interests that will affect the specific location of particular land uses and development intensities, community character and design, and site development standards. Recognizing the impacts of policy decisions on all residents is key to ensuring equitable planning and development.

[64] Environmental Protection Agency, 2015, Best Practices for Reducing Near-Road Pollution Exposure at Schools, accessed https://www.epa.gov/sites/default/files/2015-10/documents/ochp_2015_near_road_pollution_booklet_v16_508.pdf

III. Bellevue Context

This chapter provides detail on air quality and land uses near high-volume roadways in Bellevue.

Do air pollution hot spots exist in Bellevue and if so, how many people live and work within these areas?

With three major freeways carrying upwards of 100,000 vehicle trips per day, Bellevue has about an eighth of its land area within an Air Pollution Exposure Zone (APEZ) where people could be exposed to unhealthy levels of air pollution. The Puget Sound Clean Air Agency has conducted extensive air monitoring and has identified pollution hot spots in proximity to high-volume roadways generally.[65] The agency has also identified air pollution hot spots in highly impacted communities around King County, including the Wilburton and Factoria neighborhoods in Bellevue.[66]

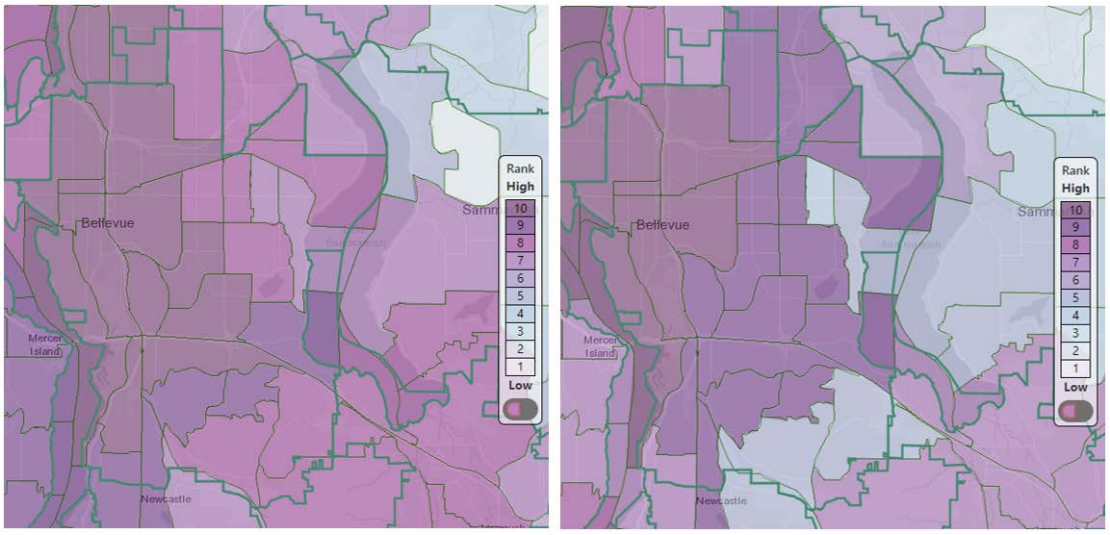


Figure 4. Populations Near Heavy Traffic Roadways (left); NOx-Diesel Pollution (right), from Washington Environmental Health Disparities Map.

Today, approximately 8,531 people live within the APEZ in Bellevue, and approximately 40,000 people work within the APEZ, equaling about six percent of Bellevue's population and over a quarter of Bellevue's workforce. Workers in these areas who work outdoors or who are frequently exposed to outdoor air are more at risk of being exposed to air pollution than those who work indoors. In

[65] Puget Sound Clean Air Agency, 2017, Chinatown International District Toxics Study: Community Report, accessed https://pscleanair.gov/DocumentCenter/View/3399/Air-Toxics-Study-in-the-Chinatown-International-District-Community-Report

[66] Park et al., 2014, Puget Sound Clean Air Agency, Highly Impacted Communities, PS Clean Air Committee Recommendations, accessed https://www.pscleanair.gov/DocumentCenter/View/2323/Highly-Impacted-Communities-HI-C-ReportPDF?bidId=

addition, other sensitive uses in Bellevue, such as early childhood education centers, senior living facilities, and parks and open spaces, exist near high-volume roadways.

How do factors besides distance affect risk of exposure across the city?

As described in the previous section, risk of exposure varies depending on certain factors including slope of adjacent land, meteorology and micrometeorology, the amounts of vegetative and structural barriers, and the types of buildings and activities occurring adjacent to roadways. In low elevation areas adjacent to freeways, air tends to stagnate resulting in greater pollutant concentrations, compared to areas of higher elevation with good air circulation where pollutants tend to disperse more quickly. Low elevation areas, therefore, are places that present the greatest risk of exposure to unhealthy levels of air pollution and are of particular concern, especially low areas downwind of freeways.

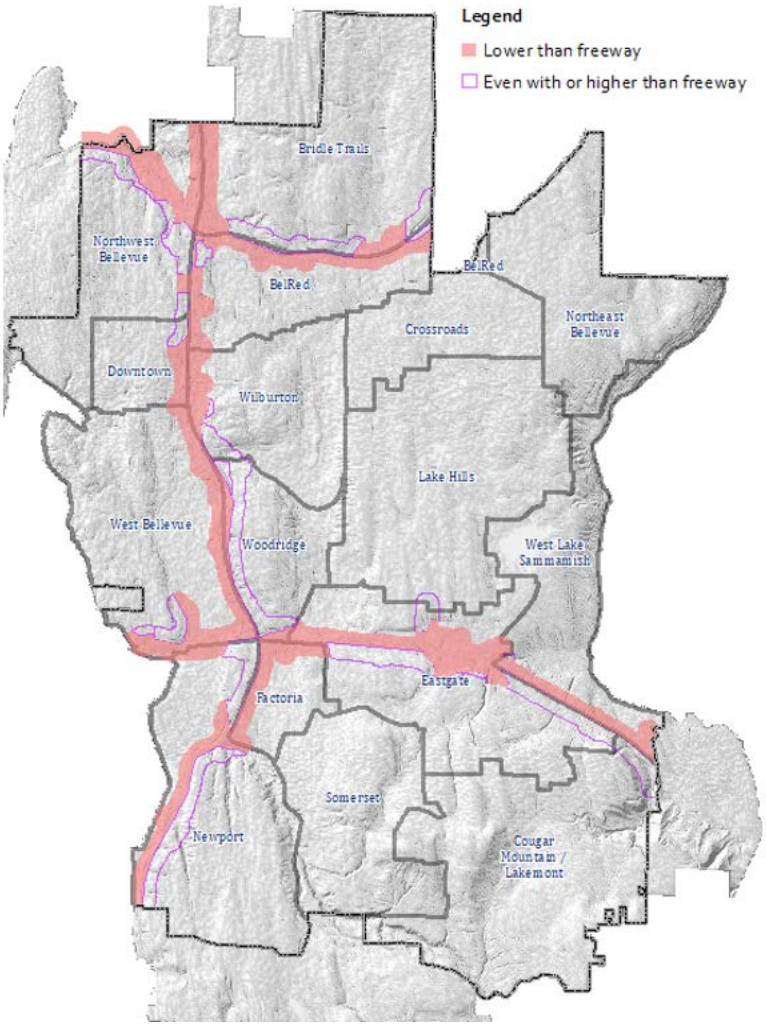


Figure 5. Hillshade Map showing low elevation areas within 500 feet of freeways.

Low elevation areas exist around all of Bellevue's freeways, yet they vary by topography (see Figure 6 above). Along SR 520 east of I-405, low elevation areas exist primarily to the south in BelRed; west of I-405, low elevations exist both north and south of SR 520. Along I-90, east of I-405, low elevation areas exist primarily to the north in West Lake Sammamish and Eastgate; west of I-405, low elevation areas exist both north and south of I-90. Along I-405, north of SR 520, low elevation areas exist both to the east and west of the freeway; between SR 520 and Downtown, low elevation areas exist primarily east of I-405 in BelRed; low elevation areas exist in both Downtown and Wilburton; between Wilburton and I-90, low elevation areas exist primarily to the west of I-405; south of I-90, low elevations exist to the east in Factoria then flip to the west in Newport. Additional images of low elevation areas can be found in Appendix D.

Prevailing wind patterns also influence exposure to air pollution. Winds during winter months, tend to be from the south, resulting in roadway air pollutants drifting northward of each roadway. Conversely, winds during summer months often originate from the north, causing pollutants to drift southward. Different areas at different times of year tend to be more or less exposed to higher pollutant concentrations.

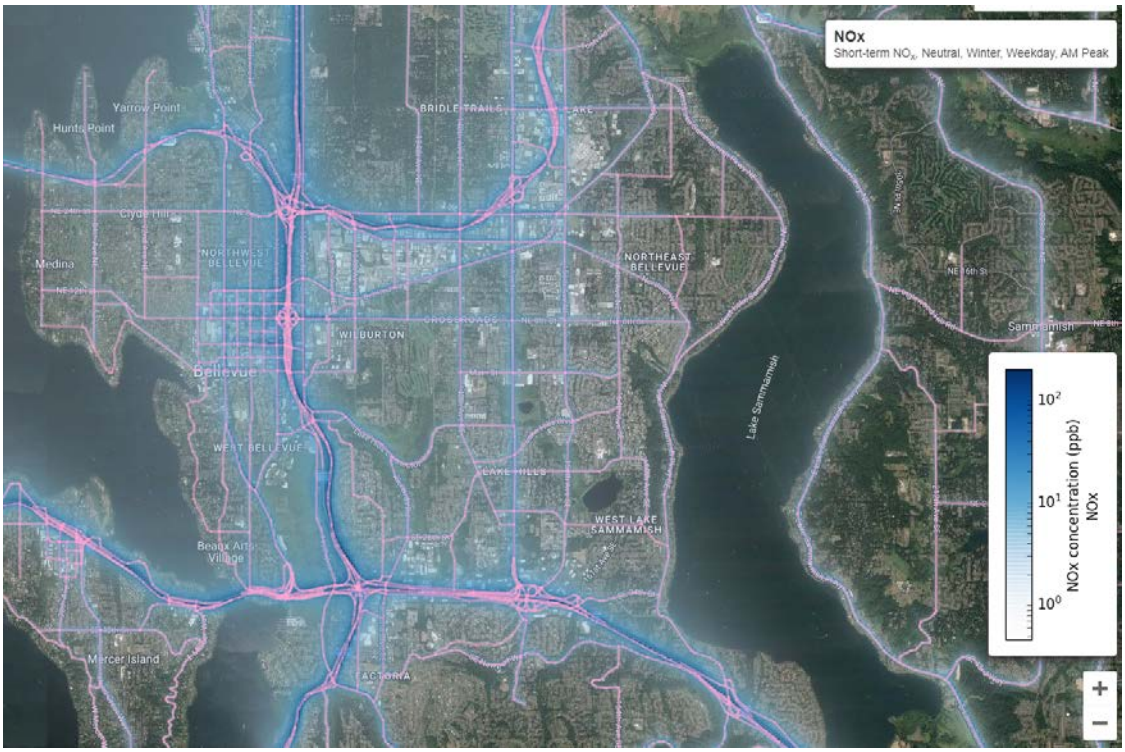


Figure 6. NOx pollutant model for short-term neutral, winter weekday AM peak. Captured from the Community LINE Source Model (C-LINE) program on 7/10/2022. *(C-Line is a web-based model designed to inform the community user of local air quality impacts due to mobile-sources in their area of interest using a simplified modeling approach. Additional information on the overall tool is available in Barzyk et. al., Environ. Model. Softw., 2015. C-LINE (unc.edu))*

Structural elements, such as noise walls, and/or vegetative buffers along high-volume roadways can protect adjacent areas from pollution exposure. See Chapter IV, Review of Mitigation Strategies, for more information. Wide berms planted with evergreen trees and shrubs provide the greatest level of protection and can be found along the east side of I-405 in parts of Newport and Factoria.

Additionally, increasing tree canopy throughout neighborhoods can also mitigate air pollution so long as trees are planted in a way that doesn't reduce airflow around roadways, inadvertently trapping pollutants. Dense, lush, varied vegetation planted in neighborhoods can filter harmful particles as they pass through and accumulate on leaf surfaces.

The type of land use and activity taking place adjacent to high-volume roadways can also increase or decrease risk of exposure. New commercial office buildings with the latest heating, ventilation and cooling system technologies are more likely to have tighter buildings with better filtration systems and workers who spend most of their day working inside. In contrast, older light industrial buildings such as service and repair shops, fabrication facilities, warehouses, and construction yards are more likely to be open to the air with less effective filtration and have workers working in more exposed conditions. Within Bellevue, employees working in older buildings adjacent to freeways without mitigation in Richards Valley, BelRed, and Wilburton may be exposed to higher levels of air pollution than employees working in enclosed office buildings downtown.

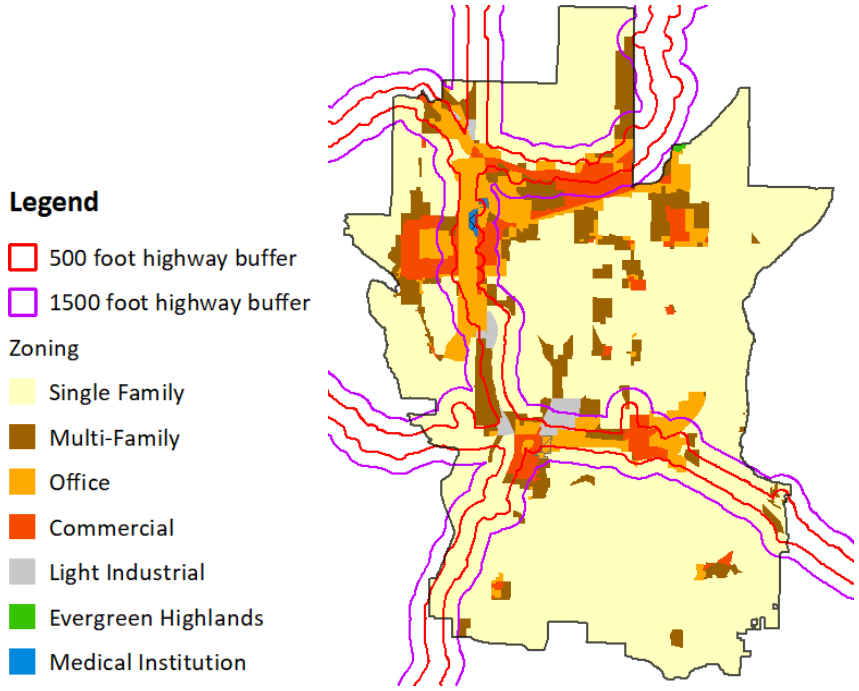


Figure 7. Zoning Districts with 500' and 1500' highway buffers.

Vegetative Buffers in Newport. From top: looking north along I-405 at 164th St SE a wide vegetative buffer to the west of I-405 provides a filter to pollutants that might otherwise flow downhill to the west; steep earthen berms and wide swaths of evergreen trees protect people living adjacent to I-405 from exposure to air pollution in the Newport Neighborhood Area; a wide vegetative buffer between I-405 and homes to the east helps disburse and filter pollutants; homes to the east of I-405 sit slightly uphill of the freeway, but the width of vegetative barrier varies; similarly, to the west of I-405 the width of vegetative barrier varies in Newport.

Development near freeways.

Top: Looking west of I-405 opposite Factoria Mall. Tall, thick vegetation is lacking;

Middle: Between NE Main and NE 12th streets. Some vegetation exists east of I-405 in Wilburton, but is lacking west of I-405 in Downtown;

Bottom: Noise wall being installed along north side of I-90.

Commercial development near freeways.

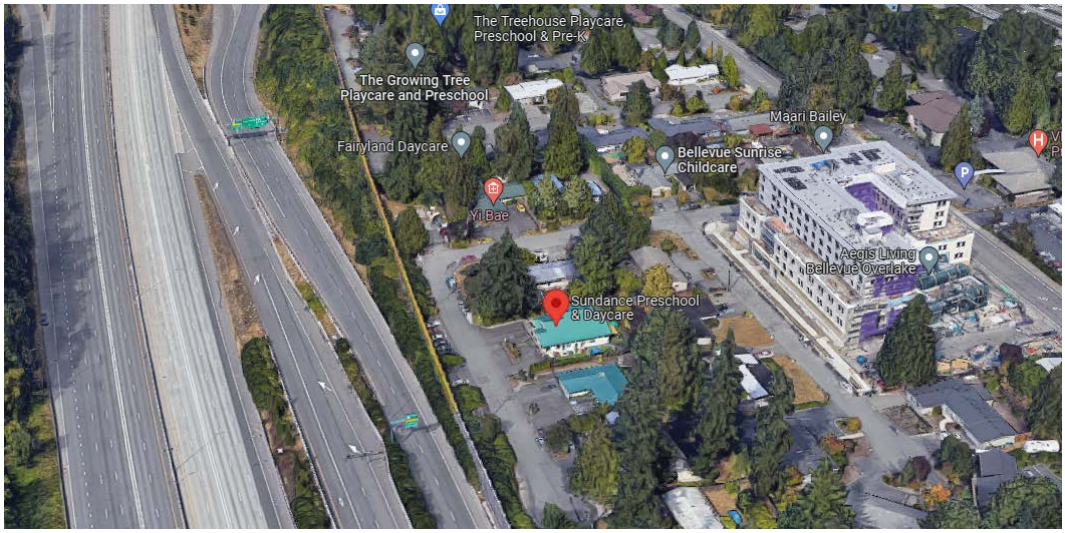
Top: Looking north along I-405, warehouse sits west and lower than I-405m but has large buffer;

Middle: Warehouses and other light industrial uses in Richards Valley sitting to the north and lower than I-90;

Bottom: Warehouses to the south of I-405 looking southwest sit low in elevation and have little vegetative buffer.

Land uses such as daycares, schools, medical clinics, senior housing and low-income housing that serve sensitive populations may also be located adjacent to high-volume roadways. In cities where development capacity is inelastic to the pressures of growth and land prices escalate, areas directly adjacent to freeways are often more affordable places for low-revenue businesses and low-income households. Tensions may exist between the need to utilize available land to provide housing and services to children, older adults and low-income residents and the need to protect these vulnerable populations from impacts that may result from exposure to air pollution. Tensions may also exist between a desire for convenient access to childcare, older adult, and low-income population services.

Within Bellevue, the Dogwood Park neighborhood north of NE 12th Street between 116th Avenue NE on the east, I-405 on the west and SR-520 on the north has become a location with a cluster of childcare facilities, medical clinics, and new senior housing developments. More than 10 childcare and/or early learning facilities, several medical clinics, and two new senior housing projects can be found within the area. Various mitigation strategies exist in this area, including dense tree canopy, and a noise wall.

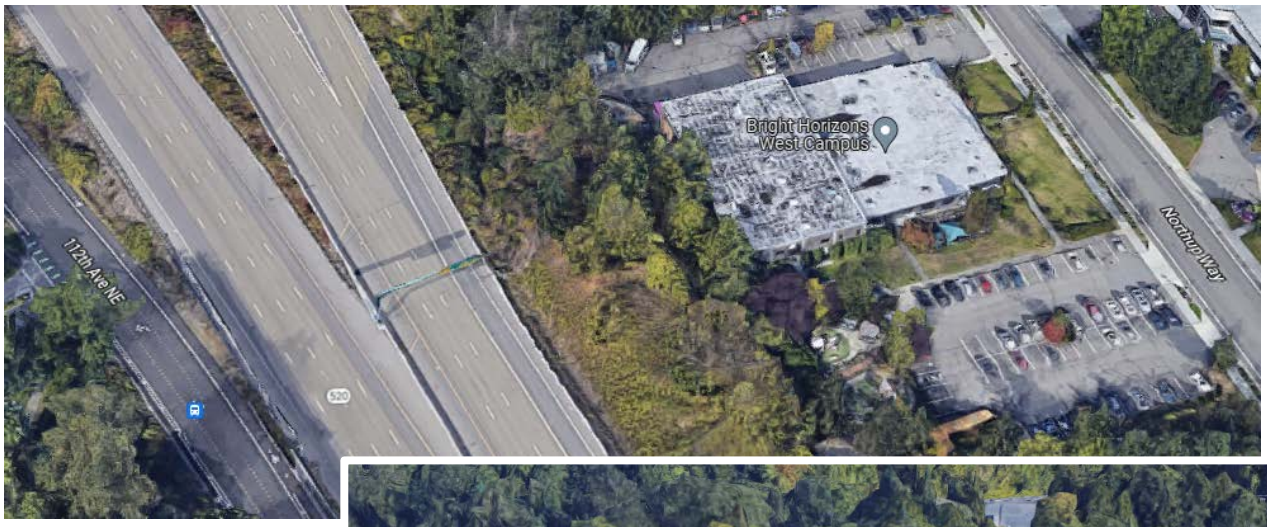


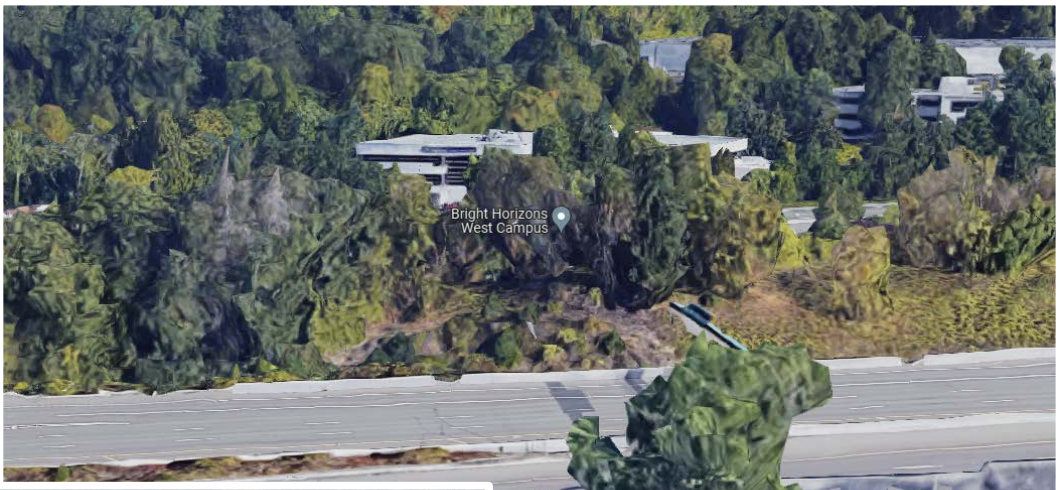
Sensitive uses.

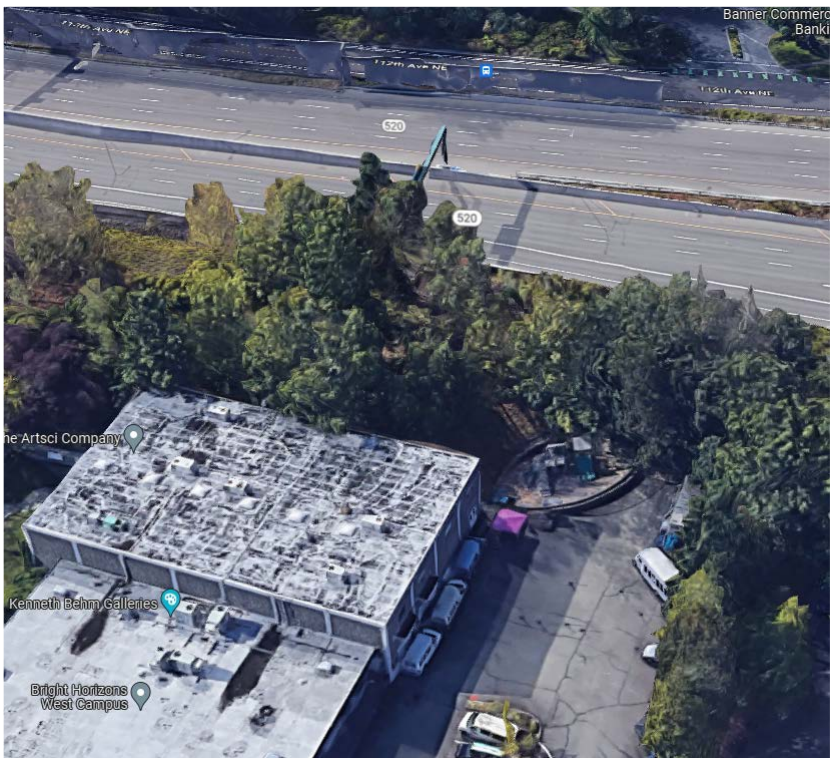
From top: Childcare facilities in Dogwood Park; preschool located adjacent to I-405 with noise wall serving as buffer.

Sensitive uses.

From top: Preschool and elementary school south of SR 520; Childcare facility north of SR 520, west of 108th Ave NE.







Sensitive uses

Three different views of a childcare facility and its play area nestled in the trees buffering it from SR 520.

How should we plan for future growth?

Upcoming long-range planning processes should consider effective strategies for avoiding and mitigating exposures to air pollution around high-volume roadways. With the periodic update to Bellevue's Comprehensive Plan and the implementation of the Wilburton Vision, Bellevue will facilitate growth and development and the creation of new mixed-use residential neighborhoods. At a minimum, Bellevue will be planning to add 35,000 housing units and 70,000 jobs by 2044. The Wilburton study area, located on the west edge of the Wilburton Neighborhood Area, is itself being studied to add between 5,000-15,000 housing units and over 20,000 jobs by 2044.

Ensuring enough capacity exists to house households of all income levels, household types and age groups is a critical issue facing the city during the next planning cycle. This is particularly true given that the city does not, under current zoning, have sufficient capacity of land to meet its housing needs. Further, available land adjacent to transit may also be located adjacent to freeways, which gives rise to competing environmental health interests that may not always be compatible.

Relatedly, when planning for jobs, the city must ensure enough development capacity exists for a wide range of business sizes, revenues, and types, especially capacity for key neighborhood services such as childcare and elder care. Locating many of these services throughout the city in low exposure risk areas could have the added benefit of enhancing convenient access to services, thereby reducing emissions.

IV. Review of Mitigation Strategies

Environmental health has traditionally focused on reducing exposure to environmental hazards, but emphasis has increasingly shifted to upstream interventions.[67] While this chapter focuses on various approaches that may be considered to avoid and minimize exposure to air pollution generated by high-volume roadways, it begins by describing "primary mitigation strategies" that eliminate and reduce health-harming air pollutants.

Primary mitigation strategies

Primary mitigation strategies include interventions before pollution happens, such as reducing vehicle trips and improving the fuel efficiency of on-road vehicles. Bellevue is already working to reduce vehicle miles traveled (VMT) through investments in pedestrian and bicycle facility improvements, rideshare programs, and implementation of other transportation demand management strategies. Additional efforts to reduce emissions include diesel retrofit programs and electrifying the city's fleet, as well as efforts at the state-level to accelerate the adoption of electric vehicles.

Key terms

Primary mitigation strategies – interventions before pollution happens.

Secondary mitigation strategies – interventions that reduce the effects of pollution.

Tertiary mitigation strategies – interventions aimed at helping people affected by pollution.

Land-use buffer – land use policies that restrict sensitive uses within a specified distance of an emission source.

Another primary mitigation strategy that focuses on land use includes transit-oriented development (TOD). The City of Bellevue is already promoting TOD around its future light rail stations and major transit centers, to create more walkable complete communities. However, as mentioned above, available land adjacent to transit within the city may also be located adjacent to freeways, potentially within the APEZ. Thus, when evaluating appropriate uses within TOD, or within specific areas next to transit that are also within the APEZ, the city will need to balance and reconcile various environmental health considerations to reach informed planning and land use decisions.

[67] Prevention Institute, 2019, Spectrum of Intervention, accessed https://www.preventioninstitute.org/tools/spectrum-prevention-o

Land use buffers

Secondary mitigation strategies include interventions that reduce the effects of pollution. For example, land-use buffers are land use policies and regulations that seek to limit sensitive uses from locating within a specified distance of a high-volume roadway. Sensitive land uses include schools, daycare facilities, residences, active park land, active travel corridors, and medical facilities.

Land use buffers may be the most effective regulatory model to address impacts of air pollution, but a prohibition has the effect of eliminating land that would otherwise be available for development of sensitive uses.[68] "Overall, the evidence suggests that exposure to traffic-related air pollution can be decreased by 40 to 90 percent, depending on the pollutant, by siting sensitive land uses 200 meters or more from highways and other busy roads."[69] By limiting new sensitive land uses from locating within a buffer zone, the risk of exposing new residents and the most vulnerable populations to high concentrations of these harmful pollutants is avoided.

> Land-use buffers can result in exposure reductions of up to 90 percent.
>
> *-Brugge and Ron, 2011.*

However, it may be difficult to site these uses, particularly when the amount of land available for development is shrinking, when market forces may constrain the production of these uses within the city, or when resident opposition to increased density limits potential policy changes that could otherwise be enacted within existing neighborhoods. Striking the appropriate balance between facilitating and encouraging sensitive land uses, optimizing buildable land capacity, and prioritizing environmental health considerations may be challenging. Thus, planning for future residential and sensitive uses, should take into account air quality, along with other considerations such as the need for additional housing, availability of land for development, transportation impacts, proximity of housing to jobs, and neighborhood character.

Improved urban design

Improved urban design is another secondary mitigation strategy to consider, which could be implemented through land use code regulations or design guidelines. Urban air pollution can be reduced by 50 percent or more through urban design practices such as the careful placement of buildings and open space. [70] This tactic would be achieved most readily in neighborhoods where the

[68] Brugge & Ron, 2021, An argument for a regulatory approach to transportation-related ultrafine particle exposure, accessed https://www.mapc.org/wp-content/uploads/2021/06/Particulate-Policy-062121.pdf

[69] Brugge & Ron, 2021, An argument for a regulatory approach to transportation-related ultrafine particle exposure, accessed https://www.mapc.org/wp-content/uploads/2021/06/Particulate-Policy-062121.pdf

[70] Brugge et al., 2014, Improving Health in Communities Near Highways

urban design was addressed holistically, such as for a neighborhood rezoned for redevelopment. To achieve improved urban design, "buildings should be oriented to readily allow dilution of polluted air, and a variety of techniques should be applied to reduce emissions in less well-ventilated areas." [71]

Other urban design strategies to consider include:

- Limiting proximity to on/off ramps and/or pursuing alternate on/off ramp designs;
- Moving freight corridors away from residential areas; and
- "…avoiding wind flow through open areas below raised highways or orienting street canyons so that wind flows through them instead of stagnating could reduce pollutant concentrations by one third to one half." [72]

Roadside barriers

Roadside barriers are a strategy that may feature noise walls or solid barriers, earthen berms, vegetative walls, vegetative buffers, or functional buffers[73]. Pollutant concentrations behind a barrier located downwind of a roadway are typically lower than concentrations in the absence of a barrier.[74] The effectiveness of this approach depends on roadway configuration, local meteorology, barrier height, design elements, and endpoint location. For example, pollutant concentrations may be higher downwind of a wall if there are gaps in the wall that allow pollutants to pass through.

A wall or solid barrier (i.e., a noise barrier) has been shown to reduce air pollution levels by 10 to 50 percent when the wind direction is across the road.[75] Barriers are less effective for other wind directions, and they should be avoided in neighborhoods with high levels of local traffic where pollution may aggregate on the non-highway side of the barrier.[76] This approach is also

A wall or solid barrier (i.e., a noise barrier) has been shown to reduce air pollution levels by up to 50 percent when the wind direction is across the road.

[71] Brugge et al., 2014, Improving Health in Communities Near Highways

[72] Brugge & Ron, 2021, An argument for a regulatory approach to transportation-related ultrafine particle exposure, accessed https://www.mapc.org/wp-content/uploads/2021/06/Particulate-Policy-062121.pdf

[73] Baldauf, R. Recommendations for Constructing Roadside Vegetation Barriers to Improve Near-Road Air Quality. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-16/072, 2016.

[74] Bauldauf et al., 2008, Impacts of noise barriers on near-road air quality

[75] Bowker et al., 2007, The effects of roadside structures on the transport and dispersion of ultrafine particles from highways

[76] Brugge et al., 2014, Improving Health in Communities Near Highways, accessed https://sites.tufts.edu/cafeh/files/2011/10/CAFEH-Report-Final-2-26-15-hi-res1.pdf

advantageous because it also decreases noise pollution.

Municipalities can also consider creating a vegetative buffer along highways. Trees and plants along roadways can act as a physical barrier and can filter particles as they pass through and accumulate on leaf surfaces. While evidence of the efficacy of vegetative buffers is less consistent than that for solid barriers, dense, lush, varied vegetation may achieve reductions like those for solid barriers.[77] Mature vegetation tends to be more effective than young vegetation, evergreen species are typically more effective than deciduous species, and vegetation with needle-like greenery tends to be less effective than broadleaved trees.[78] Particle removal rates tend to be higher when vegetation is located close to the pollutant source and when wind speeds are low.[79] In general, the vegetation barrier should be thick (approximately 20 feet or more) and have full leaf and branch coverage from the ground to the top of the canopy along the entire length (i.e., no gaps in-between or underneath the vegetation). [80] The vegetation chosen should also maintain its structure during all seasons; thus, coniferous trees would be preferable to hardwood species.[81]

A barrier (solid or vegetative) should be at least six meters in height to be effective for air pollution reduction.[82] To maximize their effectiveness, vegetation and other barriers should be arranged so that they do not impede ventilation, particularly in street canyons.[83] Several researchers have found that the presence of a solid noise barrier and a vegetative buffer resulted in the lowest downwind pollutant concentrations, compared to either strategy alone. [84], [85]

The presence of a solid noise barrier and a vegetative buffer resulted in the lowest downwind pollutant concentrations, compared to either strategy alone.

[77] Brugge et al., 2015, Developing Community-Level Policy and Practice to Reduce Traffic-Related Air Pollution Exposure
[78] Bauldauf et al., 2013, Integrating vegetation and green infrastructure into sustainable transportation planning
[79] Tong et al., 2016, Roadside vegetation barrier designs to mitigate near-road air pollution impacts
[80] Bauldauf et al., 2008, Impacts of noise barriers on near-road air quality
[81] Nguyen et al., 2015, Relationship between types of urban forest and PM 2.5 capture at three growth stages of leaves
[82] Washington State Department of Transportation. (2016). Effects of Roadside Barriers on Near-Road Pollutant Concentrations.
[83] Brugge et al., 2015, Developing Community-Level Policy and Practice to Reduce Traffic-Related Air Pollution Exposure
[84] Bowker et al., 2007, The effects of roadside structures on the transport and dispersion of ultrafine particles from highways
[85] Tong et al., 2016, Roadside vegetation barrier designs to mitigate near-road air pollution impacts

Finally, functional barriers may achieve multiple aims. For a project in Boston, recent engagement with community members suggests that functional barriers may be preferable to traditional walls or vegetative buffers. In a charrette in the Boston area, for example, "Charrette participants opted for more functional barriers such as minimally occupied structures including parking garages and commercial buildings (with high efficiency filtration) situated between the highway and proposed new housing."[86] Collocating commercial and residential parking garages or large storage facilities immediately adjacent to highways can provide a functional buffer to more sensitive land uses. Adding green roofs and covering such structures in vegetation may reduce air pollution locally but with limited effective distance, so it is unlikely to dramatically affect human exposure. However, these interventions can make such buildings more attractive.

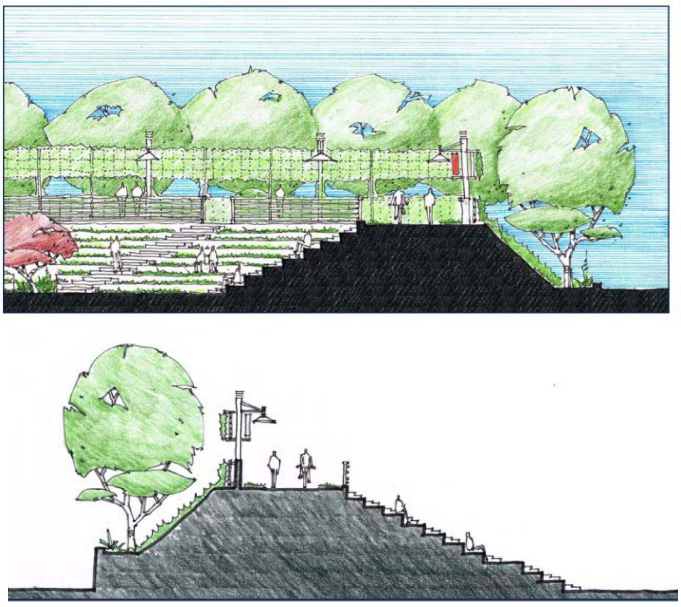


Figure 8. Schematics of functional barriers preferred by charrette participants, used with permission from Brugge et al., 2014.

Air pollution may be reduced by ~60 to 90 percent within parks relative to nearby streets, indicating that the presence of a park with lush vegetation can have a positive effect on pollution exposure.

[86] Brugge et al., 2014, Improving Health in Communities Near Highways, accessed https://sites.tufts.edu/cafeh/files/2011/10/CAFEH-Report-Final-2-26-15-hi-res1.pdf

Decking or lids over highways

Decking or lids over highways appear to be an effective mitigation strategy with some important caveats. Evidence suggests that moderate reductions in air pollution (less than 40 percent) are possible with decking or lids over high-volume roadways.[87] However, at the ends of a highway deck/lid, air pollution will aggregate. Therefore, designs should consider including large-scale air filtering of tunnel exhaust. Additionally, decking may increase commuter exposure to air pollutants, so air filtering of tunnel exhaust should be considered to ensure pollutant levels are not harmful for those driving through the tunnel. An important co-benefit of this approach is the linking of urban areas and creation of productive land, which might make it worthwhile to pursue this tactic (even though the air pollution effects are less well documented). Further study of mitigation strategies related to freeway decks or lids would need to be performed as part of the Grand Connection freeway lid effort.

Building design strategies

Building design strategies include a full suite of secondary mitigation strategies that include improved ventilation, improved filtration, green spaces inside buildings, tightening of buildings as part of energy efficiency measures and weatherization, adding triple-paned glass for noise and pollution reduction, and creating non-idling zones near buildings and their ventilation systems. Among the many opportunities to improve ventilation and filtration, several specific strategies are described below:

- Siting ventilation systems far from high-volume roadways can help mitigate exposure to air pollution and achieve improved indoor air quality. Locating building air intake vents both vertically and horizontally as far from traffic sources of pollution such as on rooftops or on sides buildings that do not face roads can decrease pollutant concentrations indoors.[88] Design guidelines for neighborhoods adjacent to freeways could include this strategy.
- Another approach is recommending or requiring higher Minimum Efficiency Reporting Value (MERV) ratings for HVAC systems near roadways. Filtration is an effective method for improving indoor air quality with reductions up to 50-90 percent.[89] Filters for residences and schools near busy roadways should be MERV 14 or above, mainly because the ultrafine

[87] Brugge et al., 2015, Developing Community-Level Policy and Practice to Reduce Traffic-Related Air Pollution Exposure
[88] Brugge et al., 2015, Developing Community-Level Policy and Practice to Reduce Traffic-Related Air Pollution Exposure
[89] Environmental Protection Agency, Improving Indoor Air Quality, accessed https://www.epa.gov/indoor-air-quality-iaq/improving-indoor-air-quality

particle removal efficiencies of filters with lower MERV ratings are not reported.[90] Although existing standards are variable, a higher MERV rating is preferable, as long as the unit meets noise requirements. Filters with electrostatic precipitation should be carefully evaluated prior to use to avoid removing particulate pollution at the expense of increased ozone levels. If filters are to be used for air pollution reduction, steps should be taken to ensure maintenance and use. Long-term benefits of improved filtration require proper filter replacement and long-term maintenance.

- Triple-paned windows and other envelope tightening strategies may decrease exposure to air pollutants. Additionally, they have energy efficiency, weatherization, and noise benefits. This could potentially be addressed in design guidelines or through updates to the building code.

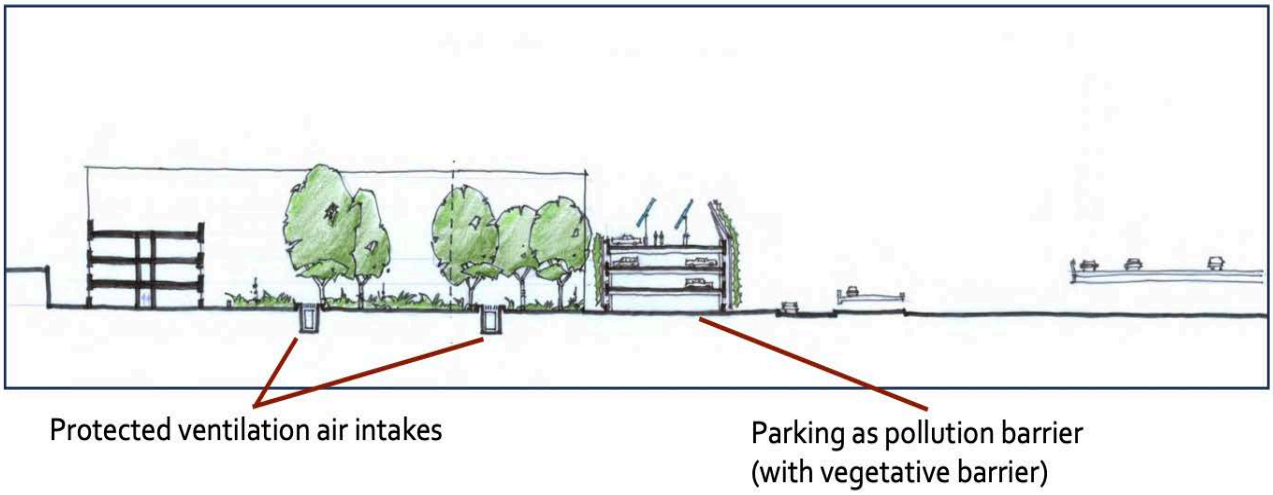


Figure 9. Schematic of protected ventilation air intakes and parking as pollution barrier, used with permission from Brugge et al., 2014.

Example air quality policies from other local governments

Appendix E includes examples of policies, codes, and plans targeted at limiting the risk of exposure to air pollution generated by high-volume roadways. Most examples are from jurisdictions located in California as California has historically been out in front of the rest of the country on air quality protections, but a couple of examples are from local jurisdictions. While not exhaustive, examples

[90] Environmental Protection Agency, 2015, Best Practices for Reducing Near-Road Pollution Exposure at Schools, accessed https://www.epa.gov/sites/default/files/2015-10/documents/ochp_2015_near_road_pollution_booklet_v16_508.pdf

range from preventative to mitigation and in general include policies and codes related to limiting sensitive uses within exposure zones, site and building design mitigation measures, and the development of community risk reduction plans with requirements for health impact assessments that may include requirements for air quality monitoring.

The following policies are illustrative. It is important to remember that local needs and circumstances should inform city consideration of the location and type of land uses and growth to be encouraged and supported, environmental health and protection, and the quality of life throughout the city.

Example site design policies and regulations include:

- Limiting sensitive land uses within an APEZ.
- Requiring residential buildings to be sited farthest from pollution sources and buildings or open spaces not housing people being located closest to the source of emissions, and/or
- Requiring installation of a combined solid barrier and dense, evergreen, vegetative buffer.

Example of building design policies and regulations include:

- Prohibiting sensitive uses on the ground floor, or any floor at the same or lower elevation of an adjacent roadway, where applicable building code provisions do not require exit directly to the exterior,
- Requiring and/or encouraging the installation of air intakes in locations as far away as is feasible from emission sources to provide the cleanest air to the building occupants, and/or
- Requiring the installation and implementation of an air filtration system (minimum of MERV 13) along with a maintenance plan detailing how the filtration system will be maintained.

Example community risk reduction plans (CRRP) and health risk assessments include:

- A CRRP with a baseline inventory of toxic air pollutants, objectives and performance targets for air quality improvement along with a set of local actions to reduce health impacts for disproportionately exposed communities,
- Requirements for health risk assessments for proposed developments along with reduction measures to reduce health risks to acceptable levels.

V. Forward-Looking Strategies for Bellevue

The following strategies in this chapter are based on a comprehensive review of the literature on reducing exposure to transportation related air pollution (TRAP). Recognizing that local land use planning and major rezones are complex, multiple factors must be considered and balanced. Prioritizing or implementing any of these strategies would depend on several factors, including the need and demand for housing, commercial space, daycares, and healthcare; the proximity to transit; and the supply, or lack thereof, of affordable land. As Bellevue plans equitably for growth, the city can consider the benefits of increasing development capacity near high frequency transit and job centers along with the benefits of limiting exposure to air pollution. Opportunities for informed review of existing policies will take place during city planning processes for the periodic update to the Comprehensive Plan, the Wilburton Vision Implementation, and the BelRed Look Forward.

Land use strategies

The following strategies are recommended for consideration when updating future plans and policies:

- Consider applying a land use buffer for new sensitive land use capacity (schools, childcare centers, and residential uses) within Air Pollution Exposure Zones (APEZ), a minimum of 500 feet from high-volume roadways, when alternative locations with lower health risks exist.
- Explore growth alternatives that increase capacity for sensitive uses outside of APEZs, and when growth is located within APEZs, specific mitigation measures should be considered.
- Explore ways to discourage new sensitive land uses (e.g. daycares) from locating on the ground floor of existing buildings within APEZs, where applicable building code provisions do not require exit directly to the exterior.
- Explore ways to encourage land uses that act as physical buffers (e.g. parking garages, storage buildings, and other low-population density structures) to locate between freeways and other more sensitive land uses.
- Expand capacity for sensitive land uses (schools, childcare centers, and residential uses) by planning for a greater mix and intensity of uses in areas outside of APEZs throughout the city.

Urban design strategies

When updating future plans, consider adding urban design policies calling for elements that mitigate impacts from high-volume roadways on new or expanded uses sited near high-volume roadways, and in particular existing sensitive uses:

- Consider adding policies calling for design standards and guidelines that could improve air flow near freeways and prevent stagnation of air pollution. This may include standards such

as maximum floor plate sizes, building siting requirements, and open space requirements between buildings.

- Consider adding policies to require or incentivize installation of solid barriers, earthen berms, sound walls, and/or the planting of dense rows of trees and/or other vegetation between buildings and high-volume roadways (>= 100,000 AADT), for new or expanded uses sited within APEZs. Large, evergreen trees with long life spans work best for trapping air pollution (e.g. Western red cedar and Douglas fir).
- Consider the location of high-volume roadways (>= 100,000 AADT) when amending policies or regulations that would affect the siting of new or expanded buildings.
- Consider adding policy that would encourage the siting of building air intakes farthest from or shielded from transportation related air pollutants, where feasible.

Overall strategies

The following recommendations apply broadly to Bellevue's policy and planning processes, and build on existing city planning processes:

- Apply an equity lens during all planning processes for land use adjacent to high-volume roadways. This centers environmental justice and redresses the cumulative health impacts to people of color, low-income communities, and other historically underrepresented groups (e.g., who would benefit most from increasing residential capcacity across the city, and who could potentially be harmed).
- Continue to prioritize pedestrian and bicycle facility improvements, transit-oriented development, rideshare programs, and efforts to electrify the city's fleet. Identify opportunities to support and accelerate medium and heavy-duty vehicle electrification.
- Prioritize increasing density through infill development to turn low-density neighborhoods into ones that support accessing goods and services by walking, bicycling, and use of transit.
- Consult with builders and developers (e.g., Master Builders, BOMA, etc.) and impacted communities when looking to implement regulatory policies or guidance aimed at air pollution mitigation.

Recommendations for further study

Although this report is focused on strategies for future land use planning, the following strategies are also related to reducing exposure to air pollution around high-volume roadways, yet they apply more broadly. They are included here for consideration when developing future work programs.

Building Strategies

- Incentivize installation and require regular maintenance of air filters with MERV ratings at 13 or above e.g. through retrocommissioning support.

- Explore linkages between green building strategies, emerging building technologies, and air quality near high-volume roadways.

Air Quality Monitoring and Existing Uses

- Partner with agencies such as the Puget Sound Clean Air Agency, WA Department of Ecology Air Quality program, King County Public Health, and/or WA Department of Transportation to pilot air quality monitoring sensors at existing sensitive use locations within APEZs to gather information on existing localized conditions (see Appendix F for EPA's School Ventilation & Filtration System Assessment to guide decision-making about existing buildings).
- Partner with Seattle King County Public Health and the Puget Sound Clean Air Agency to:
    1. Inform owners of existing sensitive land uses located near high-volume roadways of:
        - The risk of exposure to high concentrations of air pollutants, especially from outdoor activities;
        - Steps they can take to assess indoor air quality as well as measure/monitor levels of air pollution outside their buildings;
        - Steps they can take to improve indoor air filtration including relocation of air intake valves oriented as far away from emission sources as possible (e.g. on roofs or high on building walls to avoid ground-level pollutants) and use of filters with MERV ratings of 13 or above; and
        - Steps they can take to improve outdoor air quality through installation of physical and/or vegetative buffers.
    2. Evaluate the need for relocation of sensitive uses outside of APEZs.
    3. Incentivize heat pumps for residential uses near high-volume roadways and/or for people with respiratory conditions/vulnerabilities, to limit respiratory impacts due to lack of air conditioning during heat events.

Advocacy

Opportunities to collaborate regionally and advocate for regional and state policies and resources to support improving air-quality and planning near high-volume roadways include:

- Advocate for updates to the International Building Code that require enhanced ventilation systems in new construction in proximity to high-volume roadways (MERV ratings 13 or higher).
- Advocate for regional or state standards for ultrafine particulates and other pollutants that lack federal standards.

- Advocate and collaborate with the State Mechanical Code Technical Advisory Committee and the Regional Code Collaborative to update code to consider best practices and standards for buildings located near high-volume roadways.
- Collaborate with local jurisdictions to share best practices for land use planning near high-volume roadways.
- Advocate for incorporating the location of sensitive land uses into the criteria for siting and installation of noise walls.
- Advocate for increased air quality monitoring in Bellevue from relevant state or regional air quality monitoring organizations, especially for sensitive uses near high-volume roadways, through programs such as the new air quality monitoring program part of the WA Climate Commitment Act.

Other Strategies:

- Pilot air quality monitoring sensors in air pollutant exposure zones near existing sensitive uses.
- Explore linkages between green building strategies, emerging building technologies, and air quality near high-volume roadways.
- Explore alternative on-/off-ramp designs that reduce idling, acceleration, and deceleration.
- Evaluate lidding, decking, or tunneling of I-405 as a strategy for the Grand Connection, which could have additional environmental health and air pollution benefits.
- Develop interactive maps showing weather, air quality monitoring data, and impacted communities to identify Air Pollutant Exposure Zones where poor air quality, exposure risk, and community vulnerability to exposure align (see examples from the San Francisco Department of Public Health, Bay Area Air Quality Management District, and Washington Department of Health's Environmental Health Disparities Map).
- Monitor development and air pollution trends over time to ensure equitable outcomes.
- Identify opportunities for increasing tree canopy within close proximity of high-volume roadways, in particular near existing sensitive uses.
- Develop approaches to educate the community, school and childcare administrators, healthcare providers, building developers, elected officials, and other stakeholders about the risks of air pollution with targeted, proactive, and appropriate messaging.
- Identify potential sites to install noise walls or other physical barriers coupled with vegetative barriers between highways and adjacent lower elevation areas, especially where sensitive land uses exist, utilizing the WSDOT noise wall framework for projects that can trigger the development of a noise wall: Type 1; significant roadway construction projects and Type 2;

retrofit barriers in neighborhoods that existed before noise abatement regulations were established[91].

[91] Washington State Department of Transportation Noise Walls & Barriers webpage, accessed September 14, 2022; Noise walls & barriers | WSDOT.

Appendix A. Annotated bibliography

This annotated bibliography aims to organize and collate references and resources about air quality and relevant related topics. This is valuable to readers so they can understand the array of sources that were used to construct this report. Because it is not a systematic review, it does not include every resource and reference on these topics. Because it is not a literature review, it does not editorialize or synthesize information. Each of these references is included – implicitly or explicitly – somewhere in the body of the report, and each reference includes a brief overview of findings, as well as tags for topics of interest. They are presented in the order in which they are referenced in the report.

American Lung Association. (2022). State of the Air 2021 Report. Accessed on March 25, 2022, from https://www.lung.org/research/sota

The ALA produces an annual national air quality report using air quality data from the Environmental Protection Agency. It grades counties and cities based on their scores for ozone, year-round particle pollution and short-term particle pollution levels. The most recent State of the Air Report found that despite progress on cleaning up air pollution, more than 40 percent of Americans are living in places with unhealthy levels of ozone or particle pollution.

Tags: health effects

Anenberg, S.C., Haines, S., Wang, E., Nassikas, N., & Kinney, P.L. (2020). Synergistic health effects of air pollution, temperature, and pollen exposure: A systematic review of epidemiological evidence. *Environmental Health*. 19, 130.

Anenberg et al. systematically review epidemiological evidence from 56 studies for interactive effects of multiple exposures to heat, air pollution, and pollen on human health. They conclude that there is sufficient evidence that simultaneous exposure to heat and air pollution have synergistic effects on human health, meaning that the effects from both combined are larger than the effects from each alone. However, they also conclude that there is less evidence that simultaneous exposure to air pollution, heat and pollen or simply air pollution and pollen have synergistic effects on human health. Nearly all studies were at risk of bias from exposure assessment error. These findings raise concern for cumulative health impacts from air pollution and heat exposure may worsen as climate change increases exposure to heat.

Tags: climate change, health effects

Bae, C. C., Sandlin, G., Bassok, A., & Kim, S. (2007). The exposure of disadvantaged populations in freeway air-pollution sheds: A case study of the Seattle and Portland regions. Environment and Planning B: Planning and Design Environ. Plann. B, 34(1), 154-170.

Bae et al. investigate the effects of air pollution from high-volume roadways on vulnerable populations in Seattle and Portland. They find that many mobile-source emissions decay rapidly and approach background concentrations at 330 feet from the freeway. They also explore the relationship between house price values in Seattle and freeway proximity, policy options, planning implications, land-use prescriptions, and other mitigation measures. They found clustering of low-income and minority population near freeways, that the residential choices of the minority and/or low-income population are limited, and that housing prices are lower when other negative environmental factors such as traffic noise are accounted for. They conclude that people living in such locations make trade-offs for cheaper housing versus higher health risks.

Tags: residential, vulnerable populations, environmental justice, distance from road

Baldauf, R. W., Khlystov, A., Isakov, V., Thoma, E., Bowker, G. E., Long, T., & Snow, R. (2008). Impacts of noise barriers on near-road air quality. Atmospheric Environment, 42, 7502–7507.

Baldauf et al. assess traffic emissions impacts on air quality near a high-volume roadway, including a parcel of land that includes an open field, a section with a noise barrier alone, and a section with a noise barrier with vegetation combined. They found that the presence of a noise barrier can lead to higher pollutant concentrations during certain wind conditions but that the presence of mature trees in addition to the barrier reduced pollutant concentrations.

Tags: mitigation strategies, noise

Baldauf, R., McPherson, G., Wheaton, L., Zhang, M., Cahill, T. Hemphill Fuller, C., Withycombe, E., & Titus, K. (2013). Integrating vegetation and green infrastructure into sustainable transportation planning. Transportation Research News, September-October, 14-18.

Baldauf et al. assess the effects of vegetation and other green infrastructure for transportation planning. The review article includes discussions of vegetation barriers, computational models, cobenefits and disbenefits, barrier design considerations, addressing negative effects, and planting trees. Ultimately, they note that there are many considerations and questions that remain in the implementation of any mitigation strategies, and they advocate for pilot studies to help resolve these.

Tags: mitigation strategies

Barboza, T. (2017, July 9). L.A. requires air filters to protect residents near freeways. Are they doing the job? Los Angeles Times. Accessed on April 7, 2022, from https://www.latimes.com/local/lanow/la-me-ln-freeway-pollution-filters-20170709-story.html

Despite growing warnings about the health problems tied to traffic pollution, Los Angeles officials continue to approve a surge in residential development along freeways. The crux of their effort to protect people's lungs is a requirement that developers install air filters. To be effective, however, filters must be replaced frequently, and ventilation systems must run virtually non-stop.

Tags: Mitigation, residential zoning, building measures, filtration

Bateson, T.F. & Schwartz, J. (2007). Children's Response to Air Pollutants, Journal of Toxicology and Environmental Health, Part A, 71:3, 238-243.

Bateson & Schwartz highlight effects of air pollution on the lungs of young people. They note that it is important to focus on children with respect to air pollution because (1) their lungs are not completely developed, (2) they can have greater exposures than adults, and (3) those exposures can deliver higher doses of different composition that may remain in the lung for greater duration. The observed consequences of early life exposure to adverse levels of air pollutants, particularly diesel exhaust, include diminished lung function and increased susceptibility to acute respiratory illness and asthma.

Tags: vulnerable populations, health effects

Berglund, B., Lindvall, T., & Schwela, D. A. (1999). Guidelines for community noise. WHO.

This WHO document recognizes noise as an environmental problem. It compares and contrasts environmental noise to other pollutants and describes the evidence of human health impacts and dose-response relationships. Further, it attempts to derive guidelines for community noise and guidance for environmental health authorities and professions trying to protect people from the harmful effects of noise in non-industrial environments.

Tags: noise pollution

Boehmer, T.K., Foster, S.L., Henry, J.R., Woghiren-Akinnifesi, E.L., & Yip, F.Y. (2013). Residential proximity to major highways – United States, 2010. MMWR, 62(3):36-50). Accessed on February 22, 2022, from https://www.cdc.gov/mmwr/pdf/other/su6203.pdf

Boehmer et al. aim to discuss and raise awareness of the characteristics of persons exposed to traffic-related air pollution and to prompt actions to reduce disparities. They found that

approximately 11.3 million people (4 percent of the total U.S. population) live within 150 meters of a major highway. Among these, the authors identified that the greatest disparities were observed for race/ethnicity, nativity, and language spoken at home; the populations with the highest estimated percentage living within 150 meters of a major highway included members of racial and ethnic minority communities, foreign-born persons, and persons who speak a language other than English at home. They describe primary prevention strategies (e.g., transit, rideshare programs, diesel retrofitting, etc.), as well as secondary prevention strategies (e.g., roadside barriers, improved ventilation systems, land-use policies that limit new development).

Tags: vulnerable populations, environmental justice

Bowker, G. E., Baldauf, R., Isakov, V., Khylstov, A., & Petersen, W. (2007). The effects of roadside structures on the transport and dispersion of ultrafine particles from highways. Atmospheric Environment, 41, 8128-8139.

Bowker et al. examine the effects of roadside barriers on the flow patterns and dispersion of pollutants from a high-traffic highway in Raleigh, North Carolina. The authors found that air pollutant concentrations near the road were generally higher in open terrain situations with no barriers present; however, concentrations decreased faster with distance than when roadside barriers were present. The presence of a noise barrier and vegetation resulted in the lowest downwind pollutant concentrations.

Tags: mitigation strategies

Brugge, D., Durant, J., Patton, A., Newman, J., & Zamore, W. (2014). Improving Health in Communities Near Highways: Design Ideas from a Charrette. Community Assessment of Freeway Exposure and Health. Accessed on February 10, 2022, from https://sites.tufts.edu/cafeh/files/2011/10/CAFEH-Report-Final-2-26-15-hi-res1.pdf

This design charette is part of a larger Community Assessment of Freeway Exposure and Health (CAFEHG) project and focused on enacting positive changes for projects to reduce exposure to ultrafine particles near-highway locations in the Boston Area, including Boston's Chinatown and communities in the City of Somerville. Among these projects and policies, Brugge et al. describe:

1. filtration
2. air inlet locations
3. sound proofing
4. land use buffers
5. vegetative or built wall barriers
6. trees and plantings

7. decking over highways
8. urban design
9. garden locations & healthy vegetables
10. park locations
11. active travel locations

The authors note that municipalities will likely use zoning and public health regulations as effective tools for mitigating health effects from traffic pollution, but also that community activism and litigation have also produced effective actions in very specific situations in some states and municipalities.

Tags: mitigation strategies, participatory research

Brugge, D., Patton, A. P., Bob, A., Reisner, E., Lowe, L., Bright, O. M., Zamore, W. (2015). Developing Community-Level Policy and Practice to Reduce Traffic-Related Air Pollution Exposure. Environmental Justice, 8(3), 95-104.

Brugge et al. hosted a multidisciplinary design charrette that resulted in designs that successfully utilized many protective tactics and also led to engagement with the designers and developers of sites adjacent to high-volume roadways. The authors note that growth of interest in "green buildings" and "healthy homes" has mostly focused on addressing indoor sources of air pollution; however, they suggest an equally important need to consider and prevent exposure to ambient pollutants that infiltrate into homes and schools. Brugge et al. describe nine community-level tactics for reducing exposure to traffic-related air pollutants, including:

1. high-efficiency particulate arrestance (HEPA) filtration
2. appropriate air-intake locations
3. sound proofing, insulation
4. land-use buffers
5. vegetation or wall barriers
6. street-side trees, hedges and vegetation
7. decking over highways
8. urban design including placement of buildings
9. garden and park locations
10. active-travel locations, including bicycling and walking paths.

Tags: mitigation strategies, participatory research

Brugge, D. & Ron, S. (2021). An argument for a regulatory approach to transportation-related ultrafine particle exposure. Retrieved on February 10, 2022, from https://www.mapc.org/wp-content/uploads/2021/06/Particulate-Policy-062121.pdf

Brugge & Ron offer an overview of the risks of traffic-related ultrafine particle exposure, as well as practical steps toward regulating them. It is geared toward lay audiences. The authors note that, unlike PM2.5, UFP are not federally regulated, yet due to their small size they are a serious health concern since they can get into people's lungs, blood and brain where they have been linked to increased risks for respiratory disease, heart disease, and neurological health conditions as well as early death. Also, they note that while PM2.5 spreads out over multiple neighborhoods or towns, UFP often have large concentration gradients in the immediate vicinity (300-500 feet, or one-tenth of a mile) of sources, including, most notably, roadway corridors (Patton et al. 2014).

The authors also note that findings of adverse health effects and the intervention techniques tested are directly relevant to the struggle to create a healthy environment for all of the Commonwealth's residents, especially those who have been denied the opportunity to live, work, and play in an environment free from pollution due to their race, income, or citizenship.

The authors suggest that action must be taken at the local, regional, and state levels. Among the solutions they describe, the authors include:

1. establishing high-efficiency air filtration and ventilation standards for new buildings
2. using portable air filters in existing buildings
3. locating housing, schools, and parks away from highways or busy streets
4. building noise barriers

Tags: mitigation strategies, regulatory, environmental justice

Brunekreef, B., Nicole A. H. Janssen, De Hartog, J., Harssema, H., Knape, M., & Van Vliet, P. (1997). Air Pollution from Truck Traffic and Lung Function in Children Living near Motorways. Epidemiology, 8(3), 298-303.

Brunekreef et al. measured air pollution at schools near major roads in the Netherlands, as well as lung function in children attending those schools. They identified an association between lung function and truck traffic density. This association was stronger in children living closest to roads (within 300 meters). The strongest association was with diesel exhaust particles.

Tags: vulnerable populations, health effects, schools

California Environmental Protection Agency. Air Resources Board. (2005). Air quality and land use handbook: A community health perspective. Sacramento, CA: California Environmental Protection Agency, Air Resources Board.

This handbook recommends that communities avoid siting new sensitive land uses such as residences, schools, daycare centers, playgrounds, or medical facilities within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles/day. They note that localized air pollution exposures can be reduced as much as 80 percent with this buffer.

Tags: distance from road

Cohn, L., Harris, R., Shu, N., & Li, W. (2005). Highway Noise and Land Use Compatibility. Journal of Urban Planning and Development, 131(3), 125-129.

Noise is a great impediment to land use compatibility with adjacent highways and freeways. This article reports on the results from two research projects that utilized a common data-gathering effort, and examines the relationship between highway noise and land use compatibility, based on two recent studies performed by the writers. The principal goal of one of those studies was to "push the envelope" on this interrelatedness, in an attempt to examine the bigger issue of how noise should be considered in the future in relation to definitions of appropriate land use. In doing so, a series of questions was put forth and then answered, based on an extensive literature review and a survey of state highway agencies. Several recommendations were made, the most important of which was the creation of a state-funded retrofit program to be used to solve problems for residences that otherwise would not qualify for noise abatement consideration. That recommendation is under implementation by the Arizona Department of Transportation.

Tags: Noise, land use, zoning

Dadvand, P., Rivas, I., Basagaña, X., Alvarez-Pedrerol, M., Su, J., Pascual, M. D., & Nieuwenhuijsen, M. J. (2015). The association between greenness and traffic-related air pollution at schools. Science of The Total Environment, 523, 59-63.

Dadvand et al. examined the association between greenness within and surrounding school boundaries and monitored indoor and outdoor levels of traffic-related air pollutants (including NO_2, ultrafine particles, black carbon, and traffic-related $PM_{2.5}$) at 39 schools across Barcelona, Spain. They found an inverse association between greenness within and surrounding school boundaries and indoor and outdoor pollution. They conclude that including school and neighborhood greenness could be a way to address high burden of health effects of air pollution for schoolchildren, as well as to achieve other health co-benefits of greenness such as better behavioral development and school performance.

Tags: mitigation strategies, schools

Daigle, C. C., Chalupa, D. C., Gibb, F. R., Morrow, P. E., Oberdorster, G., Utell, M. J., and Frampton, M. W. 2003. Ultrafine particle deposition in humans during rest and exercise. Inhal. Toxicol.15(6):539– 552.

Daigle et al. measured the deposition of various size particles during breathing at rest and exercise. They concluded that particle deposition increased as particle size decreased, and that the ultrafine particle burden to the alveolar epithelium is significantly greater during exercise. They recommend caution for children and people exercising outdoors near high-volume roadways or other sources of UFP.

Tags: vulnerable populations, health effects, land use

DeWinter, J.L., Brown, S.G., Seagram, A.F., Landsberg, K., & Eisinger, D.S. (2018). A national-scale review of air pollutant concentrations measured in the U.S. near-road monitoring network during 2014 and 2015. Atmospheric Environment. 183:94-105

DeWinter et al. performed a national-scale assessment of air pollutants measured at 81 sites in the near-road environment during 2014 and 2015. They evaluated how concentrations at these locations compared to the National Ambient Air Quality Standards and estimated the contribution of emissions for adjacent roadways at each near-road site to the PM2.5 concentrations above the local urban background concentrations. The first two years of air quality monitoring data collected in the near-road environment across the U.S. indicate that near-road concentrations of CO and NO2 are typically below NAAQS thresholds, while PM2.5 concentrations were above NAAQS thresholds for a subset of near-road sites. The authors identified only a weak relationship between near-road mean CO, NO2 or PM2.5 concentrations and distance from roadway, likely due to confounding influences such as meteorology and urban-scale pollutant concentrations.

Tags: national data

Eisinger, D., Craig, K., Lansberg, K., Mukherjee, A., DeWinter, J., McCarthy, M., & Brown, S. (2021). Near-road air quality: Insights for a U.S. DOT five-year transportation pooled fund study. TR News.

In this review of a five-year transportation study funded by the United States Department of Transportation, the authors note that pollutants directly emitted by vehicles (from exhaust, wear from brake pads and tires, and dust from the road surface) are of special concern in areas adjacent to heavily travelled roads. Traffic, especially diesel-powered trucks and buses, create pollution hot spots within a few hundred meters of major roads. These are of particular concern given the growing awareness of environmental justice and community-based air quality. Given these concerns, eight state and federal agencies pooled their research efforts on this topic. They found that CO is no

longer a near-road problem. Furthermore, virtually all near-road NO_2 concentrations fell below existing health-based air quality standards. Most areas in the study have PM2.5 concentrations below NAAQS, and emissions trends suggest that future conditions will continue to improve. PM2.5 emissions based on EPA's emissions model, MOVES, were reduced by 92 percent between 2006 and 2035.

Tags: national data

English, P., Neutra, R., Scalf, R., Sullivan, M., Waller, L., & Zhu, L. (1999). Examining associations between childhood asthma and traffic flow using a geographic information system. Environmental Health Perspectives, 107(9), 761–767.

Using GIS data, English et al. explored the association of childhood residence proximal to high-volume roadways and asthma in a low-income population in San Diego County, California. Analysis of cases and controls within a 550-ft buffer region did not show any significantly elevated odds ratios. However, among cases, those residing near high traffic flows were more likely than those residing near lower traffic flows to have two or more medical care visits for asthma than to have only one visit for asthma during the year. This study suggests that higher traffic flows may be related to an increase in repeated medical visits for asthmatic children. Repeated exposure to particulate matter and other air pollutants from traffic exhaust may aggravate asthmatic symptoms in individuals already diagnosed with asthma.

Tags: vulnerable populations, health effects, residential

Forns J, Dadvand P, Foraster M, Alvarez-Pedrerol M, Rivas I, López-Vicente M, Suades-Gonzalez E, Garcia-Esteban R, Esnaola M, Cirach M, Grellier J, Basagaña X, Querol X, Guxens M, Nieuwenhuijsen MJ, Sunyer J. 2016. Traffic-related air pollution, noise at school, and behavioral problems in Barcelona schoolchildren: a cross-sectional study. Environ Health Perspect 124:529–535.

Forns et al. evaluated students in Barcelona to determine the associations between noise and indoor and outdoor concentrations of elemental carbon (EC), black carbon (BC), and nitrogen dioxides (NO_2) and child behavioral development scores. The authors found that increases in indoor and outdoor concentrations of EC, BC, and NO_2 were associated with more frequent behavioral problems, and that noise exposure at school was associated with more ADHD symptoms.

Tags: vulnerable populations, health effects, schools

Gauderman, W., Avol, E., Lurmann, F., Kuenzli, N., Gilliland, F., Peters, J., & McConnell, R. (2005). Childhood Asthma and Exposure to Traffic and Nitrogen Dioxide. Epidemiology, 16(6), 737-743.

Gauderman et al. examined the association between traffic-related pollution and childhood asthma in 208 Children's Health Study subjects from ten Southern California communities using multiple indicators of exposure. Lifetime history of doctor-diagnosed asthma was associated with outdoor NO2. The authors also observed increased asthma associated with closer residential distance to a freeway. Freeway exposure and measured NO2 concentrations were also associated with wheezing and use of asthma medication. Asthma was not associated with traffic volumes on roadways within 150 meters of homes or with model-based estimates of pollution from non-freeway roads.

Tags: vulnerable populations, health effects, residential

Goodkind, A.L., Tessum, C.W., Coggins, J.S., Marshall, J.D. (2019). Fine-scale damage estimates of particulate matter air pollution reveal opportunities for location-specific mitigation of emissions. PNAS, 116(18):8775-8780. Accessed on June 15, 2022, from https://doi.org/10.1073/pnas.1816102116

Goodkind et al. estimate that anthropogenic PM2.5 was responsible for 107,000 premature deaths in 2011, at a cost to society of $886 billion. The authors also applied a tool to assess the impacts of pollution emissions on a hyperlocal scale, underscoring the importance of capturing the variability in health impacts at a sub-county level.

Hankey, S., Lindsey, G., & Marshall, J. (2017). Population-Level Exposure to Particulate Air Pollution during Active Travel: Planning for Low-Exposure, Health-Promoting Cities. Environmental Health Perspectives, 125(4), 527-534.

Active travel (e.g., walking, biking) often occurs on high-traffic streets or near activity centers where particulate concentrations are highest (i.e., 20–42 percent of active travel occurs on blocks with high population-level exposure). Only 2–3 percent of blocks (3–8 percent of total active travel) are "sweet spots" (i.e., high active travel, low particulate concentrations); sweet spots are located a) near but slightly removed from the city-center or b) on off-street trails. They identified 1,721 blocks (~ 20 percent of local roads) where shifting active travel from high-traffic roads to adjacent low-traffic roads would reduce exposure by ~ 15 percent. Active travel is correlated with population density, land use mix, open space, and retail area; particulate concentrations were mostly unchanged with land use. Public health officials and urban planners may use our findings to promote healthy transportation choices.

Tags: Land use, open space, density, public health

Health Effects Institute. (2010). Traffic-related air pollution: A critical review of the literature on emissions, exposure, and health effects. Special Report 17.

This critical review of the best available evidence concludes that traffic-related emissions affect ambient air quality on a wide range of spatial scales, from local roadsides and urban scales to broadly regional background scales. The authors identify an exposure zone within a range of up to 300 to 500 m from a major road as the area most highly affected by traffic emissions. They note that the range reflects the variable influence of background pollution concentrations, meteorological conditions, and season. Finally, they conclude that the sufficient and suggestive evidence for these health outcomes indicates that exposures to traffic-related pollution are likely to be of public health concern and deserve public attention.

Tags: distance from road, health effects

Hjortebjerg, D., Andersen, A. N., Christensen, J. S., Ketzel, M., Raaschou-Nielsen, O., Sunyer, J., & Sorensen, M. (2016). Exposure to Road Traffic Noise and Behavioral Problems in 7-Year-Old Children: A Cohort Study. Environmental Health Perspectives, 124(2), 228-234.

Hjortebjerg et al. investigate the association of road traffic noise exposure and behavioral problems in 7-year-old Danish children. They determined that a 10-dB increase in average time-weighted road traffic noise exposure from birth to 7 years of age was associated with a 7 percent increase in abnormal versus normal total difficulties; 5 percent increase in borderline hyperactivity/inattention; 9 percent increase in abnormal hyperactivity/inattention; 5 percent increase in abnormal conduct problem; and 6 percent increase in peer relationship problems.

Tags: noise pollution

Hygge, S., Evans, G., & Bullinger, M. (2002). A Prospective Study of Some Effects of Aircraft Noise on Cognitive Performance in Schoolchildren. Psychological Science, 13(5), 469-474.

Hygge et al. found that children exposed to aircraft noise have impaired long-term memory, reading, short-term memory, and speech perception.

Tags: noise pollution

IMIM (Hospital del Mar Medical Research Institute). (2022, March 15). Living near green areas reduces the risk of suffering a stroke by 16 percent, study finds. ScienceDaily. Retrieved March 18, 2022 from www.sciencedaily.com/releases/2022/03/220315113023.htm

The risk of suffering an ischaemic stroke, the most common type of cerebrovascular event, is 16 percent less in people who have green spaces less than 300 meters from their homes. The study took

into account information on exposure to three atmospheric pollutants linked to vehicle traffic in more than three and a half million people selected from among the 7.5 million residents of Catalonia, over the age of eighteen who had not suffered a stroke prior to the start of the study.

Tags: mitigation strategies

Karner, A. A., Eisinger, D. S., & Niemeier, D. A. (2010). Near-roadway air quality: Synthesizing the findings from real-world data. Environmental Science & Technology, 44(14), 5334-5344.

The authors synthesize data from 41 roadside monitoring studies to determine concentration-distance relationship among air pollutants. With one analysis, they found almost all pollutants decay to background by 115-570 meters; with another analysis, they found almost all pollutants decay to background by 160-570 meters. Changes in pollutant concentrations with increasing distance from the road fell into one of three groups: at least a 50 percent decrease in peak/edge-of-road concentration by 150 m, followed by consistent but gradual decay toward background (e.g., carbon monoxide, some ultrafine particulate matter number concentrations); consistent decay or change over the entire distance range (e.g., benzene, nitrogen dioxide); or no trend with distance (e.g., particulate matter mass concentrations).

Tags: distance from road

Kim, H. H., Lee, C. S., Yu, S. D., Lee, J. S., Chang, J. Y., Jeon, J. M., ... Lim, Y. W. (2016). Near-Road Exposure and Impact of Air Pollution on Allergic Diseases in Elementary School Children: A Cross-Sectional Study. Yonsei Medical Journal, 57(3), 698–713.

Kim et al. classified seven schools according to their neighborhood characteristics: three were in traffic-related zones, two were in urban zones, and two were in industrial zones. The frequency of asthma treatment during the previous 12 months showed a significant increase with exposure to NO_2, as did the frequency of allergic rhinitis treatment with exposure to black carbon. Finally, the risk of asthma, allergic rhinitis, and atopic dermatitis was higher among children in schools in traffic related and complex source zones compared to children in schools in the control group.

Tags: vulnerable populations, health effects, schools

Kim, J.J., Smorodinsky, S., Lipsett, M., Singer, B.C., Hodgson, A.T., Ostro, B. (2004). Traffic-related Air Pollution near Busy Roads. American Journal of Respiratory and Critical Care Medicine. 170: 5(520-526).

Kim et al. conducted a school-based cross-sectional analysis in the San Francisco Bay area and found that although pollutant concentrations at 10 school sites were relatively low, they were higher at

schools near and/or downwind of major roads. They found associations between respiratory symptoms and traffic-related pollutants, as well as spatial variability in pollutants and associated differences in respiratory symptoms in a region with relatively good air quality.

Tags: vulnerable populations, health effects, schools.

Kingsley, S.L., Eliot, M.N., Carlson, L., Finn, J., MacIntosh, D.L., & Suh, H.H. (2014). Proximity of U.S. schools to major roadways: A nationwide assessment. Journal of Exposure Science and Environmental Epidemiology, 24, 253–259.

The authors examined data at 114,644 U.S. public and private schools and calculated their distance to the nearest major roadway. They found 3.2 million students (6.2 percent) attended schools located within 100 meters of a major roadway, and an additional 3.2 million (6.3 percent) students attended schools located 100-250 meters from a major roadway. Schools serving predominantly Black students were 18 percent more likely to be located within 250 m of a major roadway, as were schools where most students were eligible for free/reduced price meals.

Tags: vulnerable populations, distance from roads, schools, environmental justice

Lin, S., Munsie, J.P., Hwang, S.A., Fitzgerald, E., Cayo, M.R. (2002). Childhood asthma hospitalization and residential exposure to state route traffic. Environmental Research, Section A. 8873^81

Lin et al. studied children age 0-14 to determine whether pediatric hospitalization for asthma was associated with residing near high-volume roadways. They found that children hospitalized for asthma were more likely to live on roads with the most vehicle miles traveled. They suggest that residential exposure within 200 meters contributes to childhood asthma hospitalizations.

Tags: residential, vulnerable populations, health effects

Marshall, J., Brauer, M., & Frank, L. (2009). Healthy Neighborhoods: Walkability and Air Pollution. Environmental Health Perspectives, 117(11), 1752-1759.

The authors found that increased concentration of activities in urban settings yields both health costs and benefits. They identified neighborhoods that do especially well and especially poorly for walkability and air pollution exposure. They note that more work is needed to ensure that the poor do not bear an undue burden of urban air pollution and that neighborhoods designed for walking, bicycling, or mass transit do not adversely affect residents' exposure to air pollution. The authors' analyses could be replicated in other cities and tracked over time to better understand interactions among neighborhood walkability, air pollution exposure, and income level.

Tags: urban design, air pollution, residential use

McCarthy, M.C., Ludwig, J.F., Brown, S.G., Vaughn, D.L., & Roberts, P.T. (2013). Filtration effectiveness of HVAC systems at near-roadway schools. Indoor Air, 23(3), 196-207.

McCarthy et al. measured levels of black carbon and gaseous pollutants at three indoor classroom sites and at seven outdoor monitoring sites in Las Vegas. Initial HVAC filtration systems effected a 31-66 percent reduction in black carbon particle concentrations. After improved filtration systems were installed, black carbon particle concentrations were reduced by 74-97 percent. These findings suggest improving the filtration systems of an HVAC system may decrease exposure to near-roadway diesel particulate matter. However, reducing exposure to the gas-phase air toxics, which primarily originate from indoor sources, may require multiple filter passes on recirculated air.

Tags: mitigation strategies

Mendell, M. J., & Heath, G. A. (2005). Do indoor pollutants and thermal conditions in schools influence student performance? A critical review of the literature. Indoor Air, 15(1), 27-52.

Mendell et al. reviewed the scientific evidence relating to indoor pollutants and thermal conditions to human performance and attendance. They find persuasive evidence that links higher indoor concentrations of NO2 and reduced school performance, and suggestive evidence that links low ventilation rates to reduced performance. They also include indirect associations among many studies that link indoor dampness and microbiologic pollutants (primarily in homes) to asthma exacerbations and respiratory infections, which in turn have been related to reduced performance and attendance. Finally, they describe evidence that links poor IEQ (e.g., low ventilation rate, excess moisture, and formaldehyde) with adverse health effects in children and adults. They conclude that immediate actions are warranted in schools to prevent dampness problems, inadequate ventilation, and excess indoor exposures to substances such as NO2 and formaldehyde. Also, siting of new schools in areas with lower outdoor pollutant levels is preferable.

Tags: vulnerable populations, health effects, schools

Minguillón, M., Rivas, I., Moreno, T., Alastuey, A., Font, O., Córdoba, P., & Querol, X. (2015). Road traffic and sandy playground influence on ambient pollutants in schools. Atmospheric Environment, 111, 94-102.

Minguillón et al. examined four schools in Barcelona, Spain and found NOx, BC and PMx concentrations were higher in the school located nearest to traffic in the city center with the daily pattern reflecting the traffic rush hours. The NOx concentrations were found to decrease with

distance to the main road. The road traffic influence on ambient pollutants was higher on weekdays than weekends.

Tags: schools, distance from road

Morgenstern, V., Zutavern, A., Cyrys, J., Brockow, I., Koletzko, S., Krämer, U., Behrendt, H.,Herbarth, O., von Berg, A., Bauer, C.P., Wichmann, H.E., & Heinrich, J. (2008). Atopic Diseases, Allergic Sensitization, and Exposure to Traffic-related Air Pollution in Children. American Journal of Respiratory and Critical Care Medicine.177,12:1331-1337.

Morgenstern et al. followed a prospective birth cohort during the first 6 years of life to determine the relationship between long-term exposure to particulate matter and NO_2 at residential addresses. They found strong positive associations between distance of residence to nearest main road and asthmatic bronchitis, hay fever, eczema, and sensitization. They found a distance-dependent relationship, and odds ratios were highest among children who lived less than 50 meters from main roads.

Tags: vulnerable populations, residential, distance from road

Mori, J., Hanslin, H. M., Burchi, G., & Sæbø, A. (2015). Particulate matter and element accumulation on coniferous trees at different distances from a highway. Urban Forestry & Urban Greening, 14(1), 170-177.

Mori et al. tested coniferous trees in southwestern Norway to determine their capacity to accumulate particulate matter on the leaf surface or in the waxes on the leaf surface. They found that older trees had accumulated more particulate matter compared to younger trees. They also found a higher accumulation of course particulate matter in samples taken closest to the road.

Tags: mitigation measures

Mullen, N.A., Bhangar, S., Hering, S.V., Kreisberg, N.M., & Nazaroff, W.W. (2011). Ultrafine particle concentrations and exposures in six elementary school classrooms in northern California. Indoor Air, 21(1), 77-87.

Mullen et al. measured ultrafine particles inside and outside of six classrooms in northern California during normal occupancy and use. The authors found that particle number concentrations were higher when classrooms were occupied because of higher outdoor concentrations and higher ventilation rates during occupancy. Indoor air quality appeared mostly influenced by outdoor sources of ultrafine particles.

Tags: vulnerable populations, schools

Mueller, N., Rojas-Rueda, D., Basagaña, X., Cirach, M., Cole-Hunter, T., Dadvand, P., Nieuwenhuijsen, M. (2017). Urban and Transport Planning Related Exposures and Mortality: A Health Impact Assessment for Cities. Environmental Health Perspectives, 125(1), 89-96.

Authors estimated that annually, nearly 20 percent of mortality could be prevented if international recommendations for performance of physical activity; exposure to air pollution, noise, and heat; and access to green space were followed. Estimations showed that the greatest portion of preventable deaths was attributable to increases in physical activity, followed by reductions of exposure to air pollution, traffic noise, and heat. Access to green spaces had smaller effects on mortality. Physical activity factors and environmental exposures can be modified by changes in urban and transport planning. Authors emphasize the need for a) the reduction of motorized traffic through the promotion of active and public transport and b) the provision of green infrastructure, both of which are suggested to provide opportunities for physical activity and for mitigation of air pollution, noise, and heat.

Tags: Roadway exposure, heat, noise, air pollution, mitigation, air pollution

Ng, S. L., Chan, L. S., Lam, K. C., & Chan, W. K. (2003). Heavy metal contents and magnetic properties of playground dust in Hong Kong. Environmental Monitoring And Assessment, 89(3), 221-232.

Ng et al. examined seven heavy metals in playground dust in Hong Kong. The authors found high concentrations of zinc, cadmium, and chromium, and qualitative examination of dust samples under microscope indicated local traffic as one of the important pollutant sources.

Tags: vulnerable populations, schools

Nguyen, T., Yu, X., Zhang, Z., Liu, M., Liu, X. (2015.) Relationship between types of urban forest and PM 2.5 capture at three growth stages of leaves. Journal of Environmental Sciences.

Nguyen et al. examined five commonly cultivated kinds of urban forest types in Beijing at three stages of leaf growth. They found that the urban forest system is capable of storing and capturing dust from the air. Shrubs and broadleaf trees have the ability to capture particulate matter < 2.5 nanometers, and they were most effective when leaves have fully developed. During leafless season, conifer and mixed tree types are most effective in removing dust from the air. Grassland cannot control particles suspended in the air but can reduce dust pollution caused by dust from the ground blown by the wind back into the air.

Tags: mitigation strategies

Nowak, D.J., Crane, D.E., Stevens, J.C. (2006.) Air pollution removal by urban trees and shrubs in the United States. Urban Forestry & Urban Greening 4: 115-123.

Nowak et al. modeled hourly meteorological and pollution concentration data from across the U.S. and found that urban trees remove large amounts of air pollution. Pollution removal of O3, PM10, NO2, SO2, and CO by U.S. urban trees was estimated at 711,000 metric tons ($3.8 billion value). They conclude that increasing tree canopy cover can be a viable strategy to improve urban air quality and help meet clean air standards.

Tags: mitigation strategies

Patton, A., Perkins, J., Zamore, W., Levy, J., Brugge, D., & Durant, J. (2014). Spatial and temporal differences in traffic-related air pollution in three urban neighborhoods near an interstate highway. *Atmos Environ.* 99: 309–321.

Over the course of a year, Patton et al. measured distance-decay gradients of seven TRAPs (PNC, pPAH, NO, NO_X, BC, CO, $PM_{2.5}$) in near-highway (<400 m) and background areas (>1 km) in several neighborhoods in the Greater Boston Area (Somerville, Dorchester/South Boston, Chinatown, and Malden) to determine whether (1) spatial patterns in concentrations and inter-pollutant correlations differ between neighborhoods, and (2) variation within and between neighborhoods can be explained by traffic and meteorology. They found that pollutant levels generally increased with highway proximity, consistent with I-93 being a major source of TRAP; however, the slope and extent of the distance-decay gradients varied by neighborhood as well as by pollutant, season, and time of day.

Tags: distance from road

Pieters, N., Koppen, G., Van Poppel, M., De Prins, S., Cox, B., Dons, E., & ... Nawrot, T. S. (2015). Blood Pressure and Same-Day Exposure to Air Pollution at School: Associations with Nano-Sized to Coarse PM in Children. Environmental Health Perspectives, 123(7), 737-742.

Pieters et al. used mixed models to study the association between blood pressure and ambient concentrations of particulate matter and ultrafine particles (UFP) measured in school playgrounds. The authors found that children attending school on days with higher UFP concentrations (diameter < 100 nm) had higher systolic blood pressure, that the association was dependent on UFP size, and that there was no association with the PM2.5 mass concentration.

Tags: vulnerable populations, health effects, schools

Polidori, A., Fine, P. M., White, V., & Kwon, P. S. (2013). Pilot study of high-performance air filtration for classroom applications. Indoor Air, 23(3), 185-195.

Polidori et al. examined the effectiveness of three air purification systems inside nine Southern California classrooms. An HVAC-based high-performance panel filter (HP-PF), a register-based air purifier (RS), and a stand-alone air cleaning system (SA) were tested alone and in different combinations for their ability to remove the monitored pollutants. The combination of a RS and a HP-PF was the most effective solution for lowering the indoor concentrations of BC, UFPs, and PM2.5, with study average reductions between 87 percent and 96 percent. When using the HP-PF alone, reductions close to 90 percent were also achieved. The authors conclude that the installation of effective air filtration devices in classrooms may be an important mitigation measure to help reduce indoor pollutants of outdoor origin including ultrafine particles and diesel particulate matter, especially at schools located near highly trafficked freeways, refineries, and other important sources of air toxics.

Tags: mitigation strategies

Puget Sound Clean Air Agency. (2014). 2014 Chinatown International District Near-Road Study. Accessed on February 22, 2022, from https://www.pscleanair.gov/DocumentCenter/View/2284/2014-Chinatown-ID-ReportPDF?bidId=

The Puget Sound Clean Air Agency conducted a special study in August and September 2014 to improve understanding of the impact of I-5 on the Seattle Chinatown-International District community. The agency detected a strong diurnal and spatial pattern consistent with a significant source of pollution. Pollution decreased with distance from I-5 and was close to background by 300 meters. The agency concluded that local traffic and other sources of pollutants could have measurable short-term impacts on air quality over relatively localized areas, although the longer-term impact was not evident.

Tags: distance from roads

Puget Sound Clean Air Agency. (2021). 2020 Air Quality Data Summary. Accessed on February 22, 2022, from https://www.pscleanair.gov/DocumentCenter/View/4548/Air-Quality-Data-Summary-2020

This summary document provides air quality data from the Puget Sound Clean Air Agency's core monitoring network, including the EPA's six criteria air pollutants and air toxics. The report notes that over the last two decades, many pollutant levels have declined, and air quality has improved overall. In 2020, overall air quality remained good, though the agency notes challenges due to

wildfire smoke. Elevate fine particle levels (PM2.5) pose the greatest air quality challenge for this region. For example, on 25 days in 2020, fine particle levels exceeded the agency's local PM2.5 health goal. These days occurred during wildfire smoke and in winter months. Ozone levels also remain a concern for the region. Air toxics were measured at levels known to cause adverse health risks, including cancer, respiratory, and developmental effects.

Tags: local data

Puget Sound Regional Council. (no date). Information Item: Regional Air Quality Status. Accessed on February 22, 2022, from https://www.psrc.org/sites/default/files/air-quality-summary.pdf

The Puget Sound Regional Council evaluates four of the EPA's criteria air pollutants. Exceeding the standard can cause the EPA to designate an area as nonattainment. This document includes charts of carbon monoxide, course particulate matter, fine particulate matter, and ozone from 1985 through 2016.

Tags: local data

Reid, S., Bai, S., Du, Y., Craig, K., Erdaskos, G., Baringer, L., Eisinger, D., McCarthy, M., & Landsberg, K. (2016). Emissions modeling with MOVES and EMFAC to assess the potential for a transportation project to create particulate matter hot spots. Transportation Research Record: Journal of the Transportation Research Board, no. 2570.

Reid et al. sought to identify project characteristics that could reasonably exclude the project from consideration as a project of local air quality concern (pOAQC). In particulate matter (pm) nonattainment and maintenance areas, quantitative hot-spot analyses are required to assess air quality impacts of transportation projects that are identified as pOAQC. The authors performed scenario analysis for a hypothetical project that featured a new freeway. The mO Vehicle Emission Simulator and the Emission FACtors models were used to quantify PM10 and PM2.5 emissions for a 2006 analysis and to evaluate the impact of fleet turn-over and truck percentages on project-level emissions from 2006 to 2035. Fleet turnover effects sharply reduce project-level PM2.5 emissions over time but do not substantially reduce PM10 emissions, since re-entrained road dust emissions and tire wear and brake wear emissions increasingly dominate project-level inventories over time.

Tags: fleet turnover

Rundell, K. W., Caviston, R., Hollenbach, A. M., & Murphy, K. (2006). Vehicular Air Pollution, Playgrounds, and Youth Athletic Fields. Inhalation Toxicology,18(8), 541-547.

Rundell et al. examined particulate matter (PM1,0.02–1.0 μm diameter) levels at four elementary school athletic and playground fields and at one university soccer field. Lowest mean values were recorded at measurement sites furthest from the highway and followed a second-order logarithmic decay with distance away from the highway. Ozone increased with rising temperature and was highest in the warmer afternoon hours. The authors suggest that these findings reveal potential functional effects of chronic combustion-derived PM exposure on exercising school children and young adults.

Tags: vulnerable populations, schools

Sandlin, G. M., (2005). At the Microscale: Compact Growth and Adverse Health Impacts. Informational Paper Prepared for Puget Sound Regional Council.

This review of the California Air Resources Board document notes that it characterizes sensitive populations as "segments of the population most susceptible to poor air quality (i.e. children, the elderly and those with pre-existing serious health problems affected by air quality)" and sensitive land uses as residences, schools, daycare centers, playgrounds, and medical facilities.

Tags: definitions

Schilling, J., & Linton, L. (2005). The public health roots of zoning: In search of active living's legal genealogy. American Journal of Preventive Medicine, 28(2 Suppl 2), 96-104.

Legal, historical, and policy rationales support the modernization of zoning and land use policies that allow sensible mixes of land uses. Zoning and public health laws evolved from the same legal ancestors—the common law of public nuisance and the expansion of state police powers, both premised on protection of the public's health. When the U.S. Supreme Court approved zoning in the 1926 case of Ambler Realty v. Village of Euclid, it nominally recognized the health basis of zoning. But it went on to craft a new legal rationale focused more on protection of property rights and residential neighborhoods. Since Euclid, court decisions have given little consideration to the public health roots of zoning. Given an emerging body of research demonstrating the importance of walking-friendly environments and the deference shown by the courts to the passage of zoning laws, the courts are likely to support policymakers as they move to change zoning systems conceived long ago.

Tags: zoning, public health, residential

Silli, V., Salvatori, E., Manes, F. (2015.) Removal of Airborne Particulate Matter by Vegitation in an Urban Park in the City of Rome (Italy): An Ecosystem Services. Annali di Botanica.

Silli et al. explored the effect of urban vegetation of PM concentrations in a historical park located north of Rome. The park, Villa Ada, is surrounded by densely built areas and by high-traffic density roads. The authors found that trees may effectively abate suspended particles, with evergreen broadleaf trees being most effective in the summer, reducing the average air concentration of PM10.

Tags: mitigation measures

Staiano, M. A. (n.d.). Highway-Compatible Residential Development. Accessed:

https://www.staianoengineering.com/images/TR_News--Hwy_Compat_Devel.pdf

Many communities have achieved highway-compatible residential development. Consistently successful outcomes, however, demand well-written and intelligently implemented regulations. This requires sophistication on the part of local planning and zoning authorities, not only to set reasonable and appropriate goals but also to determine if a developer's plan for noise mitigation is feasible and if the analysis is competent.

Tags: Residential zoning, compatibility, roadway, mitigation

Stranger, M., Potgieter-Vermaak, S. S., & Van Grieken, R. (2008). Characterization of indoor air quality in primary schools in Antwerp, Belgium. Indoor Air, 18(6), 454-463.

Stranger et al. assessed indoor air quality at 27 primary schools in Antwerp, Belgium. They found elevated indoor PM2.5 and BTEX concentrations in primary school classrooms, exceeding the ambient concentrations, raising concerns about possible adverse health effects on susceptible children. The results suggest that local outdoor air concentrations measurements do not provide an accurate estimation of children's personal exposures to the identified air pollutants inside classrooms.

Tags: vulnerable populations, schools

Suades-González, E., Gascon, M., Guxens, M., & Sunyer, J. (2015). Air Pollution and Neuropsychological Development: A Review of the Latest Evidence. Endocrinology, 156(10), 3473-3482.

This review of the association between air pollution and neuropsychological development found sufficient evidence of detrimental effects of pre- or postnatal exposure to polycyclic aromatic hydrocarbons on global IQ, an association between pre- or post-natal exposure to fine particulate matter (PM2.5) and autism spectrum disorder, and limited evidence between nitrogen oxides and autism spectrum disorder. For other exposure-outcome associations reviewed, the evidence was

inadequate or insufficient. They concluded that the public health impacts of pollutants warrants caution and the precautionary principle should be applied to protect children.

Tags: vulnerable populations, health effects

Sunyer, J., Esnaola, M., Alvarez-Pedrerol, M., Forns, J., Rivas, I., López-Vicente, M., … Querol, X. (2015). Association between Traffic-Related Air Pollution in Schools and Cognitive Development in Primary School Children: A Prospective Cohort Study. PLoS Medicine, 12(3), e1001792

Sunyer et al. conducted a prospective study of 2,715 children from 39 schools in Barcelona. They found that students from schools with higher levels of EC, NO2, and UFP indoors and outdoors had a smaller growth in cognitive development than children from the paired lowly polluted schools, including working memory and inattentiveness.

Tags: vulnerable populations, health effects, schools

Tang, J., McNabola, A., & Misstear, B. (2020). The potential impacts of different traffic management strategies on air pollution and public health for a more sustainable city: A modelling case study from Dublin, Ireland. Sustainable Cities and Society, 60, 102229.

In this study, based on the traffic conditions of 2013 in Dublin, Ireland, the impact of a change in transport infrastructure, a traffic regulation change, speed limit changes and fleet composition changes on air quality and air pollution related public health were assessed. Two pollutants were considered in this study: NO2 and PM2.5. A traffic model, emissions model, dispersion model and a health impact model were adopted. The study highlighted the importance of the consideration of all possible affected areas within a city. It also highlighted the balance of the safety issues and the environmental health impact, when assessing the impact of traffic management strategies.

Tags: Fleet composition, regulation, public health impact model, mitigation

Tobías, A., Recio, A., Díaz, J., & Linares, C. (2015). Health impact assessment of traffic noise in Madrid (Spain). Environmental Research, 137, 136-140.

Tobías et al. aimed to quantify avoidable deaths resulting from reducing the impact of equivalent diurnal noise levels (LeqD) on daily cardiovascular and respiratory mortality among people aged ≥65 years in Madrid. They determined an association between LeqD exposure and mortality for both causes that suggests an important health effect. The magnitude of the health impact is similar to reducing average PM2.5 levels by 10µg/m(3). They conclude that regardless of air pollution, exposure

to traffic noise should be considered an important environmental factor having a significant impact on health.

Tags: noise pollution

Tong, Z., Baidauf, R.W., Isakov, V., Deshmukh, P. (2016.) Roadside vegetation barrier designs to mitigate near-road air pollution impacts. Science of the Total.

Tong et al. aimed to evaluate the effects of a wide vegetative barrier with high leaf area density and vegetation-solid barrier combinations on near-road air quality. They found that the impacts of these two strategies on near-road air quality are particle-size dependent. They found that a solid barrier creates an upward deflection in incoming airflow and deceleration of the approaching flow, which increases the on-road particle number concentration but results in a large concentration drop across it. In this case, deposition due to vegetation is absent and reductions are driven by dispersion only. Meanwhile, solid barrier with a vegetative cover combination was similar to a solid-barrier only. The additional particle reduction by having vegetation cover on the solid barrier is insignificant. A vegetation-solid barrier combination results in the highest reduction in downwind particle concentrations.

Tags: mitigation measures

U.S. Environmental Protection Agency. (2009). About Air Toxics, Health, and Ecological Effects. Accessed on February 22, 2022, from http://www.epa.gov/air/toxicair/newtoxics.html

This EPA resource includes extensive information about pollution and air quality, indoor air, research, air quality management, air quality by location, air pollutants, data, laws, and regulations.

Tags: health effects

U.S. Environmental Protection Agency. (2015). Best Practices for Reducing Near-Road Pollution Exposure at Schools. Retrieved on February 10, 2022, from https://www.epa.gov/sites/default/files/2015-10/documents/ochp_2015_near_road_pollution_booklet_v16_508.pdf

This EPA publication aims to help school communities identify strategies for reducing traffic-related pollution exposure at schools located downwind from heavily traveled roadways, along corridors with significant trucking traffic, and near other sources of vehicular pollution. The strategies highlighted include:

1. Educate staff on ventilation and indoor air quality best practices
2. Air-seal around windows, doors, HVAC ducts, etc.

3. Relocate air intake or source if roadway/pollution source is near intake vent
4. Use filtration
5. Improve HVAC system design to be compatible with high-efficiency filtration
6. Implement anti-idling/idle reduction policies
7. Upgrade school bus fleet
8. Encourage active transportation (e.g., walking and biking) to school
9. Locate school site away from pollution sources
10. Design school site to minimize pollutant sources
11. Use solid and vegetative barriers

Many of the best practices highlighted in this report may be effective at reducing exposure to other sources of particulate air pollution for existing buildings and other land uses.

Tags: vulnerable populations, mitigation strategies, schools

van Kempen, E.M., Kamp, I. V., Stellato, R. K., Lopez-Barrio, I., Haines, M. M., Nilsson, M. E., & Stansfeld, S. A. (2009). Children's annoyance reactions to aircraft and road traffic noise. Journal of the Acoustical Society of America. 125(2), 895.

Van Kempen et al. aim to investigate children's reactions to aircraft and road traffic noise in home and school settings. The authors found an exposure-response relationship between exposure to aircraft noise at school and severe annoyance in children. Specifically, the percentage severely annoyed children was predicted to increase from about 5.1 percent at 50 dB to about 12.1 percent at 60 dB. Aircraft noise at home) demonstrated a similar relation with severe annoyance. Children attending schools with higher road traffic noise were also more annoyed.

Tags: noise pollution

Vohra, K., Vodonos, A., Schwartz, J., Marais, E.A., Sulprizio, M.P., Mickley, L.J. (2021). Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS Chem. *Environmental Research.* 195. Retrieved from https://doi.org/10.1016/j.envres.2021.110754

Vohra et al. found that more than 8 million people died in 2018 as a result of air pollution from burning fossil fuels. This equates to 1 in 5 deaths worldwide. This groundbreaking analysis allowed researchers to directly attribute premature deaths from fine particulate pollution to fossil fuel combustion, underscoring the detrimental effects of fossil fuels on global health. In the U.S., 350,000 premature deaths were attributed to fossil fuel pollution in 2018, much more than previous analyses found.

Wang, S., Zhang, J., Zeng, Y., Wang, S., & Chen, S. (2009). Association of Traffic-Related Air Pollution with Children's Neurobehavioral Functions in Quanzhou, China. Environmental Health Perspectives, 117(10), 1612-1618.

Wang et al. collected data at two primary schools in Quanzhou, China. The authors found a significant association between chronic low-level traffic-related air pollution exposure and neurobehavioral function. Students from the school with higher concentrations of indoor and outdoor ambient air pollutants (including NO2 and particulate matter) were significantly more likely to perform poorly on a battery of neurobehavioral tests (including visual simple reaction time, continuous performance, digit symbol, pursuit aiming, and sign register).

Tags: vulnerable populations, health effects, schools

Washington State Department of Transportation. (2016). Effects of Roadside Barriers on Near-Road Pollutant Concentrations.

This review of the effects of roadside barriers on near-air quality concluded that barriers can effectively mitigate and dilute concentrations of mobile-source-emitted pollutants. The magnitude of those reductions depends on several factors (e.g., strength source, distance, meteorological conditions, roadway configuration, barrier height, length, configuration, and type). Assuming perpendicular wind conditions and a barrier of typical height (~ 6 meters), reductions are 20-60 percent within the first 100 meters. Barrier effectiveness increases with barrier height.

Tags: mitigation strategies

Zhu, Y., Hinds, W. C., Kim, S., & Sioutas, C. (2002). Concentration and size distribution of ultrafine particles near a major highway. Journal of the Air & Waste Management Association, 52(9), 1032-42.

Zhu et al. measured particle number concentration and size distribution in the size range from 6 to 220 nm at 30, 60, 90, 150, and 300 meters downwind and 300 meters upwind from I-405 at the Los Angeles National Cemetery. At this location, average traffic flow during the sampling periods was 13,900 vehicles/hr, and 93 percent of vehicles were gasoline-powered cars or light trucks. They found that particle number concentration decreased exponentially with downwind distance from the freeway. Ultrafine particle number concentration measured 300 m downwind from the freeway was indistinguishable from upwind background concentration. These data may be used to estimate exposure to ultrafine particles in the vicinity of major highways.

Tags: distance from road

Appendix B. Air Quality Trends

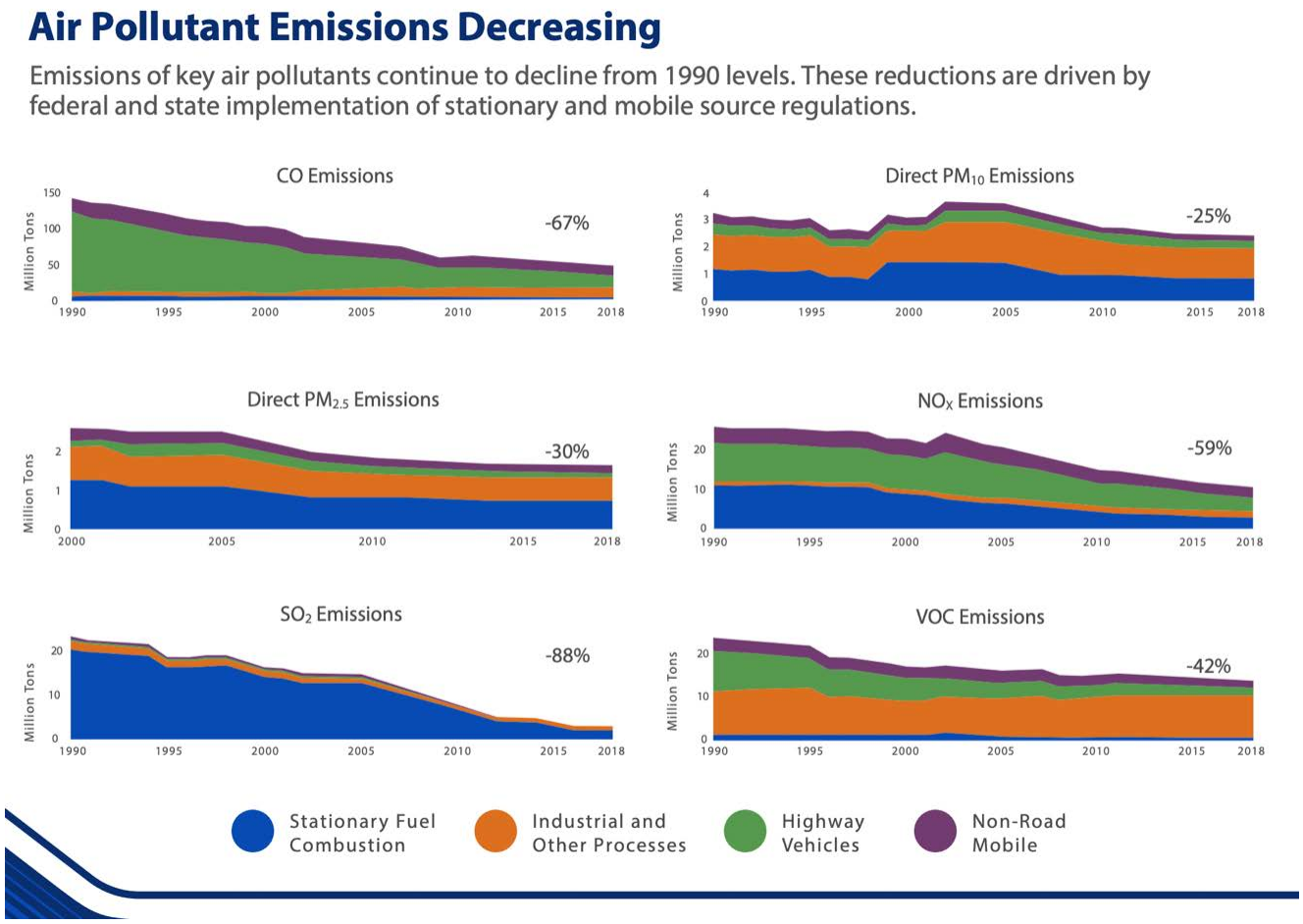


Figure 10. Emissions of key air pollutants continue downward trend, source: EPA, used with permission.

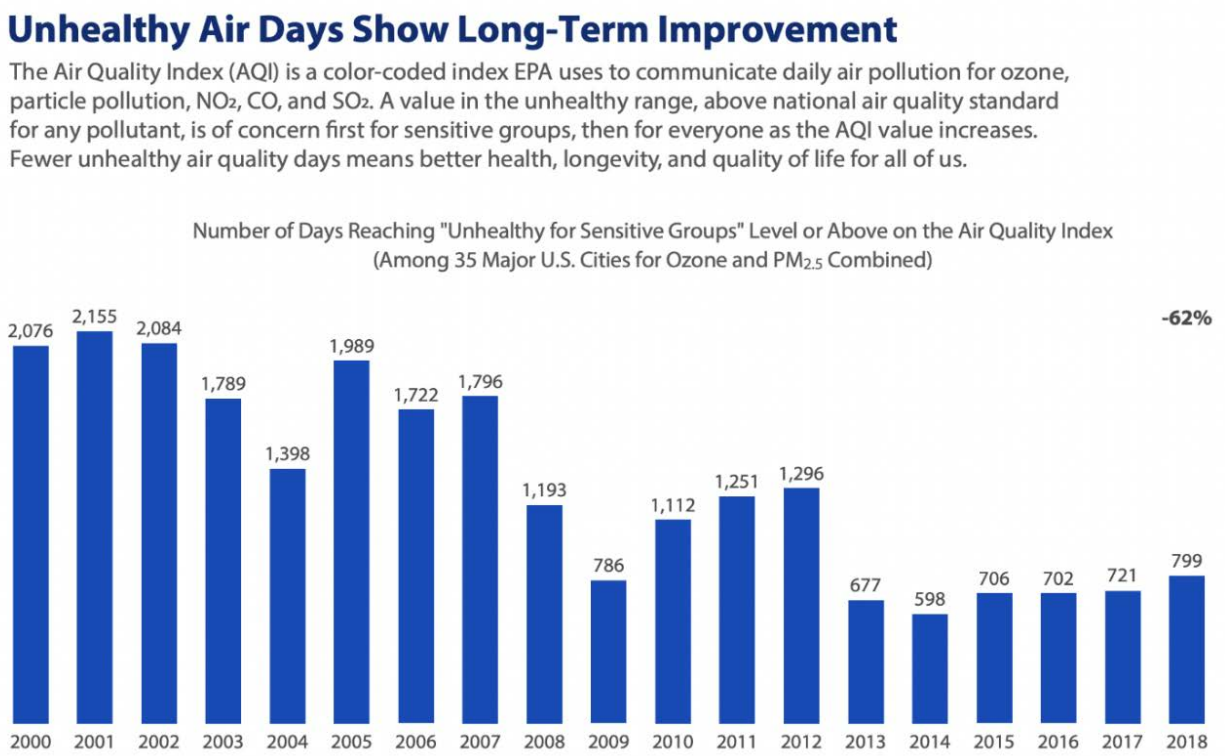


Figure 11. Unhealthy Air Days, source: EPA, used with permission.

Today, more than 135 million people in the U.S. live in counties where pollution levels frequently make the air too dangerous to breathe. That includes 799 unhealthy air days across 35 major U.S. cities in 2018 (see Figure 12).[92]

[92] U.S. EPA, 2019, *Our Nation's Air*, accessed https://gispub.epa.gov/air/trendsreport/2019/

Appendix C. Average Annual Daily Traffic Volumes

Bellevue's three high-volume roadways – I-405, I-90 and SR 520 – all have traffic volumes exceeding 100,000 vehicle trips per day. Approximately 8,500 people or six percent of Bellevue's population live within 500 feet and 29,200 people live within 1,500 feet of these roadways in 2021. Roadways with average annual daily trips of 100,000 or more are considered high-volume roadways around which measures should be taken to reduce exposure.

High-volume roadway segments

The greater the number of vehicle trips, the greater the amount of air pollutants generated. In Bellevue, I-405 has had the highest trip volumes followed by I-90 and then by SR 520. Segments of I-405 just south of Downtown and north of I-90 had the highest traffic volumes reaching over 200,000 average annual daily trips (AADT) per day in 2019. Freeway traffic volumes decrease slightly as vehicles exit the freeway and disperse into Downtown. Traffic volumes between 175,000 and 200,000 AADT in 2019 were located on I-405 near Bridle Trails, BelRed and Factoria where traffic from SR 520 or I-90 merged onto the roadway. On I-405 south of I-90 near Newport, and on I-90 near Eastgate, traffic volumes were between 150,000 and 175,000. Segments of SR 520 west of I-405 were the only highway segments in Bellevue where average annual daily trips were less than 100,000 at 69,000 and 84,000 AADT.

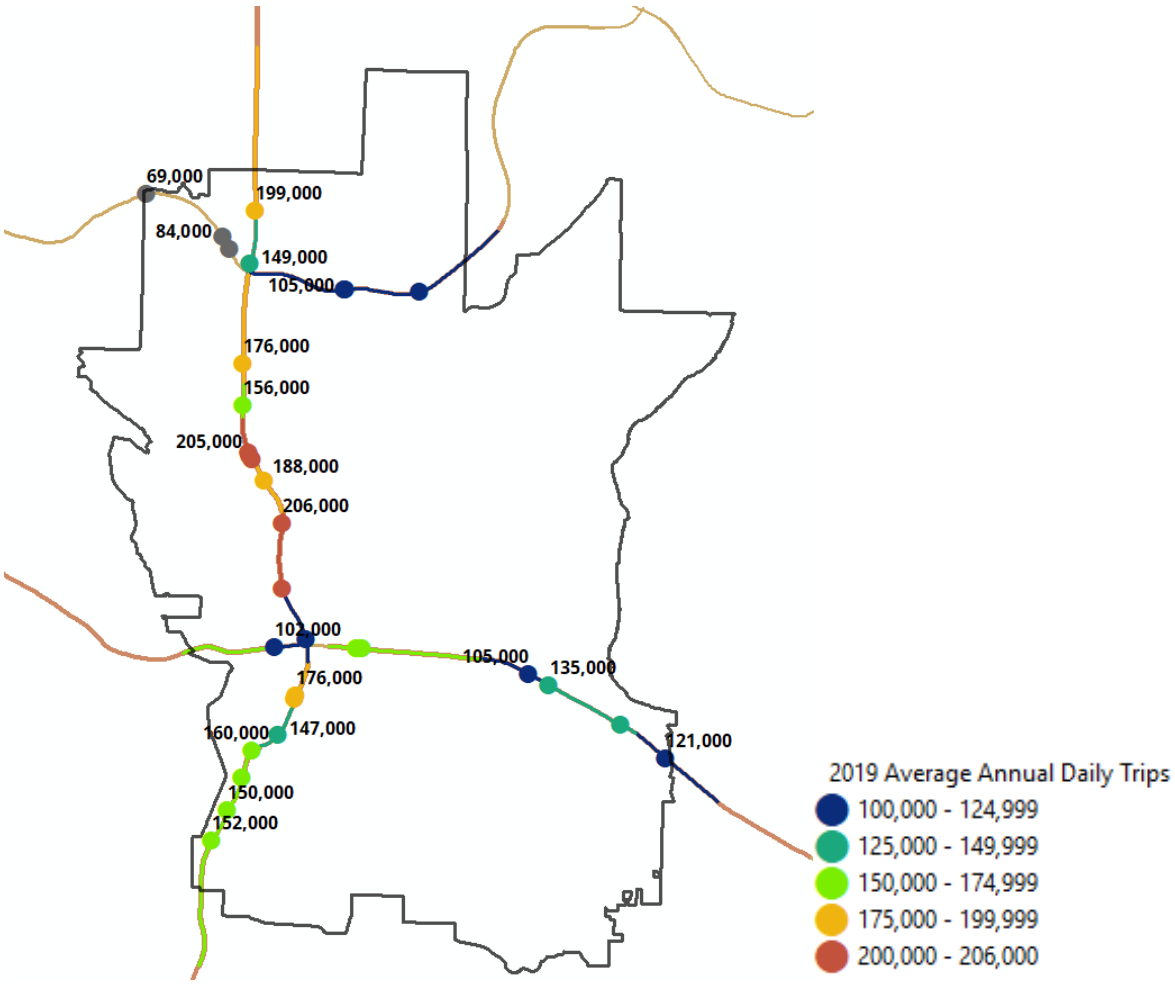


Figure 13. 2019 Average Annual Daily Vehicle Trips.

Truck volume and tonnage

In addition to overall traffic volume, the mix of vehicles affects pollution levels. While automobiles are expected to become cleaner as the fleet switches to electric powered motors, trucks are not anticipated to convert to electric motors soon. Both the type of fuel burned, and the tonnage of cargo transported affects the amount of air pollution generated. Trucks burning diesel fuel generate higher levels of particulate matter, and heavy cargo results in higher levels of tire and brake dust further increasing particulate matter levels.

In Bellevue, I-405 had the highest truck traffic volumes in 2019 with 9,700 AADT, 83 percent more than the truck volumes on I-90 at 5,300 AADT, and four times the truck volumes on SR 520 with 2,400 AADT. Trucks on I-405 also carried the highest tonnage with 39.8M tons in 2019, 63 percent more tonnage than that carried on I-90 with 24.4M tons, and nearly five times the tonnage carried on SR 520 with 8.2M tons.

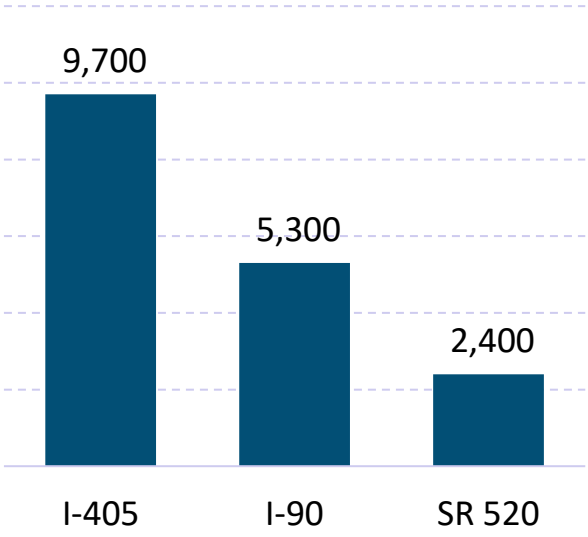


Figure 14. 2019 Average Annual Daily Truck Trips.

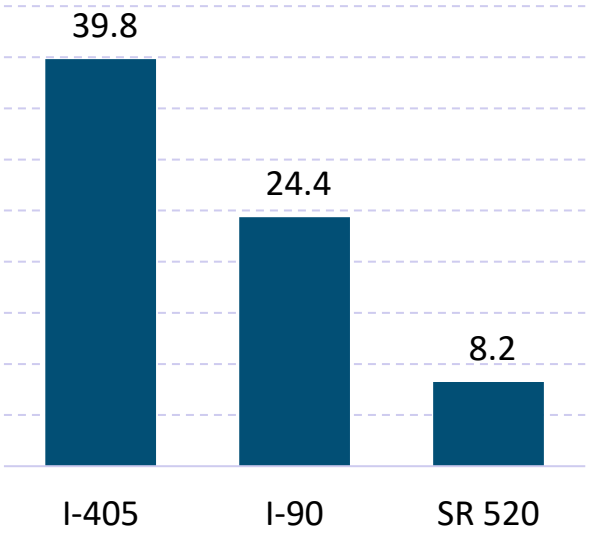


Figure 15. 2019 Truck Tonnage (millions of tons).

High-volume on-off ramps

High-volume on-off ramps where vehicles either idle during periods of peak congestion or accelerate and decelerate when there is no congestion, are also places of high emissions. Highest on/off ramp volumes in Bellevue exist in the I-405 / I-90 interchange around Factoria, Richards Valley / Lower Woodridge as well as just north of Downtown. The second highest volume cluster is located around the I-405 and SR 520 interchange. Comparatively lower ramp volumes existed around Downtown Bellevue, Eastgate, Newport, and West Lake Sammamish / Lakemont / Cougar Mountain.

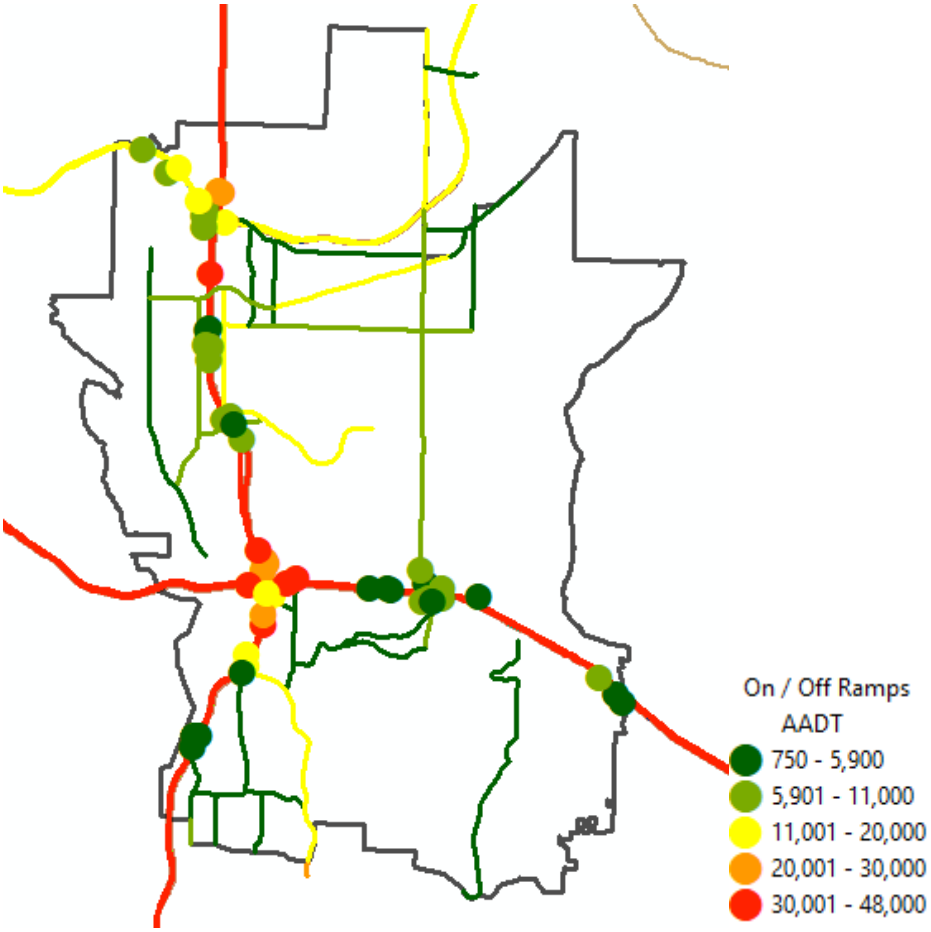


Figure 16. 2019 Average Annual Daily Vehicle Trips on On/Off Ramps.

Appendix D. Low Elevation Areas Adjacent to Freeways

This appendix includes additional images of areas located at lower elevations than the adjacent freeway based on the Aspect Ratio map shown below.

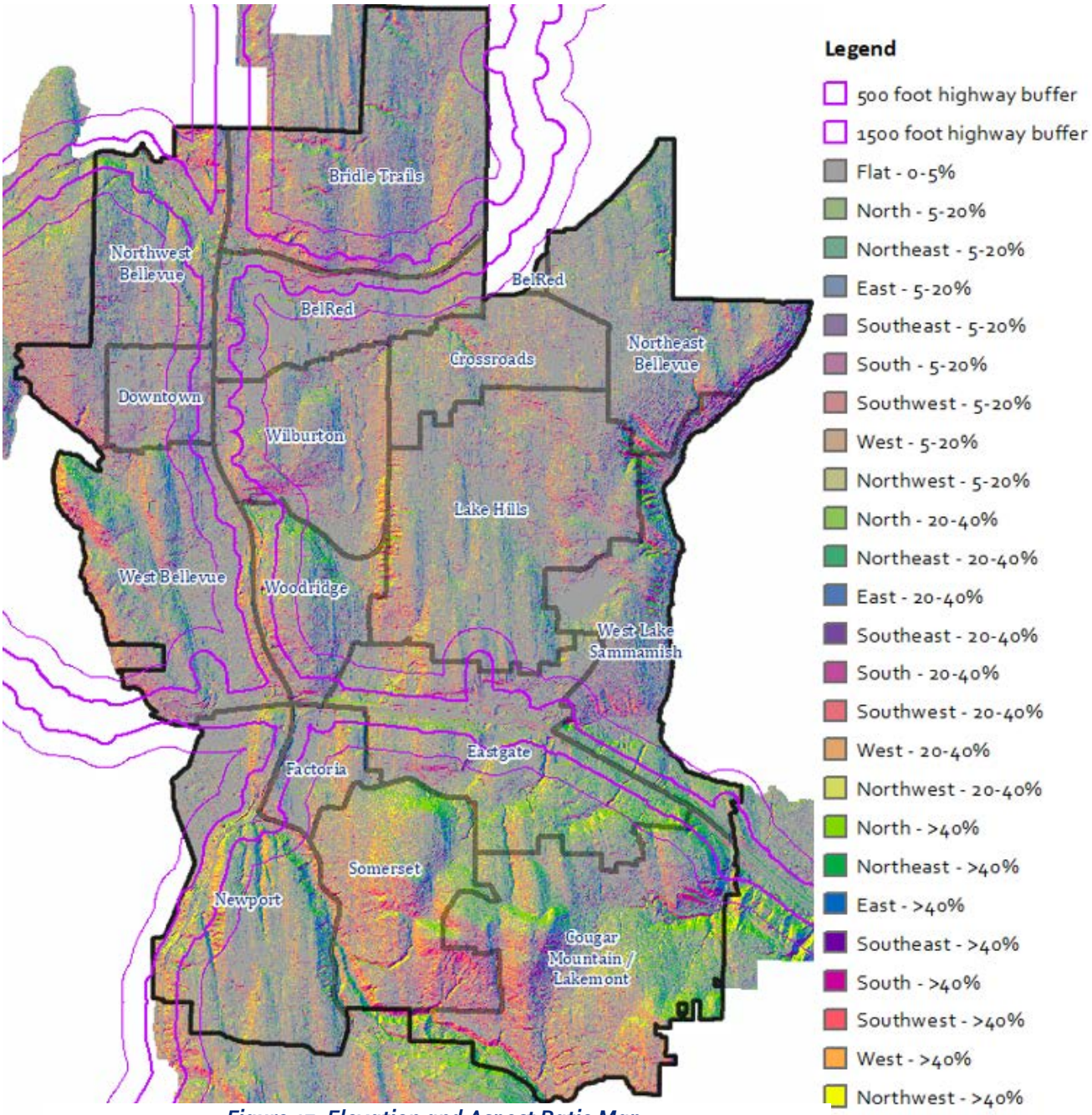
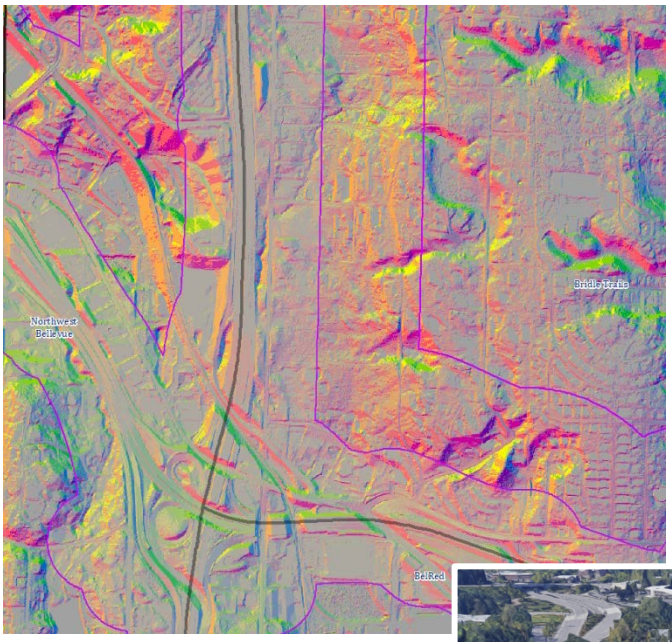


Figure 17. Elevation and Aspect Ratio Map.



Differing elevations near freeways.

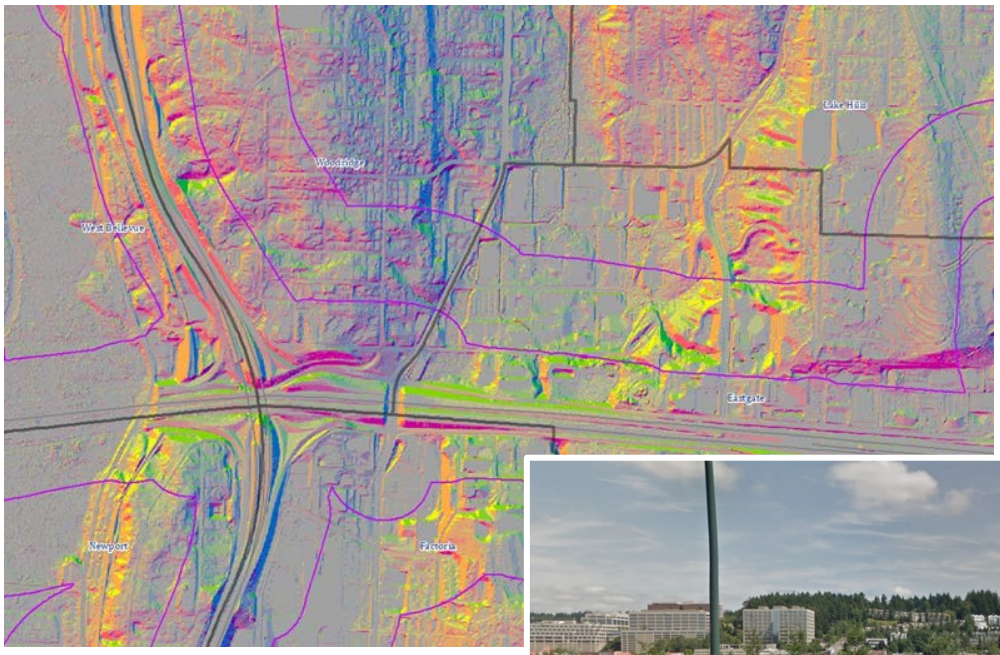
Top: Aspect Ratio map showing areas around the interchange of I-405 and SR 520.

Middle: Low elevation areas north of SR 520 looking north along 112th Ave NE.

Low elevations near freeways.

Top: Low elevation areas south SR 520 in BelRed.

Bottom: Low elevation area west of I-405 north of

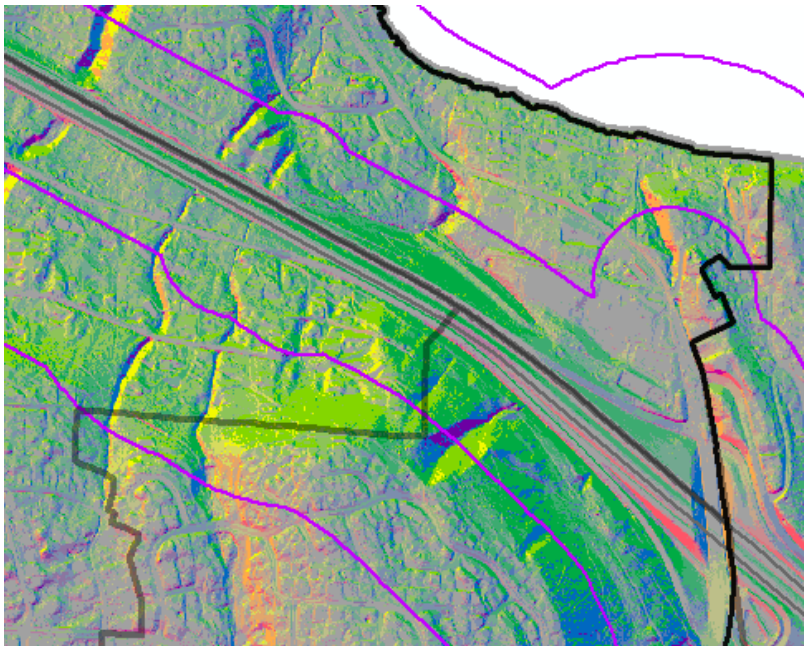


Varying elevations near freeways

Top: Aspect Ratio Map Zoomed in to Woodridge and Factoria. Zooming in, one can see that the west side of the Woodridge Neighborhood Area lies at a higher elevation than I-405, whereas Factoria lies at a lower elevation.

Middle: Looking eastward from I-405 toward Factoria. Only the tops of trees can be seen as the shopping area sits at an elevation lower than the freeway.

Bottom: Mockingbird Hill neighborhood. Located south of Factoria Mall, this neighborhood sits just below I-405 to the east.



Elevation example and map

Top: Looking northwest along I-90 at Lakemont Boulevard SE at elementary school and childcare facility.

Bottom: Aspect Ratio Map Zoomed into West Lake Sammamish and Cougar Mountain/Lakemont. The grey area north of I-90 just west of the city's boundary indicates that the area sits lower than the freeway in contrast to the green area south side of I-90 which slopes upward.

Appendix E. Policy, Code and Plan Examples

This appendix includes examples of policy, code, and plans related to limiting the risk of exposure to air pollution generated by high-volume roadways that other jurisdictions, primarily located in California, have adopted. California has historically been out in front of the rest of the country on air quality protections. These policies, while not exhaustive, range from preventative to mitigation.

General plan policy and code examples

1. City of Bothell, 12.48.170 Air quality buffer. Ordinance 2341
    - The Canyon Park Subarea Plan calls for a 500-foot buffer from the centerline of each directional roadway of Interstate 405 to prevent residential and other sensitive uses (e.g., schools, daycares) within close proximity to very heavy traffic volumes (where air pollution and health impacts are typically highest). (Ord. 2341 § 5 (Exh. A), 2020).
2. City of San Jose, 2040 General Plan
    - Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.
3. City of Hayward General Plan
    - NR-2.16 Sensitive Uses: The City shall minimize exposure of sensitive receptors to toxic air contaminants (TAC), fine particulate matter (PM2.5), and odors to the extent possible, and consider distance, orientation, and wind direction when siting sensitive land uses in proximity to TAC- and PM2.5-emitting sources and odor sources in order to minimize health risk.
    - NR-2.18 Exposure Reduction Measures for New Receptors: The City shall require development projects to implement all applicable best management practices that will reduce exposure of new sensitive receptors (e.g., hospitals, schools, daycare facilities, elderly housing and convalescent facilities) to odors, toxic air contaminants (TAC) and fine particulate matter (PM2.5).
    - NR-2.19 Exposure Reduction Measures for both Existing and New Receptors: The City shall work with area businesses, residents and partnering organizations to provide information about best management practices that can be implemented on a voluntary basis to reduce exposure of sensitive receptors to toxic air contaminants (TAC) and fine particulate matter (PM2.5).
4. Santa Clara County General Plan
    - HE-G.7 Sensitive receptor uses: Promote measures to protect sensitive receptor uses, such as residential areas, schools, daycare centers, recreational playfields and trails, and medical facilities *by locating uses away from major roadways and stationary area*

sources of pollution, where possible, or incorporating feasible, effective mitigation measures.

Site design policy and code examples

1. City of San Jose, 2040 General Plan
    - Encourage the use of pollution absorbing trees and vegetation in buffer areas between substantial sources of TACs and sensitive land uses.
2. City of Oakland, Standard Conditions of Approval
    - 2. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:
        - Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
        - Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).
        - Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
        - The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.
        - Sensitive receptors shall be located on the upper floors of buildings, if feasible.
        - Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (Pinus nigra var. maritima), Cypress (X Cupressocyparis leylandii), Hybrid popular (Populus deltoids X trichocarpa), and Redwood (Sequoia sempervirens).
        - Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.

Building design policies and code examples

1. City of San Jose, 2040 General Plan
    - Encourage the installation of appropriate air filtration at existing schools, residences, and other sensitive land uses adversely affected by pollution sources.
2. Santa Clara County, General Plan
    - HE-G.9 Healthy infill development: Promote measures and mitigations for infill development to protect residents from air and noise pollution, such as more stringent building performance standards, proper siting criteria, development and environmental review processes, and enhanced air filtration.
3. City of San Francisco, Article 38
    - Article 38 requires enhanced ventilation systems "capable of achieving the protection from particulate matter (PM2.5) equivalent to that associated with MERV 13 filtration (as defined by ASHRAE standard 52.2)" to be installed in sensitive use buildings that are identified within the Air Pollutant Exposure Zones that are either
        - a) newly constructed;
        - b) undergoing a "major alteration to existing building"; or
        - c) subject of an application for a Planning Department-permitted Change of Use. Additional information, including a map of the Air Pollutant Exposure Zones, is located on the City of San Francisco's Article 38 webpage
4. The City of Oakland also requires certain conditions to apply to projects that meet the following criteria:
    - a. The project involves any of the following sensitive land uses: residential uses; new or expanded daycares, schools, parks, nursing homes, or medical facilities; AND
    - b. The project is located within 1,000 (or other distance as specified below) of one or more of the following sources of air pollution:
        - Freeway;
        - Roadway with significant traffic (at least 10,000 vehicles/day);
        - Rail line (except BART) with over 30 trains per day;
        - Distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating TRU units per day, or where the TRU unit operations exceed 300 hours per work week.
        - Major rail or truck yard (such as the Union Pacific rail yard adjacent to the Port of Oakland);
        - Ferry Terminal;
        - Stationary pollutant source requiring permit from BAAQMD (such as a diesel generator);
        - Within 0.5 miles of the Port of Oakland or Oakland Airport;
        - Within 300 feet of a gas station;

        - Within 300 feet of a dry cleaner with a machine using PERC (or within 500 feet of a dry cleaner with two or more machines using PERC); AND
    - c. The project exceeds the health risk screening criteria after a screening analysis is conducted in accordance with the BAAQMD CEQA Guidelines.
5. City of Oakland, Standard Conditions of Approval
    - 2. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:
        - Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
        - Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).

Health risk assessments and community risk reduction plan examples

1. City of San Francisco, Community Risk Reduction Plan (CRRP)
    - The purpose of the CRRP is to protect human health through the reduction of emissions and exposure to ambient air pollution in the City and County of San Francisco. The CRRP is expected to establish citywide objectives and targets for air quality improvement and a set of local actions to reduce health impacts for disproportionately exposed communities in San Francisco.
2. City of San Jose, 2040 General Plan
    - Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution, such as freeways and industrial uses.
    - Consult with the Air District to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.
3. City of San Jose, 2040 General Plan
    - Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of toxic air contaminants and particulate matter smaller than 2.5 microns (PM2.5) emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The

Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.

4. City of Hayward, General Plan
    - NR-2.15 Community Risk Reduction Strategy: The City shall maintain and implement the General Plan as Hayward's community risk reduction strategy to reduce health risks associated with toxic air contaminants (TACs) and fine particulate matter (PM2.5) in both existing and new development.
5. City of Oakland, Standard Conditions of Approval
    - 1. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants.
        - The HRA shall be submitted to the City for review and approval.
        - If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required.
        - If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels.
        - Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.

Appendix F. EPA's School Ventilation & Filtration System Assessment

The EPA's 2015 *Best Practices for Reducing Near-Road Pollution Exposure at Schools* includes a school ventilation and filtration system assessment, which may be helpful for building owners, operators, and others to evaluate whether there are strategies that can be implemented to improve building operation and reduce exposure to near-road pollution. While the assessment is specific to schools, it can be adapted for other building types and land uses. The assessment is included below:

1. Assess whether near-road pollution may be a problem.
    a. Is there a major roadway near the school? If so:
        i. How far away is it?
        ii. Is the school downwind of the road?
    b. Where does school bus pick-up and drop-off occur?
        i. Are there opportunities to reduce bus idling or relocate loading zones away from classrooms and outdoor recreation areas?
2. Assess the current ventilation and filtration system.
    a. Is ventilation achieved passively or mechanically?
    b. If mechanical:
        i. Is a central HVAC system used or a single-classroom unit?
        ii. Are filters being used?
        iii. What is the blower capacity?
        iv. Is filtration being used? If so, what is the MERV rating of the filter(s)?
3. Assess ventilation operation.
    a. Are teachers leaving windows and/or doors open during the day?
    b. Are there opportunities to bring in air during off-peak emission times?
    c. Are teachers turning systems off due to noise issues?
    d. Are filters being inspected, cleaned, and replaced according to the schedule recommended by the manufacturer?
4. Assess air-sealing needs to limit infiltration of unconditioned air.
    a. Can infiltration of polluted air be reduced by sealing around any of the following:
        i. Windows?
        ii. Doors?
        iii. HVAC ducting?
5. Evaluate air intake location(s) relative to roadways or other pollutant sources such as school bus drop-off and pick-up locations.

a. Is air intake located near a roadway, loading zone, or other pollutant source, such as designated smoking areas? Are supply and exhaust vents unobstructed?
b. Can the air intake be relocated to an area that is less influenced by pollutant sources?