DRAFT
Environmental Impact Statement

for the

U District Urban Design Alternatives

City of Seattle
Department of Planning & Development

April 24, 2014

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Environmental Impact Statement

for the

U District
Urban Design
Alternatives

Preparation of this EIS is the responsibility of the City of Seattle. As Lead Agency, the City is responsible for SEPA compliance and based on the scoping process has directed the areas of research and analysis that were undertaken in preparation of this EIS. This Draft EIS is not an authorization for an action, nor does it constitute a decision or a recommendation for an action. In its final form—as a Final EIS—it will accompany the Proposed Action and will be considered in making final decisions concerning proposed options for U District policy and code amendments.

Date of Draft EIS Issuance:
April 24, 2014

Date of Draft EIS
Public Meeting:
May 20, 2014

Please refer to the City's website (www.seattle.gov/dpd/udistrict) or the Fact Sheet of this EIS for the time and location of the meeting.

Date Comments on the
Draft EIS are Due:
June 9, 2014

City of Seattle

Edward B. Murray, Mayor

Seattle Department of Planning and Development

Diane M. Sugimura, Director

April 24, 2014

Dear Affected Agencies, Organizations and Interested Parties:

The City of Seattle invites your comment on the U District Urban Design Draft Environmental Impact Statement (Draft EIS). The proposal considered in this EIS consists of map and text amendments to the Comprehensive Plan and Land Use Code (Seattle Municipal Code Title 23) to allow greater height and density in the U District study area. Zoning changes would be accompanied by an affordable housing incentive program, incentives for open space and other neighborhood amenities, and by development standards regulating setbacks, tower separation, and street frontage. The legislative action, if taken, would apply to the U District study area, generally bounded by Interstate-5 on the west, 15th Avenue NE on the east, Portage Bay on the south and Ravenna Boulevard NE on the north.

Objectives of the proposal include:

- Better integration of land uses with the neighborhood's future light rail station;
- Development standards to accommodate a greater variety of building types; and
- Support for equitable communities with a diversity of housing choices.

Two action alternatives representing varying approaches for accommodating increased height and development intensity within the U District study area are evaluated in this Draft EIS, together with a No Action Alternative. The alternatives, based on extensive community involvement, are:

Alternative 1 Medium towers, more dispersed development pattern;

Alternative 2 Taller towers, most focused development pattern; and

Alternative 3 No Action—current zoning, most dispersed development pattern.

This Draft EIS identifies environmental impacts and mitigating strategies for each alternative. Elements of the environment evaluated in this Draft EIS include: land use/ plans and policies, population, employment, housing; aesthetics; historic resources; transportation; climate change; open space; public services; and utilities. The public comment period for this Draft EIS is: April 24, 2014 through June 9, 2014. Please see the Fact Sheet for information on submitting written comments.

In addition, the City invites your comments on the Draft EIS at an open house and public hearing scheduled for May 20, 2014 at 6:00 p.m. The open house and public hearing will be held at the University Temple Methodist Church, 1415 NE 43rd Street. Additional information concerning the open house and public hearing is provided on the City's project website at www.seattle.gov/dpd/udistrict and the Fact Sheet for the Draft EIS.

Following the Draft EIS comment period, a Final EIS will be prepared that addresses written comments and public testimony received during the Draft EIS public comment period.

Thank you for your interest in the U District Urban Design EIS. We welcome your comments.

Sincerely,

Diane M. Sugimura
Director

City of Seattle, Department of Planning and Development
700 Fifth Avenue, Suite 2000
P.O. Box 34019, Seattle, WA 98124-4019

FACT SHEET

NAME OF PROPOSAL

U District Urban Design Alternatives

PROPONENT

The proponent is the City of Seattle

LOCATION

The area represented by this Draft EIS is the U District study area, approximately 405 acres bounded by Portage Bay on the south, Interstate-5 on the west, 15th Avenue NE on the east and NE Ravenna Boulevard on the north.

PROPOSED ALTERNATIVES

Two alternatives address height and density changes in the U District study area; a third alternative—No Action—would maintain current zoning requirements. All alternatives are based on the same growth assumptions, but vary in the approach to development standards and geographic distribution of growth within the study area. Key elements of each include the following:

- **Alternative 1** This alternative would allow high rise towers ranging between 125–160 feet in height. Towers would generally be focused in the core area of the study area, including portions of the University Way NE commercial corridor. New areas of mid-rise development would be permitted in the area extending north of the core area. No changes are proposed to the University of Washington (UW) Major Institution Overlay (MIO) or existing industrial zoning in the southern part of the study area.
- **Alternative 2** This alternative would allow high rise towers ranging between 240–340 feet in height. Towers would be focused in the core of the study area. Building height along the University Way NE commercial corridor would be limited to 65–85 feet. North of the core area, no changes to the existing SF 5000 zoning are proposed and limited changes to the existing commercial and multifamily zoning are proposed. No changes are proposed to the UW MIO or existing industrial zoning in the southern part of the study area.
- **Alternative 3** This alternative would retain existing zoning designations and associated development standards within the study area.

LEAD AGENCY

City of Seattle
Department of Planning and Development
700 Fifth Avenue, Suite 2000
P.O. Box 34019
Seattle, WA 98124-4019

SEPA RESPONSIBLE OFFICIAL

Diane Sugimura, Director
City of Seattle Department of Planning and Development
700 Fifth Avenue, Suite 2000
P.O. Box 34019
Seattle, WA 98124-4019

EIS CONTACT PERSON

Dave LaClergue, Urban Designer
City of Seattle Department of Planning and Development
700 Fifth Ave., Suite 1900
P.O. Box 34019
Seattle, WA 98124-4019
Telephone: (206) 733-9668
E-mail: Dave.LaClergue@seattle.gov

FINAL ACTION

Potential Seattle City Council approval of Comprehensive Plan and/or Land Use Code amendments. Final action is anticipated to occur in mid-2015.

REQUIRED APPROVALS AND/OR PERMITS

The following actions would be required to adopt a preferred zoning approach:

- Identification of a preferred approach; and
- Enactment through zoning and development code revisions of preferred height and density changes for the U District study area.

At such time as project-specific development is proposed, a broad range of approvals/permits pertaining to construction and operation of site-specific development would be required from agencies with jurisdiction.[1] These approvals may include the following:

Seattle Department of Planning and Development

- Land Use
- Master Use Permit
- Seattle Design Commission Review
- Construction
- Demolition Permit(s)
- Building Permit
- Grading / Shoring Permit
- Mechanical Permits
- Electrical Permits
- Plumbing Permits
- Utility Extension Agreements
- Water Service Availability Certification
- Sewer Service Availability Certification
- Comprehensive Drainage Control Plan Approval
- Large-Parcel (possibly) Drainage Control Plans with Construction Best Management Practices and Erosion and Sediment Control Approval
- Street improvement Approval (e.g. curb-cut and/or sidewalk modifications)
- Signage Approvals
- Occupancy Permit

1 *An agency with jurisdiction is "an agency with authority to approve, veto, or finance all or part of a nonexempt proposal (or part of a proposal)" (WAC 197-11-714 (3). Typically, this refers to a local, state or federal agency with licensing or permit approval responsibility concerning the proposed project.*

AUTHORS AND PRINCIPAL CONTRIBUTORS TO THIS EIS

This U District Urban Design EIS has been prepared under the direction of the City of Seattle Department of Planning and Development. Research and analysis associated with this EIS were provided by the following:

- **Studio 3MW LLP**—lead EIS consultant; document preparation; environmental analysis—land use/relationship to plans and policies, public services and utilities
- **Hewitt**—aesthetics, light/glare, shadow, viewshed
- **Fehr & Peers**—transportation, circulation, parking; greenhouse gas emissions
- **BERK**—population, employment, housing
- **Artifacts**—historic resources
- **Seattle Department of Planning and Development**—open space
- **Weinman Consulting**—SEPA strategy, alternatives

DATE OF ISSUANCE OF THIS DRAFT EIS

April 24, 2014

DATE DRAFT EIS COMMENTS ARE DUE

June 9, 2014

WRITTEN COMMENTS ARE TO BE SUBMITTED TO:

Seattle Department of Planning and Development
Attn: Dave LaClergue, Urban Designer
700 Fifth Ave., Suite 1900
P.O. Box 34019
Seattle, WA 98124-4019
or via e-mail: Dave.LaClergue@seattle.gov

DATE OF DRAFT EIS OPEN HOUSE AND PUBLIC HEARING

May 20, 2014
University Temple Methodist Church
1415 NE 43rd Street
Seattle, WA 98105

This meeting will include the following schedule:

- 6:00–6:30 pm **Open House**
- 6:30–6:35 pm **Introductions**
- 6:35–6:50 pm **Draft EIS overview**
- 6:50–7:00 pm **Overview of the EIS Process**
- 7:00 pm **Public Comments Regarding the Draft EIS**
- **Concluding Remarks** following Public Comments

The purpose of the open house and public hearing is to provide an opportunity for agencies, organizations and individuals to review information concerning the Draft EIS and to present oral comments on the Draft EIS—in addition to submittal of written comments

LOCATION OF BACKGROUND DATA

City of Seattle, Department of Planning and Development
Attn: Dave LaClergue
700 Fifth Ave., Suite 1900
P.O. Box 34019
Seattle, WA 98124-4019
Telephone: (206) 733-9668

AVAILABILITY OF THIS DRAFT EIS

Copies of this Draft EIS or notices of availability have been distributed to agencies, organizations and individuals noted on the Distribution List (Appendix A to this document). Notice of Availability of the Draft EIS has also been provided to organizations and individuals that requested to become parties of record.

The Draft EIS can be reviewed at the following public libraries:

- **Seattle Public Library**—Central Library (1000 Fourth Avenue)
- **Seattle Public Library**—University Branch (5009 Roosevelt Way NE)
- **University of Washington**—Suzzallo/Allen and Built Environment libraries (University of Washington campus)

A limited number of complimentary copies of this Draft EIS are available while the supply lasts—either as a CD or hardcopy from the Seattle Department of Planning and Development Public Resource Center, which is located in Suite 2000, 700 Fifth Avenue, in Downtown Seattle. Additional copies may be purchased at the Public Resource Center for the cost of reproduction.

This Draft EIS and the appendices are also available online at: www.seattle.gov/dpd/udistrict

FINAL EIS

The Final EIS is tentatively planned for issuance in Fall 2014.

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Acronyms

ACS	American Community Survey
ALS	Advanced Life Support
AMI	Average Median Income
APE	Area of Potential Effect
BAT	Business Access and Transit
BLS	Basic Life Support
CSO	Combined Sewer Overflow
DAHP	Washington Department of Archaeology and Historic Preservation
DPD	Department of Planning and Development
EIS	Environmental Impact Statement
EMFAC	Emissions Factors
EPA	US Environmental Protection Agency
FAR	Floor Area Ratio
FLUM	Future Land Use Map
GHG	Greenhouse Gas
GMA	Growth Management Act
HCM	Highway Capacity Manual
HPI	Historic Property Inventory
HUD	US Department of Housing and Urban Development
IB	Industrial Buffer
IC	Industrial Commercial
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation Systems
KCPP	King County Countywide Planning Policies
kV	kilovolt
LEED	Leadership in Energy & Environmental Design
LOS	Level of Service
LR	Lowrise
LUC	Land Use Code
MFTE	Multifamily Property Tax Exemption
MIO	Major Institution Overlay

MR	Midrise
$MTCO_2e$	Metric Tonne Dioxide Equivalent
MXD	Mixed Use Development Trip Generation
NC	Neighborhood Commercial
NRHP	National Register of Historic Places
POPS	Privately Owned Public Spaces
PSRC	Puget Sound Regional Council
PZ	Pressure Zone
RPZ	Restricted Parking Zone
SCL	Seattle City Light
SDOT	Seattle Department of Transportation
SEPA	State Environmental Policy Act
SF	Single Family
SMC	Seattle Municipal Code
SPU	Seattle Public Utilities
TDR	Transfer of Development Rights
U DISTRICT	University District
UATAS	University Area Transportation Action Strategy
UCUC	University Community Urban Center
UDF	Urban Design Framework
UW	University of Washington
VMT	Vehicles Miles Traveled
WAC	Washington Administrative Code
WHR	Washington Historic Register
WISAARD	Washington Information System for Architectural and Archaeological Records Data
WSDOT	Washington Department of Transportation

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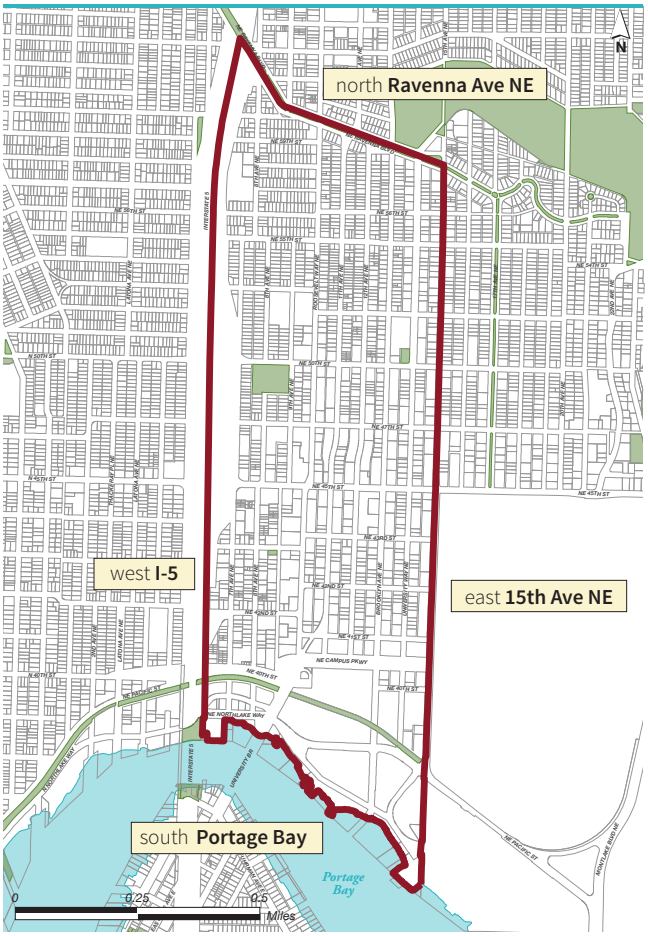
1 Summary

This chapter summarizes the findings of this Environmental Impact Statement (EIS): environmental impacts, mitigating measures and significant unavoidable adverse impacts for three alternatives to height and density in the U District study area. This summary provides a brief overview of the information considered in this EIS. The reader should consult Chapter 2 for more information on the alternatives and Chapter 3 for more information on the affected environment, environmental impacts and mitigating measures for each alternative and element of the environment.

Figure 1–1
U District Study Area Boundaries



Source: City of Seattle, 2013

1.1 Proposal

The City of Seattle is considering text and map amendments to the Seattle Comprehensive Plan and Land Use Code (Seattle Municipal Code Title 23) to allow development and design standards that permit greater height and density in the U District study area. The legislative action, if taken, would apply within the U District study area (Figure 1-1).

Alternatives to be addressed in the EIS include **No Action**—growth under ***current*** land use code standards and development patterns—and **two action alternatives**—growth under ***different*** land use code standards and development patterns. Both action alternatives will evaluate increased allowable height and development intensity for residential and commercial development within the study area.

1.2 Location

As shown in Figure 1–1, the study area is bounded by Portage Bay on the south, NE Ravenna Boulevard on the north, Interstate 5 on the west and 15th Avenue NE on the east.

1.3 Objectives of the Proposal

The City has identified the following specific objectives of the proposal:

- Advance comprehensive plan goals to use limited land resources more efficiently and to maximize the efficiency of public investment in infrastructure and services.
- Allow greater concentration of development in the area surrounding the future light rail station.
- Provide for a more diverse neighborhood character by providing a mix of housing types, uses, building types and heights.
- Enhance the pedestrian experience at street level by providing amenities, taking into consideration light and air as well as public view corridors and providing for retail activity at key locations.
- Increase height and density to achieve other goals such as providing affordable housing, increasing the variety of building types in new development and supporting equitable communities with a diversity of housing choices.
- Determine how to best accommodate growth while maintaining a functional transportation system, including street network, transit, and non-motorized modes of travel. Similarly, determine how to accommodate growth while maintaining functional capacity of utility systems, including electrical energy, water, sewer and storm drain systems.
- Provide for consistency between the comprehensive plan and land use code

1.4 Alternatives

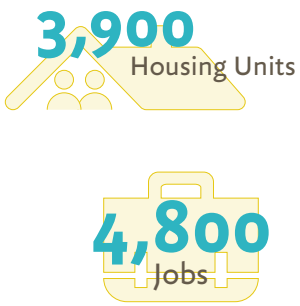
The City has identified three alternatives for consideration in this EIS. Alternatives 1 and 2 would allow for high rise development in the core of the study area of varied height and location of growth. Comparatively, Alternative 1 would provide for lower tower heights in a dispersed development pattern. Alternative 2 would provide for taller towers concentrated around the transit center. Alternative 3 would retain existing zoning designations and standards. Zoning designations proposed for each alternative are shown in Figures 1–2 through 1–4.

The Core Area is generally the area between NE 50th Street and NE 41st Street.

PLANNING ESTIMATES FOR GROWTH

For the purpose of analysis in this EIS, a growth estimate of 3,900 housing units and 4,800 jobs is assumed. This assumption is informed by the City's adopted 2024 growth targets, historic development trends, anticipated regional growth estimates and a recent analysis of the U District real estate market.

Planning Estimates for Growth



INCENTIVE ZONING

The City's existing incentive programs offer development bonuses—usually in the form of additional height or floor area—for development projects that undertake programs beyond standard requirements to mitigate the impacts of development. In a separate action, the City is reviewing the provisions of the incentive zoning program, which may lead to future change in the program.

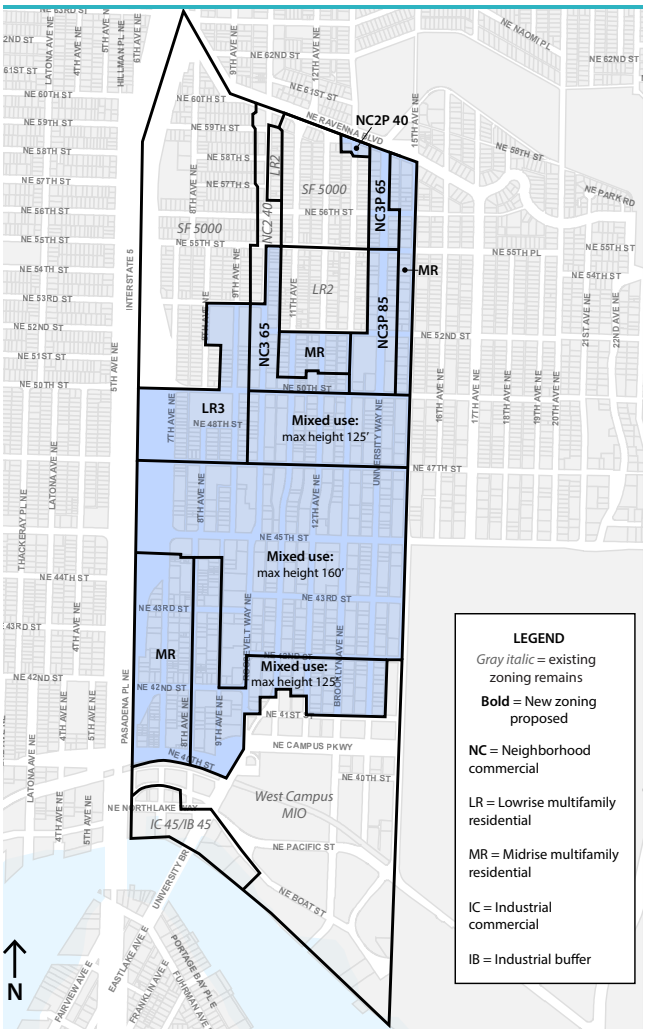
For the proposal considered in this EIS, incentive zoning provisions for the study area may be incorporated in future decision-making. Any future decisions about specific incentive measures will be made based on the public comment and city review of this EIS and other data.

Alternative 1

The Core Area is generally the area between NE 50th Street and NE 41st Street.

Alternative 1 would allow for high-rise towers in the core area—including along University Way NE—with areas of mid-rise development extending north of NE 50th Street. Maximum building heights would be between 125 and 160 feet, less than permitted under Alternative 2, and significantly greater than permitted under Alternative 3 (No Action). The proposed zoning would generally focus growth around the new transit station while yielding a development pattern more dispersed than in Alternative 2. Alternative 1 zoning designations are shown in Figure 1–2. Areas shown with a blue tint indicate a change to zoning designations.

Figure 1–2
Alternative 1



Ref. Figure 2–6, p. 2–14

Compared to Alternative 2, the area of increased height and intensity extends farther north from the core. In addition, development along University Way NE (the Ave) would be permitted to develop to high-rise standards, ranging from 125 to 160 feet, depending on location. Compared to Alternative 2, mid- and high-rise towers would be allowed in closer proximity to each other, with a minimum 60-foot separation between towers above 75 feet.

To help maintain the pedestrian character on designated Green Streets, landscaped setbacks would be required on both sides of Brooklyn Avenue NE and NE 43rd and 42nd Streets. Widened sidewalks would be required on NE 45th and 50th Streets.

No change is proposed to the existing Major Institution Overlay zoning or industrial zoning.

Alternative 2

Relative to all of the alternatives, Alternative 2 would allow the greatest heights and concentration of growth in the core area. Maximum building heights would be between 240 and 340 feet, but proposed development standards would reduce building bulk and increase building separation, compared to Alternative 1. In addition, building heights along the University Way NE corridor would be limited to 65 to 85 feet, significantly less than Alternative 1.

The Core Area is generally the area between NE 50th Street and NE 41st Street.

The Alternative 2 zoning designations are shown in Figure 1–3. Areas shown with a blue tint indicate a change to zoning designations.

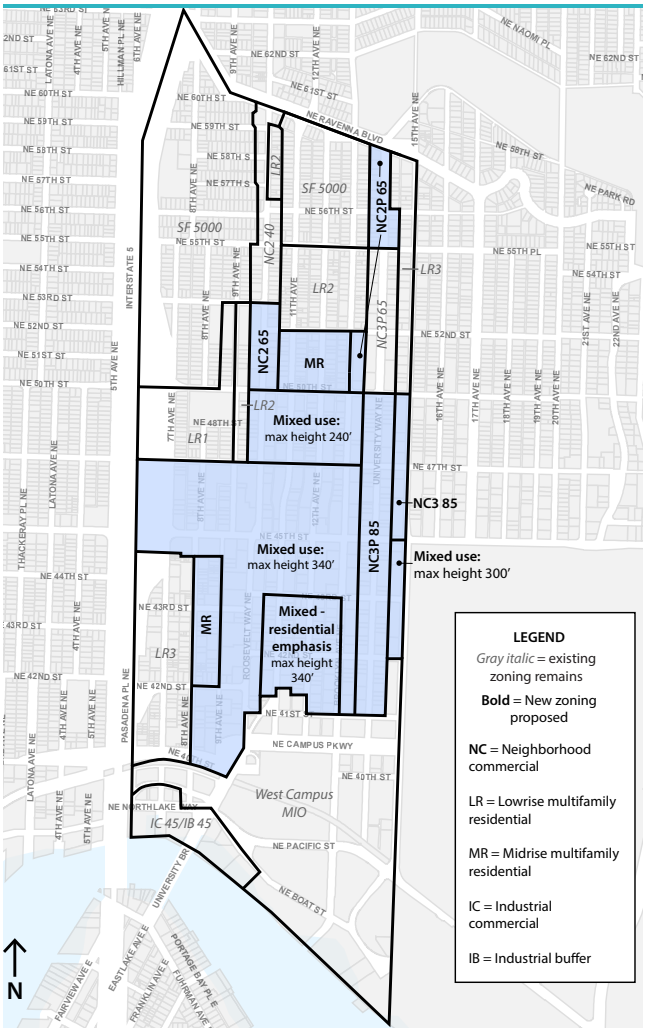
Area-specific setbacks would be required to promote pedestrian character and provide for ground-level residential stoops and landscaping.

Compared to Alternative 1, Alternative 2 proposes relatively fewer changes to zoning designations north of NE 50th Street.

To help maintain the pedestrian character on designated Green Streets, landscaped setbacks would be required on both sides of Brooklyn Avenue NE and NE 43rd and 42nd Streets. Widened sidewalks would be required on NE 45th and 50th Streets. Compared to Alternative 1, setbacks and widened sidewalks would be slightly larger.

No changes are proposed to the existing Major Institution Overlay, SF 5000 and existing industrial zoning.

Figure 1–3
Alternative 2

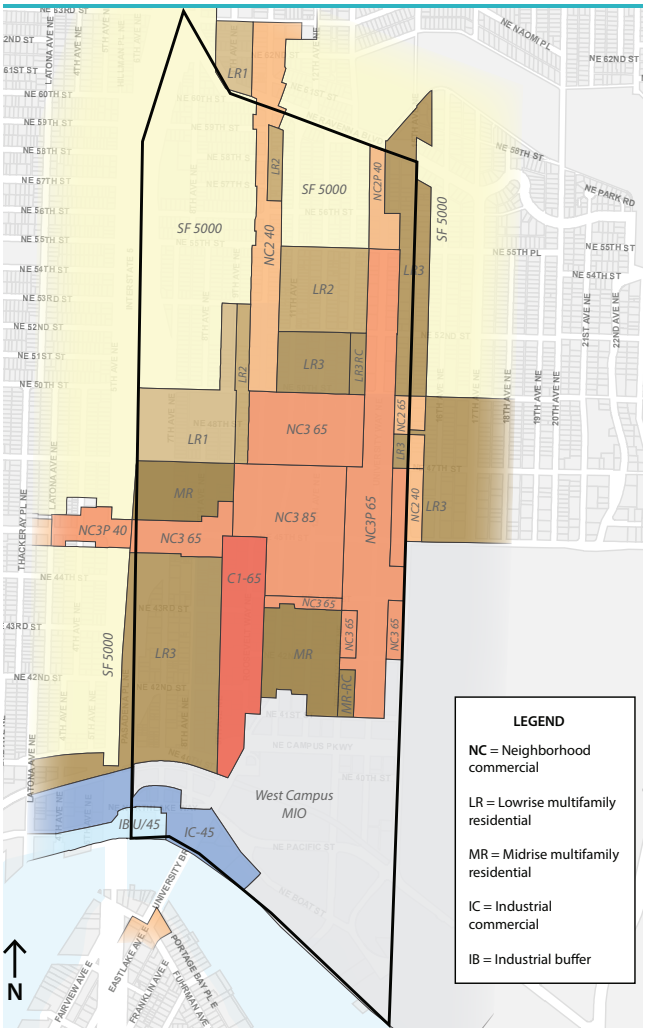


Ref. Figure 2–7, p. 2–15

Alternative 3

Alternative 3 retains the existing zoning designations in the neighborhood, with no increased potential for building heights or development capacity. Existing zoning is shown in Figure 1–4.

Figure 1–4
Alternative 3



Ref. Figure 2–8, p. 16

1.5 Summary of Impacts and Mitigating Measures

Land Use

See Section 3.1 for a full discussion of land use affected environment and potential impacts.

SIGNIFICANT IMPACTS

Alternative 1

Land Use Patterns. North of NE 50th Street, Alternative 1 would allow for a continuation of current uses at a greater intensity and density. Compared to Alternative 2, the potential area for increased height and intensity extends farther to the north. In the core area, the major impact would be to allow high-rise structures, although at a lower height than permitted under Alternative 2. Towers would be allowed to be located closer together, compared to Alternative 2, which may result in a pattern of tower development that is more dense at the street level. High rise development would also be allowed on University Way NE. Mixed-use development would continue to be permitted, but at a greater intensity and density.

Land Use Compatibility. Within the study area, there may be some abrupt transitions in building height, density and intensity between existing development and new development as redevelopment to the new standards occurs. These impacts would likely be limited in magnitude and duration as the area redevelops.

Adjacent to the study area, the proposed maximum heights of 125 to 160 feet along 15th Avenue NE north of the UW campus would adjoin an LR3 zone with a maximum building height of 25 to 40 feet, which may create a long-term abrupt change in height and scale of development along this edge.

Alternative 2

Land Use Patterns. North of NE 50th Street, Alternative 2 proposes fewer changes to zoning than Alternative 1. In the core area, Alternative 2 provides for the greatest building height and most focused growth around the future transit station. Proposed standards would reduce the appearance of height and bulk. Building heights would be limited to 65-85 feet along University Way NE. Mixed-use development would continue to be permitted, but at a greater intensity and density.

Land Use Compatibility. Within the study area, there may be some abrupt transitions in building height, density and intensity between existing development and new development as redevelopment to the new standards occurs. These impacts would likely be limited in magnitude and duration as the area redevelops. In addition, the proposed 340-foot height limit in the core area would adjoin the existing 105-foot height limit in the UW West Campus MIO, which may create a long-term abrupt change in height and scale of development along this edge.

Adjacent to the study area, the proposed maximum heights of 85 feet along 15th Avenue NE north of the UW campus would adjoin an LR3 zone with a maximum building height of 25 to 40 feet and south of NE 45th Street, building heights of up to 300 feet would adjoin the UW campus.

Alternative 3

Land Use Patterns. Incremental development and redevelopment would continue to occur. Because existing zoning allows for greater intensity than is currently found in the study area, redevelopment would likely be at greater intensities than currently exists. However, compared to the action alternatives, development would generally be less intensive and more distributed throughout the study area.

Land Use Compatibility. No significant land use compatibility impacts are anticipated.

MITIGATING MEASURES

Monitor new development to ensure that long-term land use compatibility impacts are not created. If necessary, consider additional standards for building height limits, landscaping, noise or lighting controls or other measures. See also mitigating strategies identified in Section 3.3 Aesthetics of this EIS.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts are anticipated.

Plans and Policies

PLANS, POLICIES AND REGULATIONS

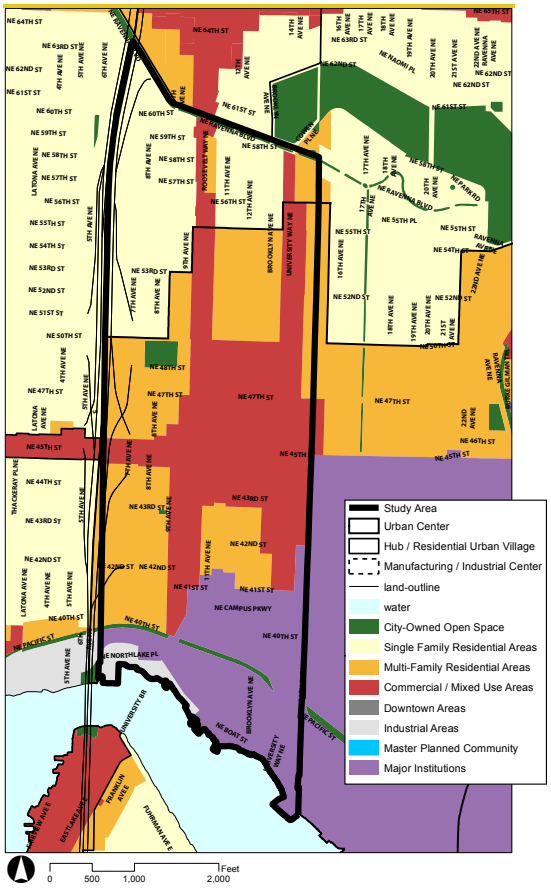
This section summarizes adopted policy guidance contained in the King County Countywide Planning Policies, Seattle 1994 Comprehensive Plan, Seattle Land Use Code and Environmental Policies and Procedures. This section also discusses policy guidnace in the University Community Urban Center (UCUC) Plan and U District Framework (UDF). The goals and policies from the UCUC Plan were adopted by the City. The UDF has not been formally adopted.

See Section 3.1.5 for a full discussion of plans and policies.

PLAN AND POLICY CONSISTENCY

Changes proposed under the action alternatives would require amendments to the comprehensive plan text and future land use map. Existing zoning designations and development standards would also require amendment under the action alternatives.

Figure 1–5
Future Land Use in U District Study Area



MITIGATING MEASURES

In order to avoid a future inconsistency with the Comprehensive Plan Future Land Use Map, either the current zoning should be retained or the Future Land Use Map should be amended to maintain consistency with new zoning designations adopted as part of this proposal.

Adopted UCUC Neighborhood Element policies should be reviewed for consistency with the proposal. As needed, policies should be amended, or the final proposal revised, to ensure continued consistency.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts to consistency with plans and policies are anticipated.

Population, Employment, Housing

See Section 3.2 for a full discussion of population, employment and housing affected environment and potential impacts.

SIGNIFICANT IMPACTS

Population. Population and household growth estimates are consistent across the alternatives. For all of the alternatives, there would be capacity for the growth estimates.

Employment. Employment growth estimates are consistent across the alternatives. For all alternatives, there would be capacity to accommodate growth estimates. Outside of education, retail jobs and service jobs are the most prevalent type of employment.

Housing. Most new private development will likely be market rate rentals in larger, multi-unit structures. Under Alternative 1, small portions of the existing SF 5000 zoning would be converted to higher intensity designations that recognize the existing church and retail use at the affected locations. Under alternatives 2 and 3, the existing SF 5000 zoned area would be unchanged.

MITIGATING MEASURES

All of the alternatives would achieve sufficient capacity to absorb the neighborhoods' growth targets for housing and employment. No significant impacts to population, employment, or housing were identified and no mitigating measures are proposed.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts are anticipated.

Housing Affordability

See Section 3.2.5 for a full discussion of housing affordability affected environment and potential impacts.

SIGNIFICANT IMPACTS

Housing Supply. All of the alternatives accommodate a supply of housing above the growth estimates established by the City. The excess capacity should help to remove the upward pressure on rents and reduce the impact on housing cost burdens. Overall, the number of existing units anticipated to be demolished is relatively low, ranging between 40-60 units, depending on the alternative.

Both action alternatives provide more capacity for housing in multifamily structures, which are overwhelmingly renter occupied in the area. An increased supply of units that have the lowest average cost, such as apartment buildings, can help address overall affordability. The concentration of denser housing zones close to the future light rail transit station could provide additional benefits to households by reducing household transportation costs.

The redevelopment of older, lower quality housing usually takes place among the lowest rent properties. It is likely that these properties will be replaced by newer, higher cost housing units translating into an immediate loss of low-cost housing. This impact is common across all of the alternatives. The action alternatives envision higher densities and a more efficient use of land which may result in the need for less land—and a reduced potential for demolition of lower cost housing—to meet the estimated population.

Alternatives 1 and 2 contemplate more mid and high-rise construction. Construction of these taller structures relies on reinforced steel and concrete construction, which costs more (on a square foot basis) than low- and mid-rise construction. All things being equal, residential uses in these buildings will rent for more (on a square foot basis) then buildings constructed for lower costs. In order to maintain a comparable housing unit rental rate with low- or mid-rise development, units would need to be relatively smaller in high rise structures.

Tools and Incentives. None of the alternatives consider changes to the Multifamily Property Tax Exemption (MFTE) program. The flexibility for more multifamily structures with rental units considered in Alternatives 1 and 2 may lead to a higher number of income-eligible units created through the MFTE program compared to the No Action Alternative.

Currently, incentive zoning is only available in the MR zone in the study area. If that policy remains unchanged, both Alternatives 1 and 2 increase MR zoning capacity. Thus, incentive zoning has the potential to create a higher number of income-eligible units compared to the No Action Alternative.

Draft EIS Section 3.2 describes potential affordable housing that could be created through incentive zoning under each alternative, summarized here in Table 1-1. Please see Section 3.2 for assumptions used to develop this estimate and additional information.

The estimates in Table 1–1 are shown for the purpose of comparison between alternatives only. It is understood that individual developer decisions about how to achieve the bonus area will vary and that incentive zoning provisions for the study area may provide options that differ from those assumed to develop these estimates.

Table 1–1: **Incentive Zoning and Affordable Housing**

	Alternative 1 Mixed Use Zones	Alternative 2 Mixed Use Zones	Alternative 3 MR Zone
Affordable Housing Area	247,660 sf	349,045 sf	7,338 sf
Affordable Housing Units	291	410	8

Source: Hewitt; Studio 3MW; City of Seattle; 2014

MITIGATING MEASURES

No significant impacts to housing affordability were identified across the alternatives. However, housing affordability remains a major challenge even if no action is taken. The City could take a number of code and programmatic steps that could address part of this challenge, including:

- Expanding the geographic eligibility of the MFTE program to cover more residential developments to create more income-eligible and lower cost housing units.
- Pending a rezone, expanding incentive zoning to include more eligible commercial and residential zones to create more income-eligible and lower cost housing units.
- Directing additional federal, state, and local housing funding to build and preserve affordable housing units for income-eligible households (especially structures that face redevelopment pressures).

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts to affordable housing are anticipated.

Aesthetics

SIGNIFICANT IMPACTS

See Section 3.3 for a full discussion of aesthetics affected environment and potential impacts.

Area Context. Overall, all of the alternatives would reinforce the highly urban character of development in the study area. Alternatives 1 and 2 are similar in that they both propose greater height and density in the core of the study area, generally the area north and west of the UW campus and south of NE 50th Street. Comparatively, Alternative 2 allows for significantly taller development in a more tightly clustered pattern, while Alternative 1 would result in a development pattern with lower building heights, but more dispersed throughout the neighborhood. Under both scenarios, the core would appear more densely developed, with taller and bulkier buildings, compared to the No Action Alternative. Alternative 3, No Action, would result in a continuation of existing development patterns.

Neighborhood Character. Due to the high-rise development pattern of the action alternatives, they are likely to result in the most pronounced change in neighborhood character. The study area would become increasingly more intensely developed, with a greater density of buildings, and higher levels of activity. This transition would be focused primarily around the core, with Alternative 2 focused the most tightly and Alternative 1 somewhat more dispersed. Under Alternative 3, the study area would continue to redevelop and become more intensely developed, but would retain its current mid- and low-rise character.

Under the action alternatives, the character of the Ave would also become more intensely developed, with taller buildings and more intensive development. Alternative 1 would allow high-rise development along the Ave, while Alternative 2 would allow mid-rise development with building heights up to 85 feet, or about 20 feet higher than currently allowed. Alternative 3 would retain the existing mid-rise development standards.

Under Alternatives 1 and 2, along designated Green Streets—Brooklyn Avenue NE, NE 42nd and NE 43rd streets—wide landscaped setbacks would create linear park-like environments. In addition, widened sidewalks along NE 45th and NE 50th streets would help offset the anticipated tower heights while providing safer pedestrian circulation.

Height, Bulk and Scale. Both action alternatives increase the building height and scale for the neighborhood with more mid-rise buildings and high-rise towers.

Under Alternative 1, building heights in the core area would range from 125 to 160 feet with a more dense configuration of buildings than permitted under Alternative 2. Building height would transition from 160 feet to 125 feet toward the UW West Campus edge. At a maximum height of 125 feet, building heights east of Roosevelt Way NE would be similar to the maximum 105-foot building heights in the UW MIO. West of Roosevelt Way NE, building heights would rise above the UW MIO maximum building heights of 45 to 65 feet. Along the University Way NE corridor, permitted building heights would range from 85 feet south of NE 55th Street up to 125 feet immediately south of NE 50th Street.

Alternative 2 proposes the tallest towers at the core, rising up to 340 feet in the central core. In addition, mixed use zoning with a maximum building height of 300 feet is located on the west side of 15th Avenue NE between NE 45th Street and NE 42nd Street. Proposed zoning in the area between NE 47th and NE 50th streets ranges from the existing low-rise zoning east of Roosevelt Way NE, to a maximum height of 240 feet west of Roosevelt Way NE to Brooklyn Avenue NE, to a maximum height 85 feet east of Brooklyn Avenue, including along the University Way NE corridor. Adjacent to the UW West Campus, the proposed maximum building height of 340 feet would adjoin a maximum building height of 105 feet in the UW MIO.

Reducing Bulk Under Alternatives 1 and 2

For towers 160 feet or less, floor plates would be limited to 24,000 SF above the podium.

For towers over 160 feet high, floor plates would be limited to 24,000 SF above the podium and 11,000 SF above 120 feet.

To the north, both alternatives would retain the existing single-family and low-rise residential character except around Roosevelt Way NE and University Way NE. Building heights along Roosevelt Way NE would generally be between 40 and 65 feet and on the Ave a maximum of 65 feet.

Because many of the existing buildings are not developed to maximum building height under current zoning, some increase in heights is likely with new development under Alternative 3. However, heights of new buildings would be roughly equivalent to those in the existing development and would remain lower than those in Alternative 1 and 2.

Scenic Route. Impacts to the scenic route are evaluated based on changes to the character of development immediately adjacent to the corridor and views to development in the larger area. Development under the action alternatives would result in the potential for increased density and intensity immediately along the scenic route. However, this change would be an incremental intensification of the existing urban character along this

route. Existing topography and development do not currently permit views to more distant scenic views. No significant impacts to the scenic route are anticipated.

Shadows. Increased shading would result from all three alternatives due to the increased amount of development in the study area. Generally, the infill development on undeveloped or under-developed sites would increase the local shadows on streets and adjacent properties. Overall, impacts are typical of an urbanizing area changing from lower intensity development to that of more intensive development. Increased shade and shadow impacts are expected at:

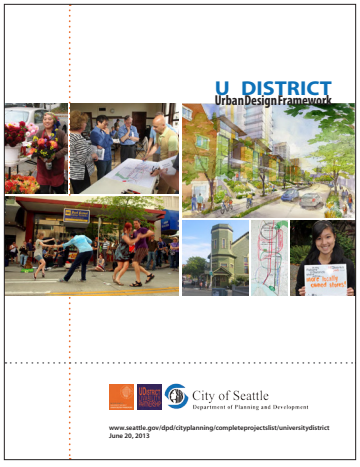
- University Heights Open Space
- Christie Park
- University Park
- Peace Park

Light and Glare. More buildings would increase the amount of artificial illumination within the study area. Because the U District study area is already a highly urbanized area, increased lighting under any of the alternatives is not expected to result in significant impacts.

MITIGATING MEASURES

Height, Bulk and Scale. Potential approaches for mitigation of height bulk and scale are outlined below including recommendations contained within SMC 25.05.665:

- Limiting the height of the development
- Modifying the bulk of the development
- Modifying the development's facade including but not limited to color and finish material
- Reducing the number or size of accessory structures or relocating accessory structures including but not limited to towers, railings, and antennae
- Repositioning the development on the site
- Modifying or requiring setbacks, screening, landscaping or other techniques to offset the appearance of incompatible height, bulk and scale



In addition to the above, the U-District Urban Design Framework includes recommendations to ease height, bulk and scale impacts to the neighborhood. Recommendations include:

- Careful consideration when transitioning from high density at the core to low density areas at the north
- High-rise separation to reduce the appearance of bulk
- Mid-block pedestrian access to improve east/west connection through long blocks
- Upper level setbacks to open up views
- Development standards to encourage modulations to break up large facades
- Control the height and design of the lower portion of high-rise to maintain a lower-scale street edge in key locations
- Establish standards for building width to avoid monotony along a block face
- Limit the footprint of the tallest buildings for slimmer building form
- To enhance pedestrian environment, all buildings, including high-rise structures should focus design details on high quality materials and design details in the first 30 feet above grade
- Street level setbacks for wider sidewalks
- Widening sidewalks at intersections to increase pedestrian visibility to drivers
- Landscaping and street trees
- Creation of open spaces as development incentives

Scenic Routes. No mitigation is required or proposed to address impacts to the designated scenic route.

Shadows. City policy SMC 25.05.675Q2e outlines shadow mitigation strategies in public open spaces including:

- Limiting the height of development
- Limiting the bulk of the development
- Redesigning the profile of the development
- Limiting or rearranging walls, fences or plant material
- Limiting or rearranging accessory structures, i.e., towers, railings, antennae
- Relocating the project on the site

In addition to the above, the following are recommended to alleviate the impacts from shadows:

- High-rise separation to reduce shadow
- Rearranging tower orientation
- Upper level setbacks in certain locations

Light and Glare. SMC 25.05.675 K2d authorizes the City to employ measures to mitigate adverse light and glare impacts, including the following:

- Limiting the reflective qualities of surface materials that can be used in the development
- Alternative building material and lighting techniques
- Limiting the area and intensity of illumination
- Limiting the location or angle of illumination
- Limiting the hours of illumination
- Providing landscaping

In addition to the above, other measures that can be employed include:

- Install screening, overhangs, or shielding to minimize spillover lighting impacts, particularly near residential areas
- Shield exterior lighting fixtures away from nearby residential uses
- Include pedestrian-scaled and pedestrian-oriented lighting for safety along sidewalks, parking areas, street crossings and building access points

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

With the proposed mitigation, no significant unavoidable adverse impacts to aesthetics, scenic routes or light and glare are anticipated. Under all scenarios, the University Playground, Christie Park and the University Heights Open Space will experience increased shade and shadow from surrounding development. Among the alternatives, these impacts would be greatest under Alternatives 1 and 2.

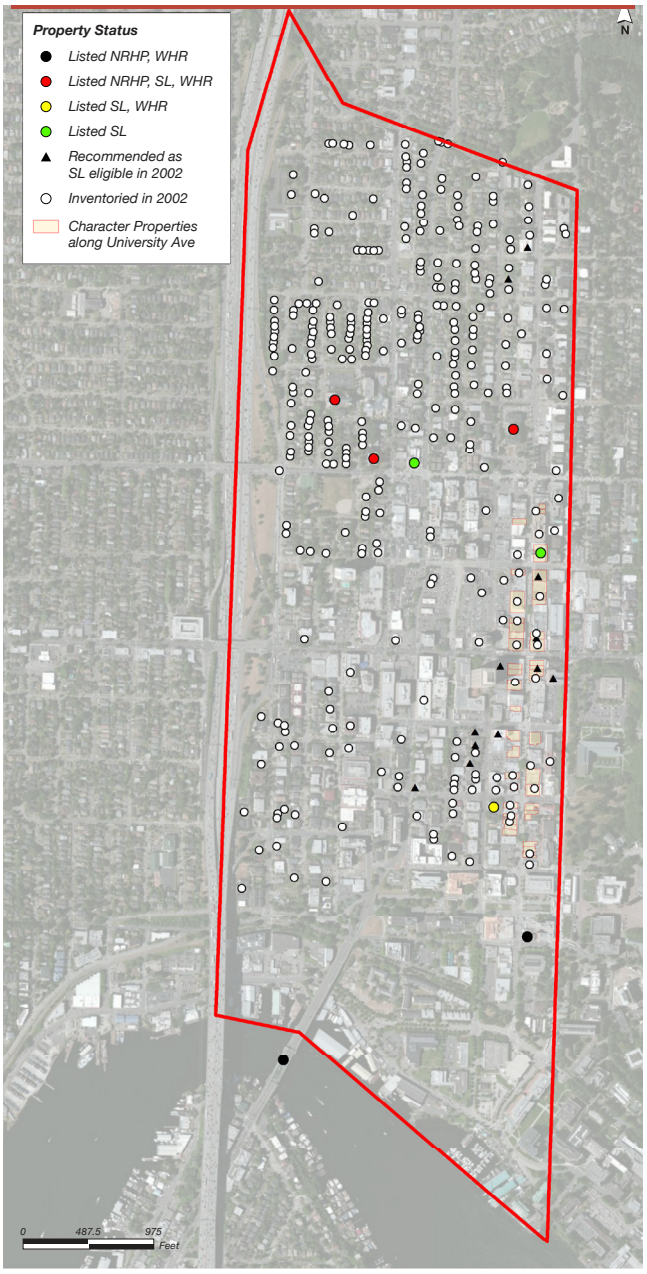
Historic Resources

See Section 3.4 for a full discussion of historic resources affected environment and potential impacts.

SIGNIFICANT IMPACTS

Older existing single-family residential areas may be affected over time by increased development and density around them, resulting in pressure for conversion or demolition.

Figure 1–6: **Property Status**



Please see Section 3.4 for definitions or acronyms shown in this Figure

All alternatives potentially affect designated historic buildings and those identified as eligible for historic status. Compared to Alternative 3, Alternatives 1 and 2 could result in heightened pressure for redevelopment, especially in the Core Area. Impacts could include demolition, inappropriate rehabilitation and re-use, or changes in the physical context as a result of development pressure that could damage integrity of individual buildings and the character of the street. Conversely, a more economically vibrant community could spur investment in maintenance and rehabilitation of character and historic properties.

Relative to Alternative 2, Alternative 1 proposes zoning changes to the largest area within the study area and affects slightly more registered and eligible historic properties than the other alternatives. Alternative 2 affects slightly fewer listed and/or eligible historic properties. Under Alternative 3, even without zoning changes, the pressure on historic resources is likely to continue over time.

MITIGATING MEASURES

Potential mitigating measures listed below represent a menu of possible actions that could be taken in order to mitigate impacts of growth on historic resources. Measures apply to all alternatives.

Survey and Inventory. Revisit the 2002 survey to expand the number of researched inventoried properties. Expand the survey range to include mid-century buildings and those built post-1962.

Conduct a new survey to determine whether the collection of apartment buildings from the 1910s through 1930's might be eligible for nomination to the National Register of Historic Places and as a Seattle landmark.

Historic Registers. Provide funding to allow identified eligible properties to progress through the local landmarks nomination process. Provide assistance to owners interested in nominating properties to the National Register of Historic Places.

Design Guidelines. New guidelines should take design cues from the character and historic buildings. Besides guidelines on scale, height, mass and materials of new and infill buildings, attention should be given to signage, accessibility issues, and appropriate seismic and energy retrofits in older buildings.

Incentives for Retention and Rehabilitation. Give consideration to incentives, including:

- Historic rehabilitation tax incentives consisting of the 20% federal tax credit for National Register properties and the locally-based special property tax valuation for Seattle Landmark properties.
- Transferable development rights, which should be analyzed for their potential in the University District.
- Financial incentives in the form of design assistance and grants or low-interest loans for building and storefront improvements could be considered. Specific programs could be developed in coordination with the URM Policy Committee to address seismic concerns. A block-level approach to shared engineering studies could help property owners address seismic issues in a more cost effective way.
- Support for a Main Street-style program along the Ave to assist small businesses, develop a viable business mix, activate vacant space, coordinate promotional activities, and provide design assistance to building and shop owners.

Single family Areas. Monitor the SF 5000 residential zone. Maintain a regular program of inspections for code violations. Explore a conservation overlay district that addresses demolition, new construction, and major alterations.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts are anticipated under any of the proposed alternatives.

Transportation

See Section 3.5 for a full discussion of transportation affected environment and potential impacts.

SIGNIFICANT IMPACTS

Alternative 3 (No Action)

The No Action Alternative is discussed first because it serves as the baseline for the impact analysis of the action alternatives (Alternatives 1 and 2). It represents the operations of the transportation system if no actions were taken by the City Council and no zoning changes were made in the U District. The same transportation network is assumed for the No Action Alternative and the two action alternatives.

Trip Generation

Trip generation assumptions are based on:

Existing and proposed land use

Reasonably foreseeable roadway improvement projects

Planned bicycle and planned pedestrian improvements

Transit system improvements

Projected travel costs

Please see Section 3.5 for additional discussion of methodology.

Auto and Freight. One of the U District's main connections to the south—the University Bridge—is projected to decline from LOS D southbound and LOS A northbound to operate at LOS F in both directions by 2035. In addition, the following study corridors would operate at LOS F in 2035:

- Westbound NE 50th St from 5th Ave E to Latona Ave E (LOS E in 2015)
- Westbound NE 40th St from 9th Ave NE to 2nd Ave NE (LOS E in 2015)
- Southbound Roosevelt Way NE from NE 50th St to NE 45th St (also LOS F in 2015)
- University Bridge from NE Campus Pkwy to Fuhrman Ave E in both directions (LOS E in 2015)
- Northbound 11th Ave NE from NE 45th St to NE 50th St (LOS F in 2015)

Transit. The following study corridors would operate at LOS F:

- Westbound NE 45th Street from Roosevelt Way NE to 5th Avenue NE (LOS F in 2015)
- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway (LOS E in 2015)
- Northbound University Way NE from NE Pacific to NE 45th Streets (LOS F in 2015)

Pedestrian and Bicycle System. The land use development anticipated to occur under the No Action Alternative will result in a substantial number of pedestrian and bicycle trips within the study area. This level of pedestrian

and bicycle activity serves as the baseline against which impacts of the action alternatives will be assessed.

Safety. While there may be more High Accident Locations under future conditions with the No Action Alternative, there is no data available to suggest that a volume-based collision rate (e.g., collisions per million vehicles entering the intersection) will increase with build-out of the No Action Alternative. One pedestrian intersection of interest was identified: Brooklyn Avenue NE & NE 45th Street. This location is already signalized, but may experience an increase in the total number of collisions due to future growth in vehicle and pedestrian volumes through the intersection.

Parking. New development would result in potential impacts to on-street parking supply within the U District, as well as spillover impacts into Roosevelt to the north and University Park to the east. The duration of time that demand nears or meets/exceeds supply would likely be longer than is currently the case. Since the No Action Alternative assumes more evenly distributed growth throughout the study area, effects would likely be spread over a larger area than the action alternatives.

Alternatives 1 and 2 (Action Alternatives)

Because the transportation impacts of the action alternatives are very similar, they are discussed together.

Auto and Freight. The same corridors listed that operate at LOS F under the No Action Alternative would operate at LOS F under the action alternatives.

Transit. The same corridors listed as operating at LOS F under the No Action Alternative would operate at LOS F under the action alternatives. In addition, the following corridors would be impacted under the action alternatives:

Alternative 1

- Northbound 7th Avenue NE from NE 42nd Street to NE 45th Street
- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway
- Northbound University Way NE from NE Pacific Street to NE 45th Street

Alternative 2

- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway

The scenarios would operate similarly because the overall level of growth in the study area is the essentially the same among all three alternatives. Although the concentration of buildings would vary, a very similar number of travelers would be moving in and out of the U District.

Pedestrian and Bicycle System. Development anticipated to occur under both of the action alternatives would result in an increase in the pedestrian

and bicycle trip mode share within the study area, compared to the No Action Alternative. The area that may see the largest increase in pedestrian and bicycle travel is between NE 50th Street and NE 42nd Street. Since the City's Pedestrian Master Plan and Bicycle Master Plan have identified high priority improvement needs within the study area, this increase in facility users results in a significant impact.

Safety. Changes would be similar to the impacts described for the No Action Alternative.

Parking. Compared to the No Action Alternative, demand for parking would likely be more concentrated around the core of the U District. Potential impacts to on-street parking supply within the U District are expected, as well as potential spillover impacts into Roosevelt to the north and University Park to the east.

MITIGATING MEASURES

This section briefly summarizes the transportation mitigating measures. Please refer to the full mitigation description in EIS Section 3.5 for additional information, including a discussion of example mitigation measures and potential mitigation measure implementation.

Given the area-wide scale of the zoning alternatives, the recommended mitigation strategy focuses on three main themes:

Improving the Bicycle and Pedestrian Network. Projects listed in various plans and documents including the Pedestrian Master Plan (PMP) , Bicycle Master Plan (BMP), University Area Transportation Action Strategy (UATAS), and U District Urban Design Framework (UDF) were considered as mitigation measures to address pedestrian and bicycle impacts. There is a well-documented link between improved bicycle and pedestrian accessibility and reduced demand for vehicle travel. Moreover, impacts were identified based on the presence of high priority improvement needs within the study area. To mitigate these impacts, the City could pursue these improvements.

Implementing Speed and Reliability Improvements. The Seattle Transit Master Plan (TMP) identified numerous projects to improve transit speed and reliability in the U District. In conjunction with other funding sources, new development could pay for a share of TMP improvements on key routes.

Expanding Travel Demand Management and Parking Strategies. Given cost, right-of-way, and environmental constraints, it was deemed infeasible to provide additional roadway and intersection capacity beyond what is currently

planned to reduce impacts to traffic congestion (which affects transit) and freight mobility. Therefore, managing demand for auto travel is a critical element to reducing auto, freight, and transit congestion. The City and UW have well established Commute Trip Reduction (CTR) and Transportation Management Programs (TMP) in the area. This mitigation strategy looks to expand on the travel demand management strategies proposed as part of the CTR and TMP programs to include new parking-related strategies.

The three potential mitigation packages are listed in more detail below. The following sections present an example of the types of projects that could be implemented—other projects could achieve similar results.

PMP Pedestrian Master Plan

BMP Bicycle Master Plan

UATAS University Area Transportation Action Strategy

UDF Urban Design Framework

Pedestrian & Bicycle System

Improvements to the pedestrian and bicycle system would mitigate impacts to facility users by providing a more robust system and addressing high priority improvement locations identified by the PMP and BMP. Based on a review of the PMP, UATAS, and UDF, the projects shown in Table 3.5–15 (p. 3.5–63) and Figure 3.5–22 (p. 3.5–62) have been identified as potential mitigation measures. This list will continue to evolve and is not prescriptive as other plans identify other projects that may also improve the non-motorized network. This simply reflects a sample package of projects that could be pursued to improve the overall network. Zoning codes could also be modified to include requirements for wider sidewalks, particularly along greenways and green streets to promote walking and bicycling.

Figure 1–7: **Pedestrian and Bicycle Potential Mitigation Measures**

Additional maps illustrating existing conditions and potential mitigation measures can be found in Section 3.5 Transportation.

Transit Speed and Reliability Improvements

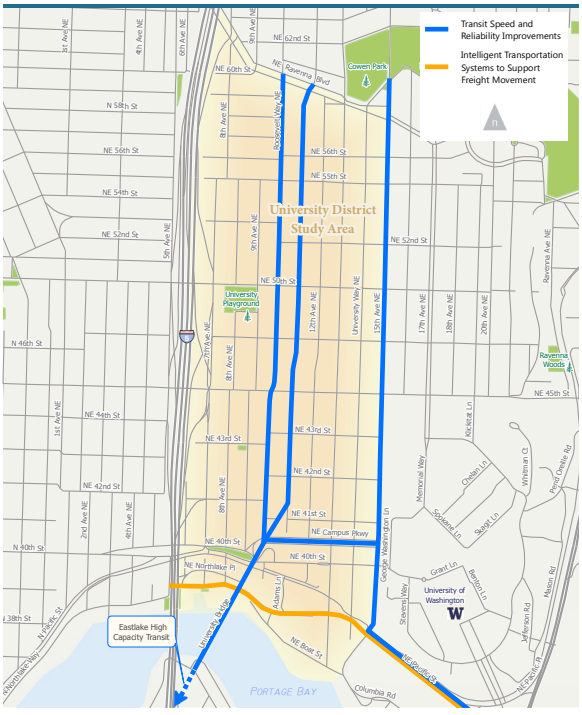
Transit and freight travel times could be reduced by providing speed and reliability improvements on key routes. Specific projects on key transit corridors were identified in the 2012 Transit Master Plan, as listed in Table 3.5–16 (p. 3.5–65). SDOT has identified similar ITS solutions on NE Pacific Street, which is an important corridor for freight mobility, although it has not been identified as being impacted by either of the rezone alternatives.

As with the pedestrian and bicycle measures, this transit and freight list will continue to evolve and is not exhaustive as other plans identify other projects that may also improve the transit and freight mobility. This list reflects a sample package of projects that could be pursued to improve the overall network.

The potential mitigation measures described above extend far beyond the study area in most cases. The relevant improvements within the U District are shown in Figure 3.5–23 (p. 3.5–64). Transit signal priority would be installed on Roosevelt Way NE, 11th Avenue NE, the University Bridge, 15th Avenue NE, NE Campus Parkway, and NE Pacific Street. Transit only or Business Access and Transit (BAT) lanes may be implemented along Roosevelt Way NE and 11th Avenue NE. Note that implementation of dedicated transit lanes may have secondary impacts on parking supply if a parking lane is taken.

Travel Demand Management and Parking Strategies

Figure 1–8: **Transit and Freight Potential Mitigation Measures**



Additional maps illustrating existing conditions and potential mitigation measures can be found in Section 3.5 Transportation.

The City of Seattle could consider enhancing the travel demand management programs already in place in the U District. Research by the California Air Pollution Control Officers Association (CAPCOA), which is composed of air quality management districts in that state has shown that implementation of travel demand management programs can substantially reduce vehicle trip generation, which in turn reduces congestion for transit, freight, and autos. The specific measures described below are all potential projects, but are not assumed to be in place for the mitigation analysis.

Parking maximums would limit the number of parking spaces which can be built with new development. The City could also review the parking minimums currently in place within the UW parking impact area (as defined in the Municipal Code) to determine if they should be revised. Unbundled parking separates parking costs from total property cost, allowing buyers or tenants to forgo buying or leasing parking spaces. These types of potential mitigation measures would tend to reduce the number of work-based commute trips and all types of

home-based trips. Shopping-based trips would also decrease, but likely at a lower level since these types of trips are less sensitive to parking costs and limited supply for short-term use.

Incentive zoning provisions could also be explored to encourage developers to include parking spaces for car share and bike share programs. Site requirements could be modified to accommodate bike share stations on private sites in high demand areas. Bicycle share will launch in the U District in 2014 and more bike share stations will likely be added to the study area as demand and use increases. A more detailed review of the code would be required before setting specific recommendations for facilitation of bike share station siting. However, some regulatory sections for potential modification may include:

- Adding bike share stations as a "residential amenity" in the open space provisions
- Floor Area Ratio (FAR) bonuses allowing bike share setback, listing bike share stations in the street improvement manual (as a "green street" improvement or separately)
- Allowing modifications from landscaping setbacks to allow bike share stations, where appropriate

The City could also consider encouraging parking operators, including UW, to upgrade their parking revenue control systems (PARC) to the latest technology so it could be incorporated into an electronic guidance system, such as the e-Park program that is currently operating Downtown. This technology would help direct drivers to off-street parking facilities with available capacity. An analogous approach for on-street parking—SFpark—has been implemented in San Francisco. SFpark uses sensors embedded in metered spaces to provide real-time data to drivers so they can find open spaces more easily and spend less time cruising for parking, thereby reducing congestion. The sensor data also allows the San Francisco Municipal Transportation Agency to periodically adjust parking pricing to match demand. In the absence of a new ITS parking program, the City would continue to manage on-street paid parking through SDOT's Performance-based Parking Pricing Program which evaluates data to determine if parking rates, hours of operation and/or time limits could be adjusted to achieve the City's goal of one to two available spaces per block face throughout the day.

In addition to the parking management strategies described above, the City of Seattle could also consider establishing an area-wide transportation management partnership organization to provide programs, services, and strategies to improve access to employment and residences while decreasing the SOV rate, particularly during peak periods. This could include integrated land use and transportation planning as well as partnerships with transit providers. Local Transportation Management Associations (TMAs) can provide some of these services. Programs like the state's Growth and Transportation Efficiency Center (GTEC) concept or the existing local Business Improvement Area (BIA) are possible models or future funding sources. The program could include features of relevant programs such as Seattle Center City's Commute Seattle, Whatcom County's SmartTrip or Tacoma's Downtown on the Go programs. The City could also work with UW to expand their existing TDM campus services to all UW-owned facilities in the study area.

The City could consider updating municipal code and Director's Rules related to Transportation Management Plans required for large buildings to include TDM measures that are most effective in reaching the U District's mode share goal. This may include membership in a TMA and discounted or free transit passes and/or car share and bike share memberships. For residential buildings, the City could also consider extending the Transportation Management Plans or requiring travel options programs (such as Green Trips in Oakland, CA and Residential Services in Arlington, VA).

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

The proposed mitigation packages would reduce the magnitude of all of the identified impacts of the rezone alternatives to a less-than-significant level. Therefore, there are no significant unavoidable adverse impacts to transportation.

Greenhouse Gas Emissions

SIGNIFICANT IMPACTS

Table 1–2 compares greenhouse gas emissions from the development alternatives based on the King County GHG Emissions Inventory Worksheets for embodied and energy emissions. Transportation GHG emissions combined two methodologies: the King County SEPA GHG spreadsheet and a VMT (Vehicles Miles Traveled) GHG analysis tool geared toward a more detailed subarea evaluation. The completed SEPA GHG Emissions Worksheets for all alternatives, as well as an explanation of the methodology employed to create the formulas, are included as an appendix to this Draft EIS.

See Section 3.6 for a full discussion of greenhouse gas emissions affected environment and potential impacts.

Based on these calculations, all three 2035 alternatives generate roughly the same annual GHG emissions. The same embodied and energy emissions are expected under all three alternatives since the planning estimates are identical. The variation is within one percent and represents slightly different distribution patterns for the land uses and resulting differences in transportation-related GHG emissions:

- Alternatives 1 and 2 would generate roughly 216,000 MTCO2e GHG annual emissions
- Alternative 3 (No Action) would generate roughly 218,000 MTCO2e GHG annual emissions
- Alternatives 1 and 2 have lower annual emissions than the No Action Alternative.

Table 1–2: **GHG Emissions Based on King County SEPA GHG Emissions Inventory Worksheets and VMT-GHG Analysis Tool**

	Estimated Annual GHG Emissions Associated by Alternative ($MTCO_2e$)
Existing Conditions	159,000
No Action Alternative	218,000
Alternative 1	216,000
Alternative 2	216,000

Source: Fehr & Peers and Studio 3MW, 2013

MTCO2e is defined as Metric Tonne Dioxide Equivalent, equating to 2204.62 pounds of CO2. This is a standard measure of equivalent Co2 emissions.

MITIGATING MEASURES

Transit, Pedestrian, and Bicycle Improvements. Transit, pedestrian, and bicycle improvements would help encourage use of non-SOV modes, thereby reducing transportation-related GHG emissions. Refer to Section 3.5.4 for a complete discussion of transportation mitigation measures.

District Infrastructure Systems for Energy, Water and Waste. District Infrastructure Systems aggregate enough service demands to make local neighborhood utility solutions feasible, and may reduce greenhouse gases by utilizing renewable sources of energy and increasing the use of local resources, materials and supplies. District parking solutions and car sharing

are designed to reduce vehicle trips and land devoted to parking. Water reuse and anaerobic digesters may reduce sewer flows. Rainwater capture may reduce stormwater flows. Water reuse and rainwater capture could also reduce potable water demands. The City could pursue a district energy system in the U District, which was identified as a major opportunity area for district energy in a 2011 study. The City could also pursue a partnership with private developers and UW to expand the University's existing district heat system to more areas within the U District.

Waste Management and Deconstruction. When existing buildings need to be demolished, there are often opportunities to reduce the amount of waste being sent to the landfill with sustainable waste management strategies. In the Seattle area, standard practice for building construction and demolition results in fairly high recycling rates of over 50 to 60 percent. However, these rates can be increased by implementing aggressive demolition recycling. The City could consider programs to require or encourage best practices to achieve higher recycling rates.

Building Design. Green building encompasses energy and water conservation, waste reduction, and good indoor environmental quality. Tools and standards that are used to measure green building performance, such as Built Green, LEED, the Living Building Challenge, and the Evergreen Sustainable Development Criteria, could be encouraged or required for development within the U District.

Natural Drainage and Green Roofs. Green roofs can provide additional open space, opportunities for urban agriculture, and decreased energy demands by reducing the cooling load for the building. Green Stormwater Infrastructure (GSI), currently required for all redevelopment, also could reduce climate change impacts by adding landscaping and reducing energy requirements for stormwater treatment. Most areas north of NE 50th Street will be eligible for GSI funding through the Residential RainWise program, which is run as a partnership between Seattle Public Utilities and King County. Much of the U District is already required to meet a landscaping standard called Seattle Green Factor, which encourages incorporation of various landscaping features such trees, shrubs, groundcovers, green roofs, green walls, native plants, and food gardens. This program should be maintained, and potentially expanded to cover the entire study area.

Tree Protection. The City of Seattle has aggressive urban forest goals in order to help restore tree cover which has been lost due to development. Trees can provide stormwater management, habitat value, noise buffering, air purification, carbon sequestration, and mitigation of the urban heat island effect. Trees also have a positive effect on property values and neighborhood quality. Protection of existing trees, as feasible, and careful attention to new tree planting could help meet the Seattle Comprehensive Urban Forest Management Plan Goals for multifamily residential and commercial office development by achieving 15-20 percent overall tree canopy within 30 years.

Urban Agriculture. New P-patch Community Gardens and rooftop gardens could be provided or encouraged within the neighborhood for residents to grow food. Balconies, decks, and right-of-way planting strips could also be utilized for individual residents' agriculture needs.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No impact is expected for Alternatives 1 or 2 since they would both have lower GHG emissions than the No Action Alternative. Moreover, the proposed development in the U District has lower GHG emissions than comparable development elsewhere in the Puget Sound region.

Open Space and Recreation

See Section 3.7 for a full discussion of open space and recreation affected environment and potential impacts.

SIGNIFICANT IMPACTS

Table 1-2 summarizes the status of existing and future open space and facilities compared to the City's adopted targets. The projections suggest that growth in the neighborhood will out-pace the expansion of open spaces and recreation facilities—generally this means that the neighborhood will be farther from meeting these goals in 2035 than it is today. Because the growing deficiencies in supply and type of open space are the same with or without zoning changes, these deficiencies are not considered impacts for purposes of this EIS.

As for the 2004 Comp Plan citywide goal for Breathing Room Open Space, Seattle's 2012 population (634,535 residents) already surpassed the eligible Breathing Room Open Space. To meet the goal of 1 acre per 100 residents, Seattle would need 6,345 acres—as of 2011, there were 6,187 acres. Like the deficiency in Village Open Space, the growing deficiency in Breathing Room Open Space is projected to be the same with or without zoning changes. Consequently, the increasing lack of Breathing Room Open Space is not considered an impact for purposes of this EIS.

MITIGATING MEASURES

Various actions could help provide more open spaces and recreational opportunities for the growing neighborhood (including Village Open Space, Breathing Room Open Space, and open space "offsets"):

- New property acquisition and improvement by Seattle Parks, funded through a future levy, open space impact fees, or other means—especially in the existing gap between NE 47th and NE 41st streets.
- Provision of dedicated, publicly accessible open space as part of private development ("POPS"), through development standards or an incentive zoning program in the land use code.
- On-site open space provided as residential amenities through new development.
- Public/private partnerships to develop, manage, and program public open spaces.
- Additional community gardens.
- Improvement of designated green streets to provide outdoor seating and other amenities. Adopt green street concept plans

to the Right-of-Way Improvements Manual to guide private development, and/or grant funding for streetscape improvements.

- Improvement of "festival streets," i.e., special streets that can be shut down to vehicular traffic for community events.
- Improved access to campus for the public for the purposes of public access to open spaces located on the UW campus within the immediate vicinity of the planning area.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

None anticipated, the proposed mitigation packages would reduce the magnitude of all identified impacts of the rezone alternatives to a less than significant level.

Table 1–3: **Comprehensive Plan Open Space and Recreation Facility Goals for U District**

	Comprehensive Plan Goal	U District Target	Resource	Status
	Open Space Supply			
2013	**Village Open Space** ▶ one acre per 1,000 households ▶ one acre per 10,000 jobs	**6.77 acres total** 6.14 acres, by household 0.63 acres, by jobs	3.85 acres	Goal not met: **2.9-acre deficit**
2035	**Village Open Space** ▶ one acre per 1,000 households ▶ one acre per 10,000 jobs	**11.15 acres total** 10.04 acres, by household 1.11 acres, by jobs	6.04 acres anticipated, per planned projects	Goal not met: **5.1-acre deficit**
	One "Village Commons" ▶ where the existing or projected households total 2,500 or more	1 Village Commons	1 Village Commons	**Goal met**
	Specific facilities			
	One indoor, multi-use recreation facility ▶ per Urban Center	1 recreation center	No City-owned recreation center	**Goal not met**
2013	**One dedicated community garden** ▶ for each 2,500 households	2 community gardens	3 community gardens	**Goal met**
2035	**One dedicated community garden** ▶ for each 2,500 households	4 community gardens	3 community gardens	**Goal not met**

Source: City of Seattle, 2014

Public Services

See Section 3.8 for a full discussion of public service affected environment and potential impacts.

SIGNIFICANT IMPACTS

Fire and Emergency Services. Construction activities associated with potential development under the proposed alternatives could result in an increase in demand for fire services. Existing Fire Department staffing and equipment are anticipated to be sufficient to handle increased service needed for construction activities.

Since each alternative assumes the same planning estimate for growth, the potential for impacts to public services is the same for all alternatives.

As development occurs, the increased number of residents and workers would likely result in a commensurate increase in calls for emergency services. The Fire Department would attempt to maintain response times consistent with current performance levels. However, depending on the rate and amount of new development, additional staffing and equipment may be required in order to maintain performance levels.

Police Services. It is anticipated that the Police Department would have sufficient staffing and facilities to accommodate the increased demand for service from the U District study area and no additional safety problems would occur as a result of development under the alternatives. Part of this can be attributed to the Department's ability to deliver proactive police-community project solving services to the area and the City of Seattle in general through the implementation of the Neighborhood Policing Staffing Plan.

Public Schools. Under any of the alternatives, an increase in households in the U District study area would contribute to a continuing need by the Seattle School District to manage capacity at local schools and to construct new and expanded facilities to accommodate a growing student population. The current study area population is characterized by a large number of student households and relatively few families. It is likely potential increases in public school student population associated with development in the U District study area would be incremental and would result in associated incremental impacts on school facility capacity. This type of change would allow the District to respond through short-, intermediate- and long-term capacity management planning. Significant impacts associated with the proposal are not anticipated.

MITIGATING MEASURES

Future population and employment increases associated with potential development in the U District study area would be incremental and would result in associated increases in demand for public services. These impacts could be addressed by the following mitigation measures.

- A portion of the tax revenue generated from potential redevelopment in the study – including construction sales tax, business and operation tax, property tax and other fees, licenses and permits – would accrue to the City of Seattle and could help offset demand for police and fire services.
- All new buildings would be constructed in accordance with the 2006 Fire Code which is comprised of the 2006 International Fire Code with Seattle amendments or the applicable fire code in effect at the time of permit submittal.
- Design features could be incorporated into potential development in the study that would help reduce criminal activity and calls for police service, including orienting buildings towards the sidewalk and public spaces, providing connections between buildings, and providing adequate lighting and visibility.
- Ongoing capacity management by the Seattle School District will help meet future school capacity needs associated with growth in the U District study area. The School District also has the option of collecting impact fees under Washington State's Growth Management Act and voluntary mitigation fees paid pursuant to the State Environmental Policy Act.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts to public services are anticipated.

Utilities

See Section 3.9 for a full discussion of utility affected environment and significant impacts.

SIGNIFICANT IMPACTS

Water. New development will be required to include practices which will incorporate efficient plumbing fixtures, water conserving landscaping, and water reuse opportunities that can reduce per capita water demand. These practices will reduce the overall impact to water use within the area of the proposed alternatives. It should be noted that the potential impact to water use is equally likely under the no action alternative as under the action alternatives. Therefore, increased water use is not considered a significant impact of the proposal.

Sanitary Sewer System. The increased development that would be permitted by any of the alternatives could result in greater demands on the local sewer collection system and on the downstream conveyance and treatment facilities. The potential increased demand is equally likely under the no action alternative as under the action alternatives. Therefore, increased demand for sanitary sewer service is not considered a significant impact of the proposal.

Storm Sewer System. Current drainage code will require redeveloped sites that discharge to the storm sewers to provide stormwater detention with Green Storm Water Infrastructure (GSI) that allows some water to infiltrate, and be kept on site, before the rest is released to the storm sewer.

Current stormwater code standards will help control peak rates of stormwater through the local combined sewer systems, limiting the frequency of street flooding from the local collector pipes and reducing the risk of combined sewer overflows from the trunk mains.

Electricity. Under all scenarios, future growth and development will increase demand for electrical energy. Additional studies are required to determine whether major upgrades to the substation infrastructure will be required. The local distribution system may need improvements or reconfiguration to meet future growth needs throughout the study area. Development concentrated in the network distribution area may have a higher impact to the electrical system than development spread over a wider area and/or in the area served by the looped radial distribution system.

MITIGATING MEASURES

Water

- The use of low or no-flow fixtures and water saving devices in new construction and renovations.
- Collection and re-use of storm water for non-potable uses (irrigation, toilet flushing, mechanical make up water, etc.) would reduce demand on the public water supply.

Combined Sewer

- As individual sites redevelop, current stormwater code standards, including Green Stormwater Infrastructure, will help control peak rates of stormwater through the local combined sewer systems and reduce the risk of combined sewer overflows.

Stormwater

- New development in the area will be required to meet the 2009 City of Seattle Drainage Code. Stormwater collected on site will be required to be held on site with Green Stormwater Infrastructure (GSI) methods, or detained before discharge to the city storm system. These measures will reduce the peak rate of water discharged to the combined and storm sewer systems.

Electric Power

- Evaluate and identify the future service system needs through collaborative planning process between Seattle Department of Development and Seattle City Light.
- The installation of photo-voltaic and other local generating technologies will reduce the demand on the public generating and distribution facilities.
- Evaluate the feasibility of a district energy system.
- Construction and operation of LEED compliant (or similar ranking system) buildings will reduce the level of increase required in power systems.
- Reduce the use of power in building heating and cooling with passive systems and modern power saving units.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts to utilities are anticipated.

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FACT SHEET

1. SUMMARY

2. ALTERNATIVES

3. ANALYSIS

4. REFERENCES

APPENDICES

Description of Proposal and Alternatives

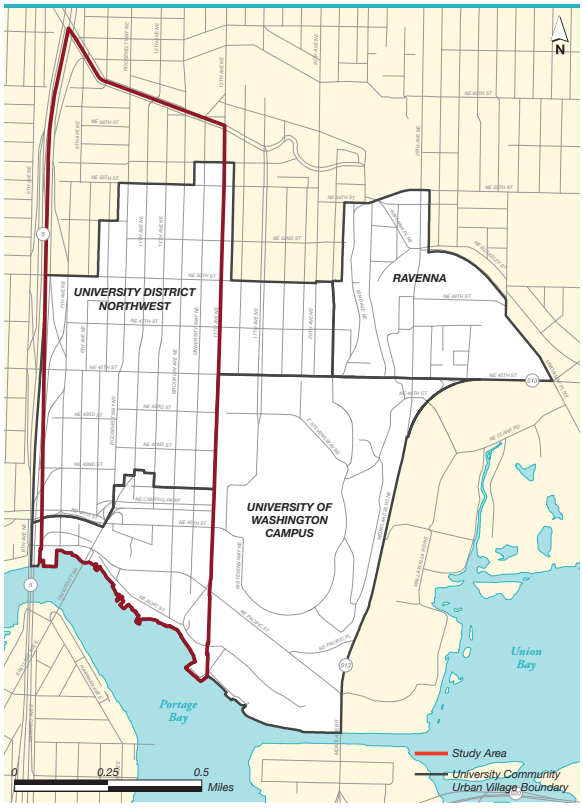
2 Description of the Proposal and Alternatives

2.1 Introduction

The City of Seattle Comprehensive Plan, *Toward a Sustainable Seattle*, is a 20-year vision and roadmap for Seattle's future. It provides the framework for most of Seattle's big-picture decisions on how to grow while preserving and improving our quality of life. For example, the plan guides City decisions on where new jobs and homes should be located, how to improve the transportation system, and how to prioritize investment in public facilities, such as utilities, sidewalks, and libraries.

The urban village strategy is a key component of the plan, providing a comprehensive approach to planning for future growth in a sustainable manner. The Urban Village element of the plan identifies four categories of urban villages: urban centers, manufacturing/industrial centers, hub urban villages and residential urban villages. Urban centers are identified as the densest neighborhoods in the city, with a diverse mix of uses, housing, and employment. The Comprehensive Plan designates the community surrounding and including the University of Washington (UW) campus as the University Community Urban Center (UCUC). As shown in Figure 2.1, the UCUC is divided into three urban villages. The area considered in this EIS—the U District study area—encompasses much of the University District Northwest Urban Village and the southwest portion of the UW Campus Village. (See Figure 2–1.)

Figure 2–1: **U District Study Area with the University Community Urban Center and Village Designations**

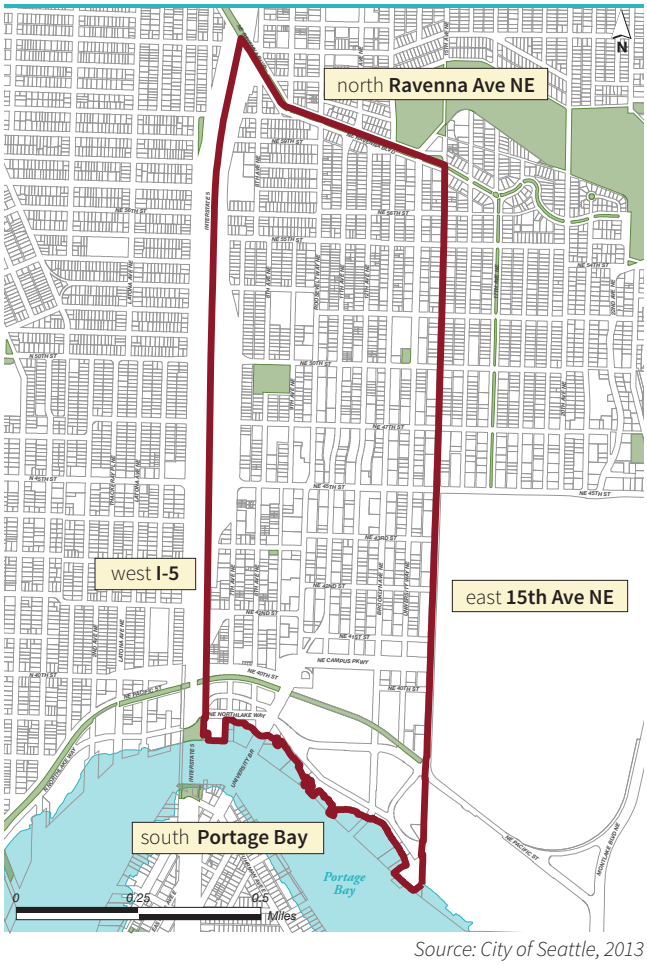


Source: City of Seattle, Comprehensive Plan

Within the U District study area, the potential for a concentration of housing and employment is supported by the future Link light rail U District Station. The station, located on Brooklyn Avenue between NE 43rd and NE 45th Streets, is anticipated to open in late 2021 and to serve as an opportunity to permit more intensive development in the surrounding area.

The City has initiated this Environmental Impact Statement (EIS) process to study the potential impacts of increased height and density in the U District study area. For the purpose of this study, the City identified two alternative zoning scenarios, along with a scenario that maintains existing zoning standards. Based on the analysis and public comment received during the Draft EIS comment period, the City will determine future actions, if any, associated with code updates to permit increased height and density in the U District study area.

Figure 2–2
U District Study Area Boundaries



Source: City of Seattle, 2013

Overview of the Proposal

The City is considering text and map amendments to the Seattle Comprehensive Plan and Land Use Code (Seattle Municipal Code Title 23) to allow development and design standards that permit greater height and density in the U District study area. Zoning changes would be accompanied by an affordable housing incentive program and by development standards, including setbacks, tower separation and street frontage improvements. The proposal is based on a comprehensive public stakeholder process that addressed land use, urban design, transportation and other topics related to the urban character of the U District planning area. The legislative action, if taken, would apply within the U District study area.

Alternatives to be addressed in the EIS include **No Action**—growth under ***current*** land use code standards and development patterns—and **two action alternatives**—growth under ***different*** use code standards and development patterns. Both action alternatives will evaluate increased allowable height and development intensity for residential and commercial development within the study area.

STUDY AREA

As shown in Figure 2–2, the study area is bounded by Portage Bay on the south, NE Ravenna Boulevard on the north, Interstate 5 on the west and 15th Avenue NE on the east.

Objectives of the Proposal

The City has identified the following specific objectives of the proposal:

- Advance Comprehensive Plan goals to use limited land resources more efficiently and to maximize the efficiency of public investment in infrastructure and services.
- Allow greater concentration of development in the area surrounding the future light rail station.
- Provide for a more diverse neighborhood character by providing a mix of housing types, uses, building types and heights.
- Enhance the pedestrian quality at street level by providing amenities, taking into consideration light and air as well as public view corridors and providing for retail activity at key locations.
- Increase height and density to achieve other goals such as providing affordable housing, increasing the variety of building types in new development and supporting equitable communities with a diversity of housing choices.
- Determine how to best accommodate growth while maintaining a functional transportation system, including street network, transit, and non-motorized modes of travel. Similarly, determine how to accommodate growth while maintaining functional capacity of utility systems, including electrical energy, water, sewer and storm drain systems.
- Provide for consistency between the comprehensive plan and land use code.

2.2 Planning Context

Seattle Comprehensive Plan

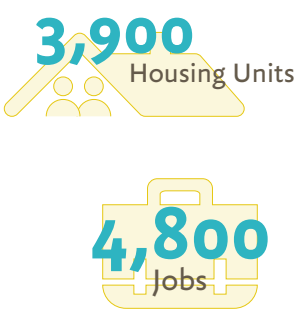
The Seattle Comprehensive Plan, *Toward a Sustainable Seattle*, is a 20-year plan that provides guidance for how Seattle will accommodate growth in a way that is consistent with the vision of the citizens of the City. As a policy document, the plan lays out general guidance for future City actions. In many cases, general guidance in the Plan is more specifically addressed in functional plans that focus on a particular aspect of City services, such as parks, transportation or drainage. The City implements the Plan through development and other regulations, primarily found in the City's zoning map and land use code.

Consistent with the Washington Growth Management Act (GMA), the City adopted the current Plan in 1994. It has been updated in major and minor ways in subsequent years, with the last major update in 2004. The City is currently preparing a major update to the City's comprehensive plan that will incorporate updated estimates of job and population growth and changes since the last major plan update. The current comprehensive plan provides policy guidance through 2024; the updated plan will extend to 2035. This major update is scheduled to be complete in 2015.

PLANNING ESTIMATES FOR GROWTH

The current comprehensive plan contains planning estimates for growth that establish how much residential and employment growth is anticipated through 2024 and where it will be located. The City's ongoing update to the comprehensive plan will adopt new planning estimates for growth for 2035 and allocate growth to individual urban villages based on these estimates. The basis for the planning estimates for growth are established in the King County Countywide Planning Policies. The City has not yet adopted the updated estimates into the comprehensive plan or allocated portions of those estimates to individual urban centers or urban villages. The current 2024 growth estimates for the University Community Urban Center are for 2,450 housing units and 6,140 jobs. As shown in Figure 2–1, the U District study area comprises a portion of the overall Urban Center and overlaps with the University District Northwest Urban Village, which has 2024 housing and jobs estimates of 2,000 housing units and 500 jobs.

Planning Estimates for Growth

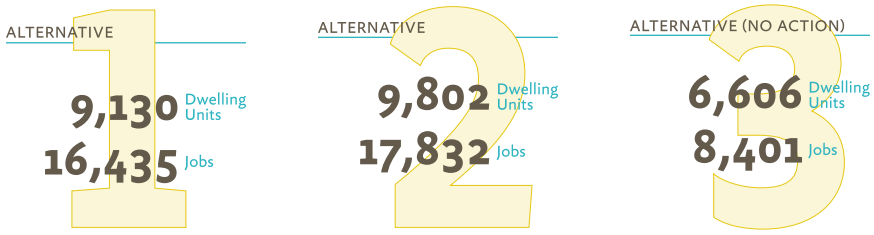


For the purpose of this EIS analysis, growth estimates of 3,900 housing units and 4,800 jobs by 2035 apply equally to all alternatives. While each alternative assumes the same level of growth, each would accommodate this growth in a different manner, with variation in the height, intensity and pattern of potential development in the study area. Please see the discussion of alternatives in Section 2.3.

DEVELOPMENT CAPACITY

Development capacity is a measure of the total amount of new development that could be added in an area. The City of Seattle calculates this measure by comparing existing land uses to what could be built under current or proposed zoning. The difference between the potential and existing development is the capacity for new development. Development capacity estimates are not a prediction that a certain amount of development will occur or when it may occur, but instead a measure of the maximum development that could occur in a given area. Development capacity is expressed in terms of housing units and the number of potential jobs that could be added.

Development Capacity in the U District Study Area



Jobs = Employment Capacity
Assumes one job per 350 square feet of commercial development

Dwelling Units = Residential Capacity
Assumes an average dwelling unit size of 850 square feet

Source: City of Seattle, Hewitt, Studio 3MW, 2013

The estimate of development capacity varies according to the amount and type of development that is permitted. Accordingly, the development capacity for the U District study area has been calculated for each alternative, including No Action (Alternative 3). Please see Appendix B for a description of the development capacity methodology used in this analysis.

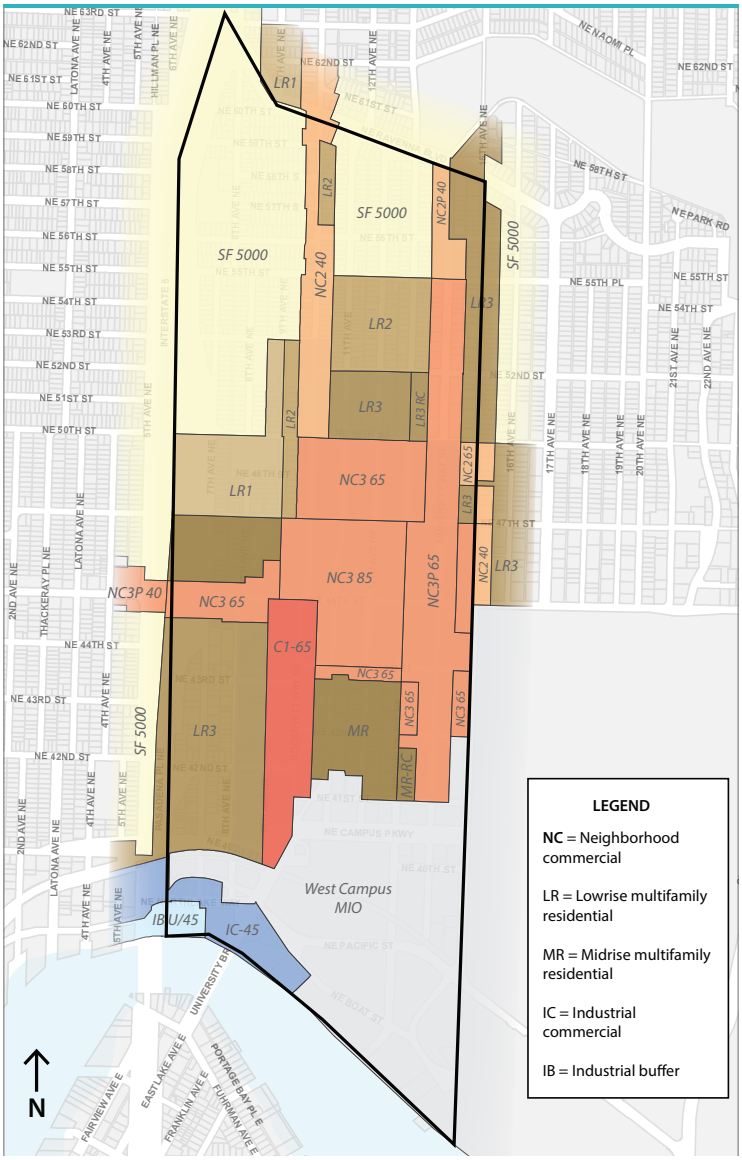
University District Community Urban Center Plan

The University Community Urban Center Plan was completed in 1998. The plan was developed through a collaborative process that included

neighborhood representatives, UW, and the City, and was subsequently approved by resolution by the City of Seattle. Goals of the plan include:

- **Vibrant commercial districts.** Serve local and regional needs, especially along the Ave, Roosevelt, and NE 45th Street
- **Efficient transportation.** Balance different modes, including public transit, pedestrians, bicycles, and cars, minimizing negative impacts to the community.
- **Housing.** Meet the needs and affordability levels of demographic groups including students, young adults, families with children, empty nesters, and seniors. Balance homeownership opportunities with rental unit supply.
- **Recreation.** Increase open spaces and active recreation, consistent with the Comprehensive Plan open space goals for urban centers.
- **Physical identity.** Build on historical and architectural resources, attractive streets, the university campus, and other unique features.
- **Arts, culture, and education.** Build on the widespread recognition of the U District as a hub of arts, cultural activities, and the region's foremost educational institution.

Figure 2–3:
Existing Zoning in the U District Study Area



Source: City of Seattle, 2013

Key goals of the plan were subsequently adopted into the comprehensive plan. Please see discussion in Section 3.1 of this EIS.

Existing Zoning

As shown in Figure 2–3, the study area is zoned for a range of single family and multifamily residential and commercial development. Zoning designations found in the study area are summarized in Table 2–1.

Table 2–1: **Existing Zoning in the U District Study Area**

Zoning Designation	Summary
SF **Single Family**	Single family zones generally allow one unit per lot, typically a detached single family home. Allowable heights range between 25 and 35 feet, depending on the width of the lot. Accessory dwelling units may also be permitted, subject to administrative review.
LR1, LR2, LR3 **Lowrise**	Lowrise zoning allows a variety of multifamily housing types, including cottages, townshouse, rowhouses, and apartments. The LR zones generally allow structure heights of 25 to 40 feet.
MR **Midrise**	Midrise zoning accommodates a full range of housing types and is most often the location of new apartment structures. The MR zone generally allows heights up to 85 feet.
NC2, NC3 **Neighborhood Commercial**	The NC zones allow both residential and commercial uses. Height limits are as identified on the zoning map—for example NC3–65 designates a maximum building height of 65 feet. NC zones include standards to ensure a pedestrian-friendly streetscape environment. Density allowances correspond to height limits. Some NC zones include a Pedestrian (P) designation, which identifies locations where street-front retail and pedestrian-oriented design are required.
C1 **Commercial**	Similar to the NC zone, the C zone allows a mix of residential and commercial uses. However, C zones allow a broader range of higher-impact commercial uses, including auto-oriented lot configurations.
MIO **Major Institution Overlay**	The MIO designation applies to development on the University of Washington campus. The MIO requires development of a campus master plan intended to: (1) establish clear guidelines and development standards on which the institution can rely on for long-term development; (2) provide the neighborhood advance notice of development plans; (3) allow the city to anticipate and plan for public capital or programmatic actions: (4) provide the basis for defining measures to avoid or reduce adverse impacts from major institution growth. Within the U District study area, height limits in the MIO range from 40 to 105 feet. Lowest maximum buildings heights are generally located near the Portage Bay shoreline, and permitted heights increase with distance from the shoreline. The University of Washington Master Plan was approved in 2003. Future updates will be reviewed through a separate process and are not included in this proposal.
IC **Industrial Commercial**	The IC zone allows both industrial and commercial activities, including light manufacturing and research and development. Residential uses are not allowed. Maximum building heights are identified on the zoning map.
IB **Industrial Buffer**	The IB zone provides a transition between industrial development and adjacent residential or commercial zones. Typical land uses include general manufacturing, commercial and entertainment uses. Height limits are identified on the zoning map.

Source: City of Seattle

SHORELINE DESIGNATIONS

The southern edge of the U District study area is bounded by Portage Bay as shown in Figure 2–2. The Portage Bay shoreline is regulated by the Washington Shoreline Management Act and the City of Seattle Shoreline Master Plan. The City has completed an update of its shoreline master plan, which is in review with the Washington State Department of Ecology prior to final adoption.

In the study area current shoreline designations are Urban Stable, east of 7th Avenue NE (extended) and Urban Maritime, west of 7th Avenue NE.

The Urban Stable designation is intended to provide opportunities for substantial numbers of people to enjoy the shorelines through water-dependent recreational uses, to preserve and enhance views of the water from adjacent streets and upland areas and to support water dependent uses.

The Urban Maritime designation is intended to preserve areas for water-dependent and water-related uses while still providing some views of the water from adjacent streets and upland residential streets. Public access shall be second in priority to water-dependent uses.

The proposal and alternatives do not propose any change to existing shoreline designations, activities or uses. Shoreline designations are not discussed further in this EIS.

Public Outreach

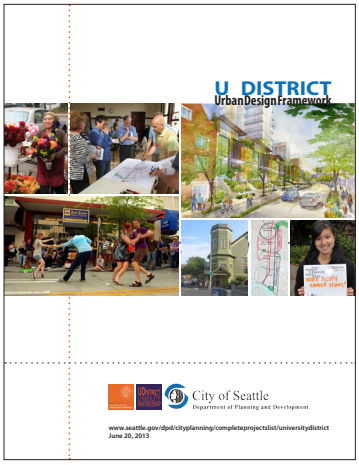
U DISTRICT LIVABILITY PARTNERSHIP (ULDP)

Through a grant provided by the Office of Economic Development (OED), the City of Seattle has participated in and supported a robust public planning process led by the UDLP. Specific to the proposed action, the UDLP created a Future Development and Urban Design working group to focus on the physical development of the U District. This working group led a series of 14 public meetings in 2012 and 2013 to consider land use, design standards, transit, parks and open spaces, and environmental sustainability. The UDLP process and the progress of the Urban Design Framework were widely advertised through print and digital media.

In addition to these public meetings, the UDLP hosted three "Community Conversation" events that were attended by hundreds of people from the U District and beyond. Staff from Seattle Department of Planning and Development (DPD), OED, Department of Neighborhoods and Seattle Police met with neighborhood groups and individuals. Walking tours were organized in the community.

In April 2013, the working group hosted a public open house to share draft recommendations and DPD held public "drop-in office hours" at a local coffee shop to have more detailed conversations with interested individuals. This public process led to development of the U District Urban Design Framework (UDF), which recommended preparation of an EIS to study the potential impacts of different zoning alternatives.

URBAN DESIGN FRAMEWORK



The U District Urban Design Framework (UDF) was developed in 2012 and 2013 through a collaboration between the community, the Seattle Department of Planning and Development, Office of Economic Development and Department of Transportation. The process was led by the U District Livability Partnership (UDLP). Participants included local business people, residents, social service providers, the faith community, students, UW representatives and neighbors from outside the planning area. A physical development working group of the UDLP met for an extensive series of public meetings which ultimately led to the recommendations in the UDF.

The UDF proposes a shared design vision and implementation strategy for the U District study area. Measures contained in the UDF are meant to help guide future growth in the study area through guiding principles, specific recommendations, and implementation tasks.

Guiding principles identified in the UDF include:

- Recognize light rail as a catalyst for change
- Balance regional and local needs
- Provide a network of great streets and public spaces
- Grow and diversify jobs
- Welcome a diversity of residents
- Improve public safety

- Encourage quality and variety in the built environment
- Build an environmentally sustainable neighborhood
- Improve integration between the UW and the U District
- Support and coordinate active transportation choices

Urban design recommendations address land use character, public space network, station surroundings, urban form, building height, incentive zoning, retail activation, housing choices and gateways, hearts and edges. Environmental sustainability recommendations address mobility, landscaping, green stormwater infrastructure, green building, district infrastructure, community health, and environmental planning and governance.

ENVIRONMENTAL REVIEW PROCESS

As part of the environmental review process the City held a public scoping meeting on September 24, 2013, at the University Heights Community Center. Materials and a presentation at the meeting described the EIS process, draft zoning alternatives, and environmental elements to be considered in the EIS. A total of 72 people signed in and 21 people spoke at the meeting.

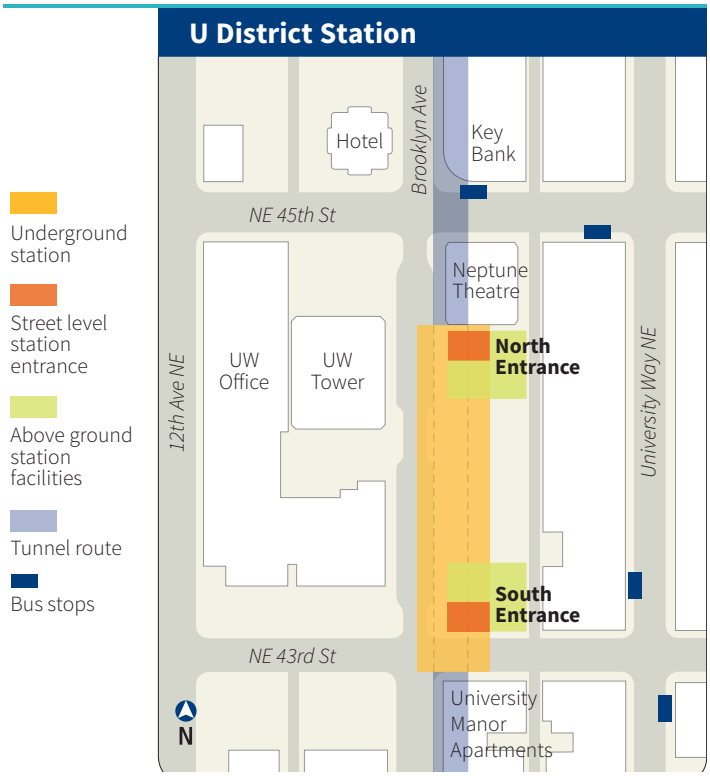
Public involvement continues to be an important element of the planning process. This EIS process includes a public comment period, during which one or more public meetings have been scheduled. During the public comment period, written and verbal comments are invited. Public comments will be considered and addressed in the Final EIS. Please see the Fact Sheet at the beginning on this Draft EIS for the dates of the public comment period and public meeting(s). See Appendix C for a summary of the scoping process.

Sound Transit Light Rail U District Station

The future U District Station is part of Sound Transit's Northgate Link Extension approved by voters in 2008. The U District Station will be located on Brooklyn Avenue NE between NE 43rd and NE 45th streets. The station will serve the surrounding residential community, business district and north University of Washington Campus. The Northgate Link Extension, including the U District Station, is expected to open in late 2021. By 2030, approximately 12,000 people a day are expected to board light rail at the U District Station. Travel time to downtown Seattle will be 8 minutes and to Sea-Tac Airport 41 minutes. See Figure 2–4 shows the U District Station and surrounding vicinity.

As shown in Figure 2–5, the "walkshed" around the station site, meaning the area within a 10-minute walk, extends from the NE 45th Street freeway overpass to UW's Central Campus, and from NE 52nd Street in the north to NE Pacific Street in the south.

Figure 2–4: **Sound Transit U District Station Vicinity**



Source: Sound Transit, U District Station Fact Sheet, 2013

Figure 2–5: **U District Station Walkshed**

Source: City of Seattle Department of Planning and Development. Existing Conditions Report. 2012

2.3 Proposed Action and Alternatives

Overview

The City has identified three alternatives for consideration in this EIS. Alternatives 1 and 2 would allow for high rise development in the core of the study area of varied height and location of growth. Comparatively, Alternative 1 would provide for lower tower heights in a dispersed development pattern. Alternative 2 would provide for taller towers concentrated around the transit center. Alternative 3 would retain existing zoning designations and standards. Zoning designations proposed for each alternative are shown in Figures 2.6 through 2.8.

GROWTH ESTIMATES

For the purpose of analysis in this EIS, a growth estimate of 3,900 housing units and 4,800 jobs is assumed. This assumption is informed by the City's adopted 2024 growth targets, updated guidance from the 2012 King County Countywide Planning Policies, historic development trends and a recent analysis of the U District real estate market.[1] This growth estimate assumes a conservatively high demand for future office and residential high-rise development.

Estimated growth was allocated within the study based on the following:

- Likely development sites were based on the Potential Development Map, U District Urban Design Framework, June 2013
- A range of residential, commercial, mid-rise and high-rise development could occur and should be represented in the alternatives
- New development would likely occur on large sites and smaller easily aggregated sites
- New development would most likely cluster around the future U District Link Light Rail station, but some would also occur throughout the study area
- Residential development would average 850 square feet per housing unit. Commercial development would average 350 square feet per employee.

1 *Heartland. U District Urban Design Framework Support Analysis Memo. June 2013*

Incentive Zoning

The City's existing incentive programs offer development bonuses—usually in the form of additional height or floor area—for development projects that undertake measures beyond standard requirements to mitigate the impacts of development, such as:

- Affordable housing
- Meeting a specific LEED™ standard
- Provision or payment in lieu of childcare
- Provision of public amenities, such as open space
- Transfer of development rights (TDR)

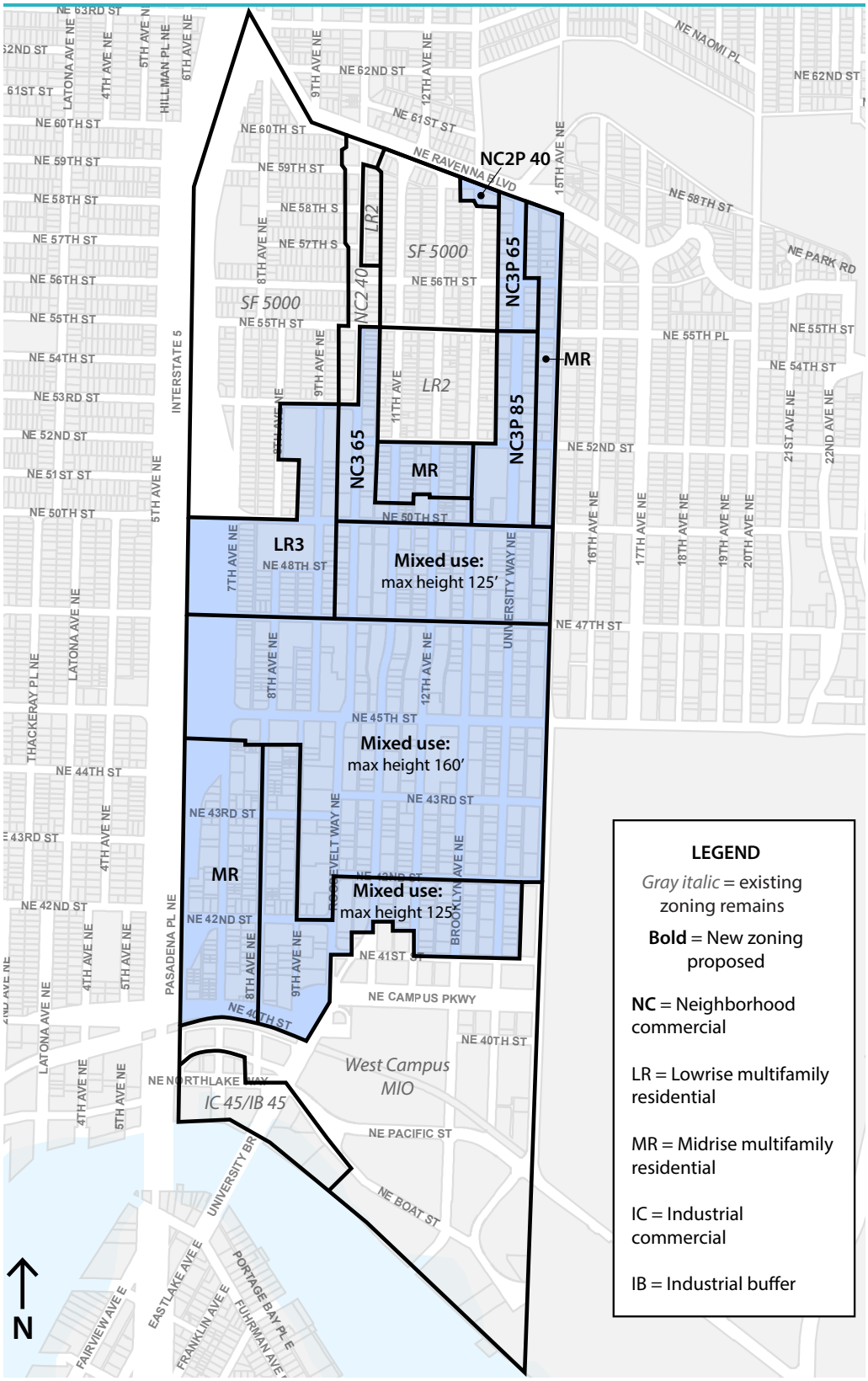
In a separate action, the City is reviewing the provisions of the incentive zoning program which may lead to future change in the program.

For the U District study area, the UDF identifies the following list of incentive measures for further consideration and prioritizing:

- New public and private open spaces, including spaces for active and passive recreation
- Mid-block pedestrian pathways
- Affordable housing
- Larger-sized residential units to accommodate families
- Support services and facilities for vulnerable populations including seniors, non-English speakers, and homeless people
- Child care
- Preservation of historic buildings
- Streets and alleys that are friendly to pedestrians, including landscaping, sidewalk cafés and other features
- Preservation of regional forests and farmlands

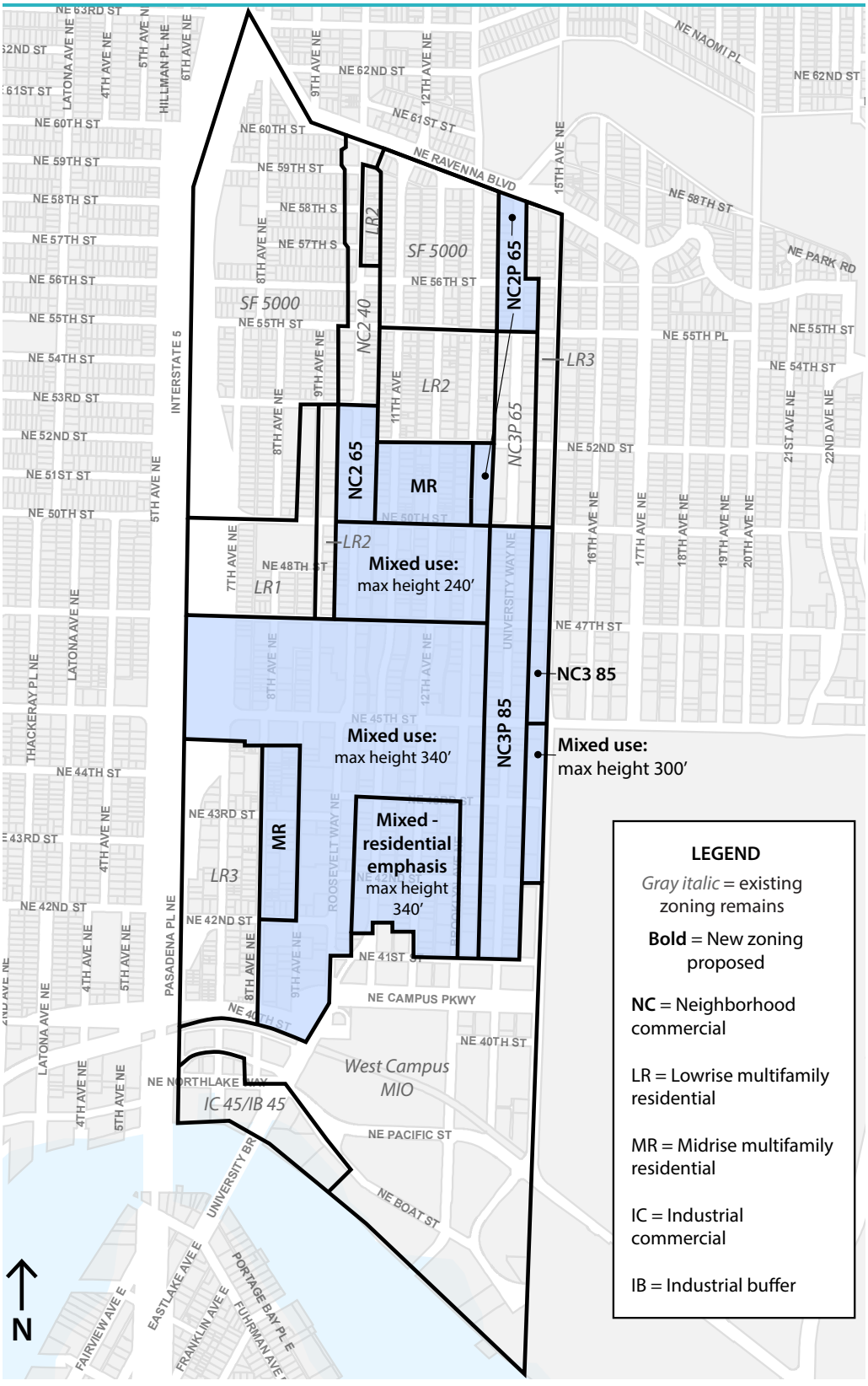
Any future decisions about specific incentive measures will be made based on the public comment and city review of this EIS and other data.

Figure 2–6: **Alternative 1 Proposed Zoning**



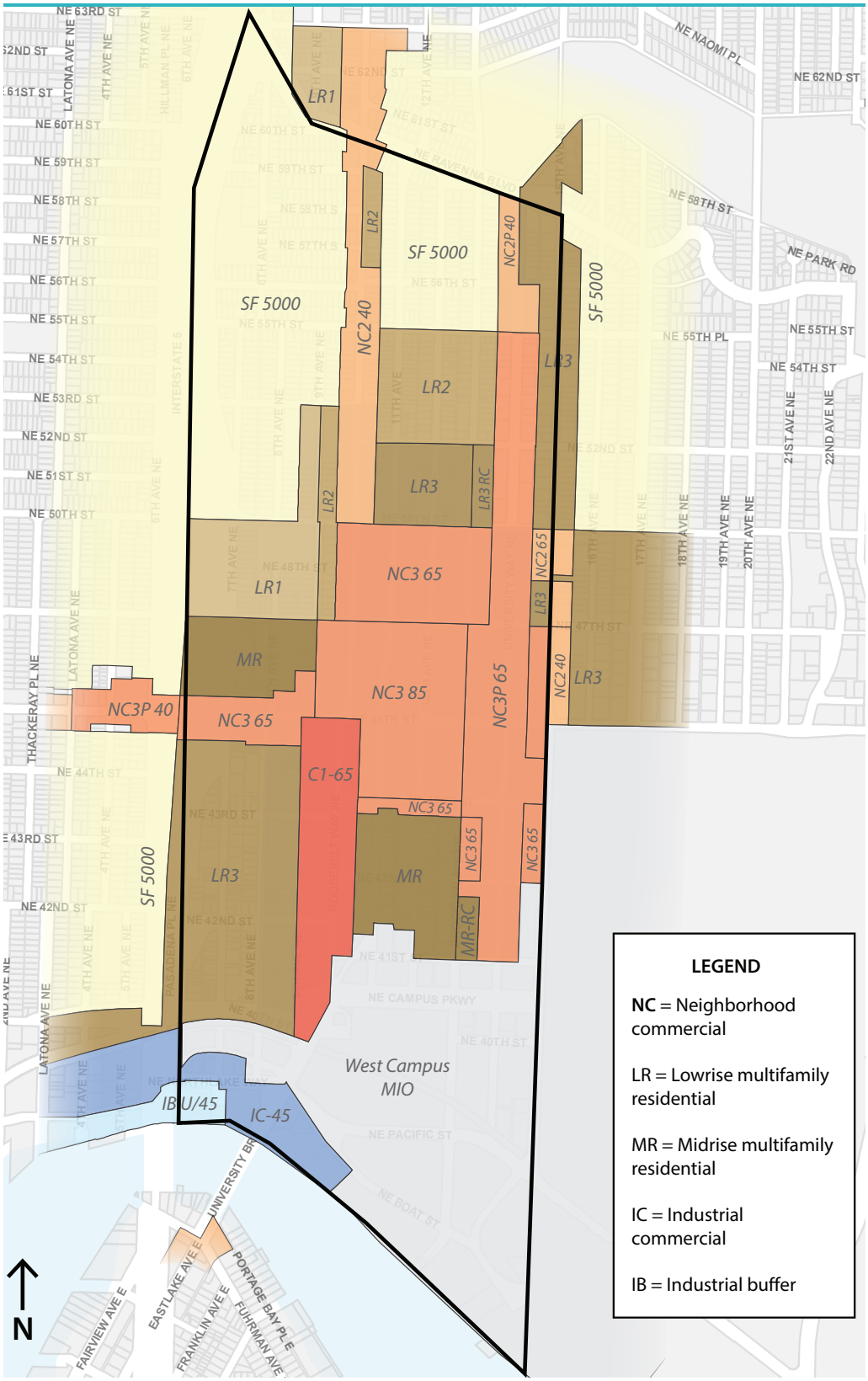
Source: City of Seattle, 2013

Figure 2–7: **Alternative 2 Proposed Zoning**



Source: City of Seattle, 2013

Figure 2–8: **Alternative 3 (No Action) Existing Zoning**



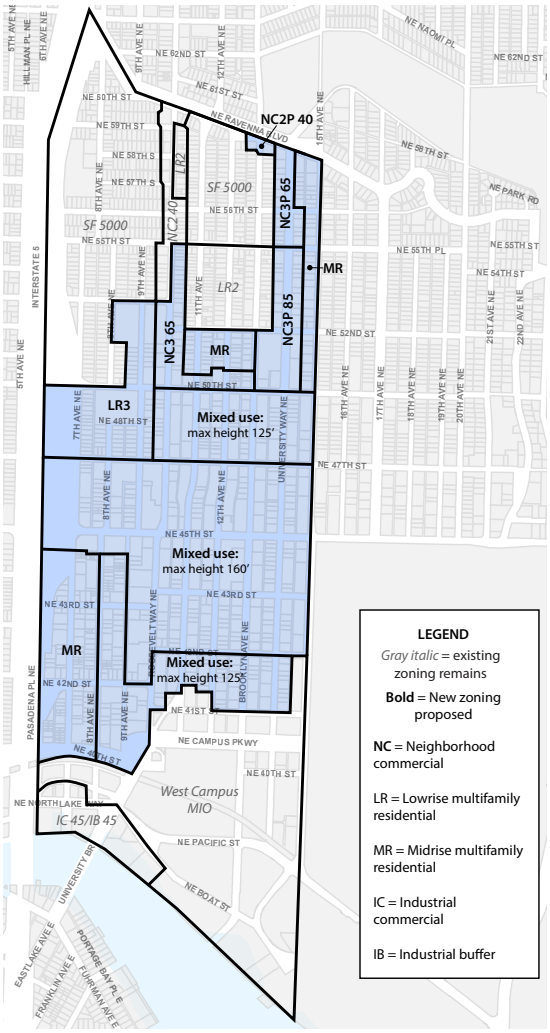
Source: City of Seattle, 2013

Alternative 1

Alternative 1 would allow for high-rise towers in the core area—including along University Way NE—with areas of mid-rise development extending north of NE 50th Street. Maximum building heights would be between 125 and 160 feet, less than permitted under Alternative 2, and significantly greater than permitted under Alternative 3 (No Action). The proposed zoning would generally focus growth around the new transit station while yielding a development pattern more dispersed than in Alternative 2. Alternative 1 zoning designations are shown in Figure 2–6. Areas shown with a blue tint indicate a change to zoning designations as described below.

Compared to Alternative 2, the area of increased height and intensity extends farther north from the core. In addition, development along University Way NE (the Ave) would be permitted to develop to high-rise standards, ranging from 125 to 160 feet, depending on location. Compared to Alternative 2, mid- and high rise towers would be allowed in closer proximity to each other, with a minimum 60-foot separation between towers above 75 feet.

To help maintain the pedestrian character on designated Green Streets, landscaped setbacks would be required on both sides of Brooklyn Avenue NE and NE 43rd and 42nd Streets. Widened sidewalks would be required on NE 45th and 50th Streets.



Ref. Figure 2–6, p. 2–14

CORE AREA: SOUTH OF NE 50TH STREET AND NORTH OF UNIVERSITY OF WASHINGTON CAMPUS MIO

The majority of this area is proposed for redesignation to a future mixed-use zone. The area between NE 47th and NE 42nd Streets, including the University Way NE corridor, would be allowed the greatest building heights, up to a maximum of 160 feet. The area north of NE 47th and south of NE 42nd streets would be allowed a maximum building height of 125 feet. Table 2–2 summarizes the development standards for the mixed-use area.

Other new designations include:

- The area between NE 50th and NE 47th Streets, east of Interstate-5 would be re-designated from LR1 to LR3
- The area south of NE 45th Street and west of 8th Avenue NE would be re-designated from LR3 to MR in the southwest.

NORTH OF NE 50TH STREET

The majority of the area currently zoned SF 5000 would be retained in this area. However, two changes to the SF 5000 zoning are proposed:

- 8th Avenue NE, south of NE 53rd Street—the Blessed Sacrament Church property would be re-designated to LR3.
- NE Ravenna Boulevard/Brooklyn Avenue NE—an existing retail and multifamily development would be re-designated to NC2P 40.

Other changes in the area north of NE 50th Street would include:

- An area along 9th Avenue NE and extending west would be re-designated from LR1 and LR2 to LR3.
- A portion of the Roosevelt Way NE corridor immediately north of NE 50th Street would be re-designated from NC2 40 to NC3 65.
- The University Way NE corridor would be re-designated to NC3P at 65 and 85 feet in height.
- The west side of 15th Avenue NE would be re-designated from LR3 to MR.

UNIVERSITY OF WASHINGTON CAMPUS MIO

No change is proposed to the existing Major Institution Overlay zoning or industrial zoning.

Alternative 2

Relative to all of the alternatives, Alternative 2 would allow the greatest heights and concentration of growth in the core area. Maximum building heights would be between 240 and 340 feet, but proposed development standards would reduce building bulk and increase building separation, compared to Alternative 1. Growth would be primarily focused in the core area, south of NE 50th Street. In addition, building heights along the University Way NE corridor would be limited to 65 to 85 feet, significantly less than Alternative 1.

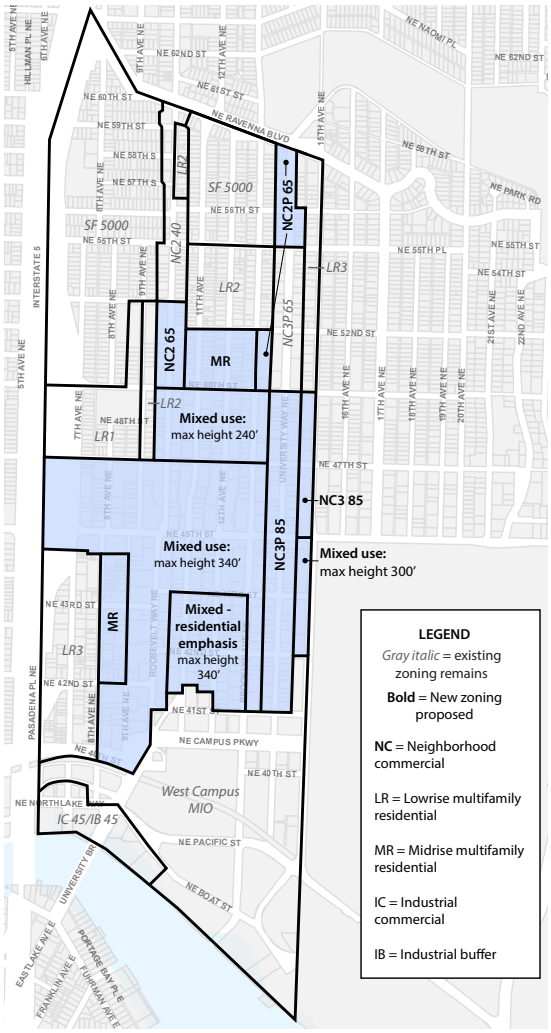
Area-specific setbacks would be required to promote pedestrian character and provide for ground-level residential stoops and landscaping.

The Alternative 2 zoning designations are shown in Figure 2–7 and at right. Areas shown with a blue tint indicate a change to zoning designations.

CORE AREA: SOUTH OF NE 50TH STREET AND NORTH OF UNIVERSITY OF WASHINGTON CAMPUS MIO

The majority of this area would be designated for mixed-use, with building heights varying from 240 feet to the north of NE 47th Street and 340 feet south of NE 47th Street. A portion of the mixed-use area, generally south of NE 43rd Street and between Roosevelt Way NE and Brooklyn Avenue NE, would be mixed-use with a residential emphasis. Table 2–2 summarizes the development standards for the mixed-use area.

In contrast to Alternative 1, the mixed-use designation does not extend to the University Way NE corridor, which would be rezoned to NC3P-85, allowing 20 feet greater height compared to existing zoning. The area to the west of 15th Avenue NE would be rezoned to NC3 85 to the north of NE 45th Street and to mixed-use with a maximum height of 300 feet south of NE 45th Street.



Ref. Figure 2–7, p. 2–15

Two partial blocks south of NE 45th Street and between 8th and 9th Avenues NE would be re-designated from LR3 to MR.

NORTH OF NE 50TH STREET

No changes are proposed to the existing SF 5000 and LR2 designations in this area. Proposed changes include:

- Three discrete areas along the Roosevelt Way NE and University Way NE corridors would be re-designated from NC2P 40 and LR3 RC to NCP 65.
- The area immediately north of NE 50th Street would be re-designated from LR3 to MR.

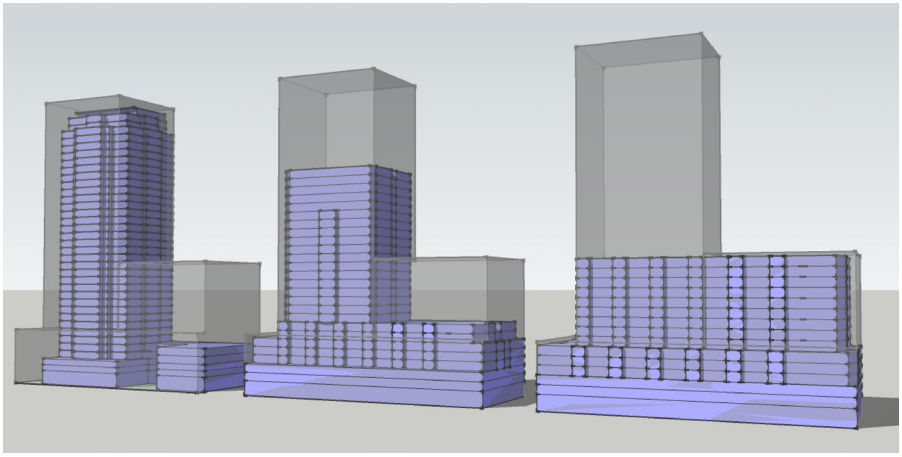
UNIVERSITY OF WASHINGTON CAMPUS

No changes are proposed to the existing Major Institution Overlay and existing industrial zoning.

Figure 2–9: **Zoning Envelopes and Floor Area Ratios**

***Gray**: hypothetical "zoning envelopes" established by setbacks, height limits, tower floorplate limits, minimum tower separation and other development standards.*

***Blue**: possible building configurations within the allowed zoning envelope, limited by a floor area ratio (FAR) of 12. All three buildings have the same amount of floor area but they configure the space differently.*



Source: City of Seattle, 2013

A floor plate is the horizontal plane of the floor of a building, measured to the inside surface of exterior walls.

Floor area ratio is the ratio of the total square feet of a building to the total square feet of the property on which it is located.

Table 2–2: **Mixed-Use Development Standards**

Features	Alternative 1	Alternative 2
Height Limits	▶ 125–160 feet	▶ 240–340 feet
Floor Plate Size	▶ Max floor plate is 24,000 SF above 65 feet	▶ If structure over 160 feet tall, max floor plate is 24,000 SF above 65 feet, then 11,000 SF above 120 feet
Floor Area Ratio Limits*	▶ 6–10	▶ 9–12
Tower spacing	▶ 60 feet	▶ 100 feet
Area-specific standards		
University Way NE	▶ 10-foot setback above 65 feet	▶ 15-foot setback above 45 feet 120-foot building facade limit
Brooklyn Avenue NE	▶ 5-foot ground level setback (landscaping) ▶ 10-foot setback above 40 feet	▶ 10-foot ground level setback (balconies above, but not structural overhangs)
NE 42nd & 43rd Streets	▶ 5-foot landscaped setback both sides ▶ 10-foot setback above 40 feet	▶ 10-foot setback above 40 feet on the south side for solar exposure
NE 45th Street	▶ 7-foot ground-level setback for sidewalk (OK to cantilever back above 15 feet)	▶ 10-foot ground level setback for sidewalk (no cantilever, absolute 10-foot setback)
NE 50th Street	▶ 5-foot ground-level setback for sidewalk (OK to cantilever back above 15 feet)	▶ 8-foot ground-level setback for sidewalk (no cantilever, absolute 8-foot setback)

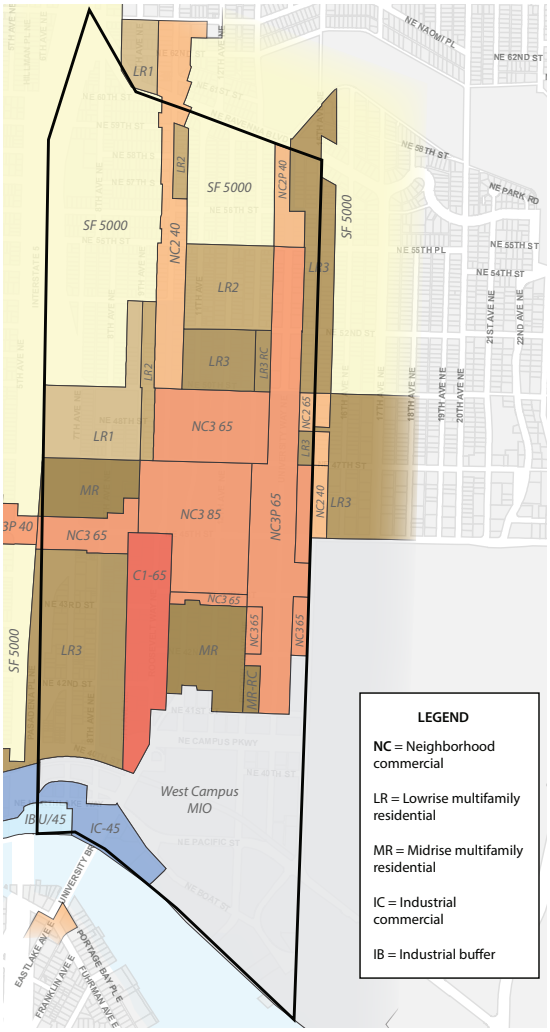
*Floor Area Ratio (FAR) assumptions include an exemption for street-level retail use from the FAR calculation. *Source: City of Seattle*

Alternative 3

Alternative 3 retains the existing zoning designations in the neighborhood, with no increased potential for building heights or development capacity. Existing zoning is shown in Figure 2-8 and briefly described below.

CORE AREA: SOUTH OF NE 50TH STREET AND NORTH OF UNIVERSITY OF WASHINGTON CAMPUS MIO

The central portion of the core area is designated NC3, with heights ranging from 65 to 85 feet. The University Way NE corridor is zoned LR3, NC2 and NC3, with maximum building heights of 40 to 65 feet. Other designations include the MR zone in the northwest and southern portions of the core area, C1 along a portion of the Roosevelt Way NE corridor and LR3 in the southwest corner of the core area.



Ref. Figure 2–8, p. 2–16

NORTH OF NE 50TH STREET

North of NE 50th Street, existing zoning consists of a mix of Lowrise (LR1, LR2, LR3), Neighborhood Commercial (NC1, NC2, NC3) and Single Family (SF 5000) zones. The major corridors along NE 50th, University Way NE and Roosevelt Way NE are generally designated for the greatest relative intensity and building heights. Highest maximum building heights are 65 feet on the south side of NE 50th Street and extending north on Roosevelt Way NE.

UNIVERSITY OF WASHINGTON CAMPUS

As in the action alternatives, the existing Major Institution Overlay and industrial zoning would be retained.

2.4 Environmental Review

Purpose

The purpose of this EIS is to assist the public and agency decision-makers in considering the potential environmental effects of proposed changes to land use code standards for height and density in the U District study area.

This Draft EIS provides qualitative and quantitative analysis of environmental impacts as appropriate to the general nature of the Proposed Action planning efforts.

Programmatic Review

SEPA requires government officials to consider the environmental consequences of proposed actions, and to consider ways to accomplish the objectives that minimize adverse impacts or enhance environmental quality. They must consider whether the proposed action will have a probable significant adverse environmental impact on the elements of the natural and built environment.

The adoption of development regulations is classified by SEPA as a non-project (also referred to as programmatic) action. A non-project action is defined as an action that is broader than a single site-specific project, and involves decisions on policies, plans, or programs. An EIS for a non-project proposal does not require site-specific analyses; instead, the EIS will discuss impacts and alternatives appropriate to the scope of the non-project proposal and to the level of planning for the proposal. (See WAC 197-11-442 for detail.) The analysis in this EIS may also be used in the future to help inform project-level development proposals.

EIS Scope of Analysis

The City issued a Determination of Significance and Scoping Notice on September 5, 2013. During the scoping comment period, which extended from September 5 to October 9, 2013, interested citizens, agencies, organization and affected tribes were invited to provide comments on the scope of the EIS. During the comment period, the City held a public scoping meeting to provide information and invite comment from interested parties. A total of 21 persons spoke at this meeting. In addition, a total of 29 letters and emails were received during the scoping period related to:

- Specific environmental impacts proposed for study in the EIS

- The alternatives proposed for study
- The planning process that led to the proposed alternatives

See Appendix C for a summary of scoping comments.

Based on this process, the City revised the EIS alternatives and finalized the scope of the EIS. Elements of the environment addressed in this EIS include:

- Land Use Plans & Policies
- Housing
- Aesthetics
- Historic Resources
- Transportation
- Greenhouse Gas
- Open Space & Recreation
- Public Services
- Utilities

Environmental Impacts

For each of the alternatives, potential environmental impacts to the elements of the environment listed above are described in Chapter 3 of this EIS and briefly summarized in Chapter 1. Please refer to these chapters for a comparison of the impacts of the alternatives, potential mitigating measures and significant unavoidable adverse impacts.

2.5 Benefits and Disadvantages of Delaying the Proposed Action

Delaying adoption of zoning that would to allow increased height and density in the U District study area could reduce the likelihood of improvements based on development impacts that may be experienced as a result of development standards and incentive zoning. Delaying the action would also maintain existing height limits. This may be seen as a benefit or a disadvantage depending on the perspective of the individual.

FACT SHEET

1. SUMMARY

2. ALTERNATIVES

3. ANALYSIS

4. REFERENCES

APPENDICES

Environmental Analysis

3.1 Land Use

This section of the EIS describes existing land use, development patterns, character, and scale of development within and near the U District study area. This section also summarizes pertinent plans, policies and regulations.

3.1.1 Affected Environment

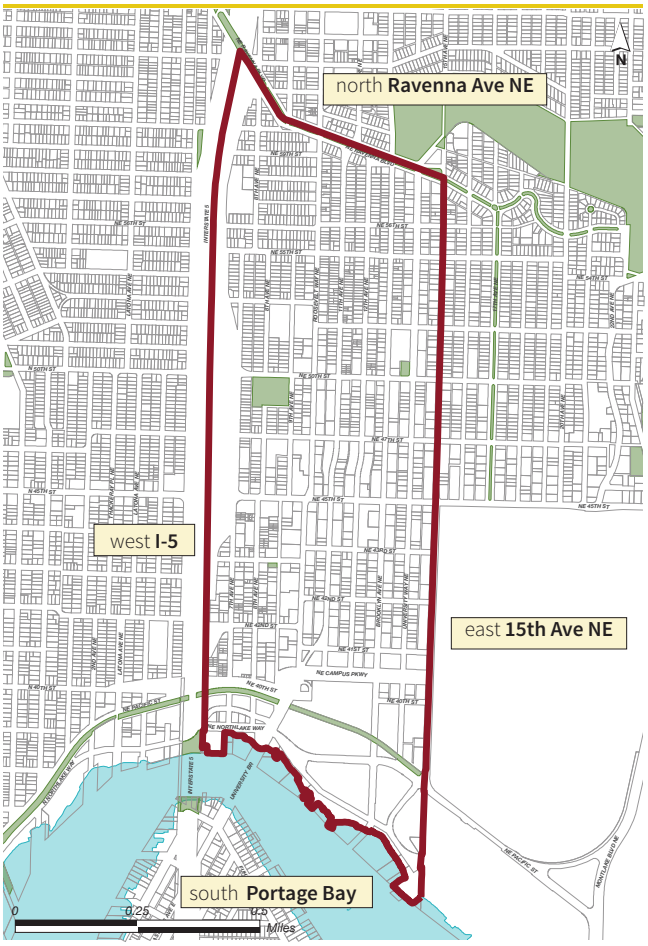
Study Area Overview

The U District study area consists of approximately 405 acres bounded by 15th Avenue NE, Interstate-5 (I-5), NE Ravenna Boulevard, and Portage Bay within the City of Seattle. (See Figure 3.1–1.) With about 160 acres in use as public rights-of-way, streets are the primary land use in the study area. The remaining 245 acres are developed with a mix of uses, described in this section.

The study area is a densely developed urban area characterized by a mix of uses and development intensities. The range of development includes single family and multifamily residences, retail, restaurants, entertainment, offices, a portion of the University of Washington campus, and community service facilities.

The majority of the U District study area is within the City of Seattle's designated University Community Urban Center (UCUC). More specifically, it is largely within the University District Northwest Urban

Figure 3.1–1:
U District Study Area Boundaries



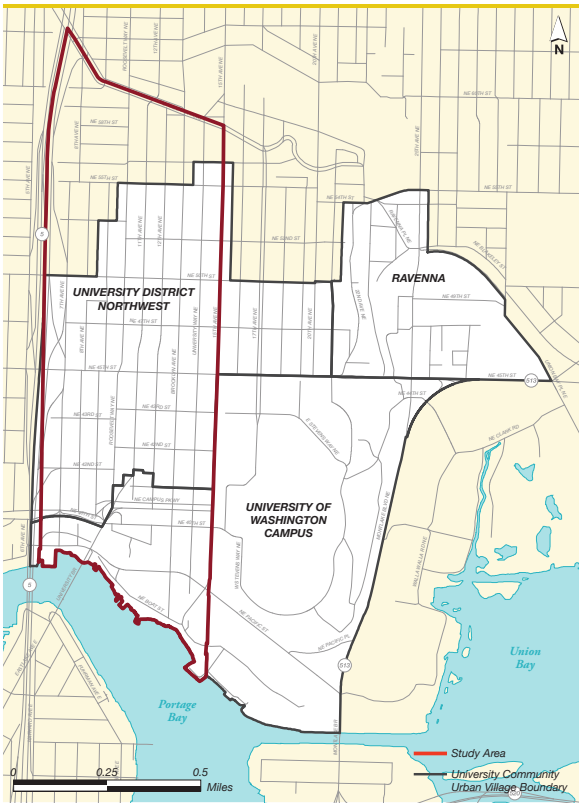
Source: City of Seattle, 2013

Village portion of the UCUC (Figure 3.1–2). As shown in Figure 3.1–2, only the northwest portion of the study area is not located within the UCUC.

The urban center designation is part of the city's comprehensive urban village strategy, which establishes that urban centers should contain a concentration of housing and employment and provide a regionally significant focus for housing and employment growth. For more information on the City's urban village strategy, see the description of the Seattle Comprehensive Plan in the Plans and Policies section of this EIS (Section 3.1.5).

Figures 3.1–3 and 3.1–4 show the overall pattern of existing development in the U District study area. Figure 3.1–3 focuses on the UCUC. Areas to the

Figure 3.1–2: **U District Study Area with the University Community Urban Center and Village Designations**



Source: City of Seattle, Comprehensive Plan

Figure 3.1–3: **U District Study Area Existing Land Use**

Source: City of Seattle Department of Planning and Development. Existing Conditions Report. 2012.

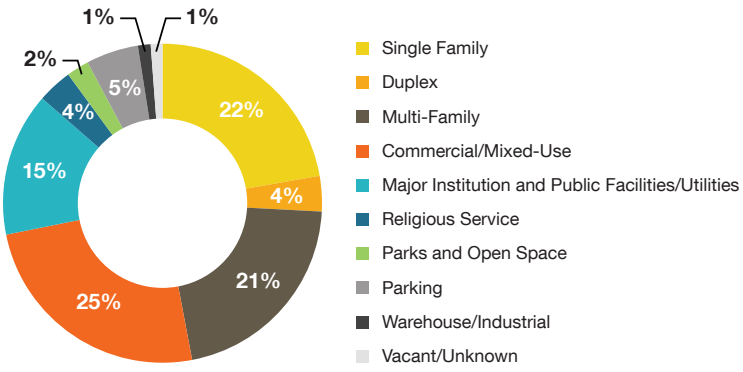
north are primarily single family residential, with neighborhood scale retail along the Roosevelt Way NE and University Way NE corridors.

As shown in Figure 3.1–4, a roughly equal mix of commercial/mixed-use, single family and multi-family development comprise about 66% of the study area. The next largest category of land use is major institution and public facilities, which includes the University of Washington campus and other public facilities and occupies about 15% of the study area. Other uses include religious institutions, parks, parking, warehouse/industrial and vacant/unknown.

In order to provide a more detailed description of the existing land use pattern, the following discussion breaks the study area into four smaller areas (See Figure 3.1–5):

- **North Study Area**, generally located between I–5, 15th Avenue NE, NE Ravenna Boulevard, and NE 50th Street.
- **Core Area**, generally south of NE 50th Street, north of NE 43rd Street, and between I–5 and Brooklyn Avenue NE.
- **South Study Area**, generally located south of NE 43rd Street, west of Brooklyn Avenue NE, east of I–5 and north of Portage Bay.
- **University Way NE Corridor**, running south of NE Ravenna Blvd east of Brooklyn Avenue NE to NE Campus Parkway and west of the UW Campus.

Figure 3.1–4 **U District Study Area Existing Land Use**



Source: City of Seattle Department of Planning and Development. Existing Conditions Report. 2012.

Figure 3.1–5 **U District Study Area Sections**

Source: Studio 3MW

North Study Area

This area includes roughly 70 acres east of I–5, west of Brooklyn Avenue NE, south of NE Ravenna Boulevard, and north of NE 50th Street. The southeast portion of this area is within the UCUC. With the exception of development along Roosevelt Way NE, land use in this area is predominately residential.

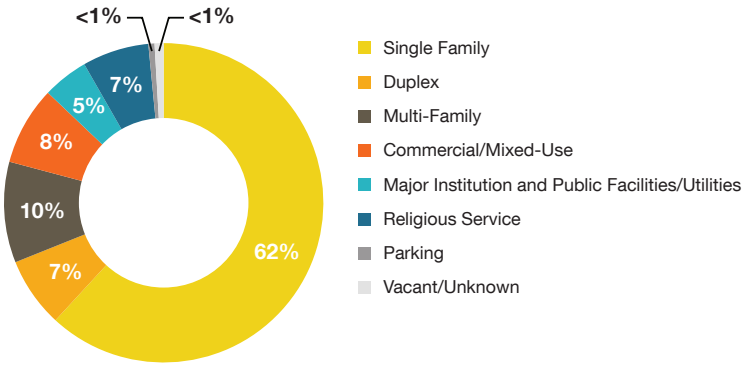
In this area, approximately 62% of the land area is occupied by single family residences, 7% with duplex development, 10% with multi-family (single use) development, and 8% with commercial and mixed-use development. The remaining 13% of area is devoted to religious institutions, major institutions, parking and vacant/unknown. (See Figure 3.1–6.)

Almost all building structures are low-rise, with building heights of one to three stories. The majority of non-residential and mixed-use buildings are along Roosevelt Way NE where uses include office, retail, restaurants, and other services. While primarily low-rise, this corridor has some mid-level (4–6 stories) structures.

There are significant community facilities in this area, including the University Branch Seattle Public Library and the YMCA.

Adjacent areas to the east and north are primarily devoted to residential use.

Figure 3.1–6 **Existing Land Use in North Study Area**



Source: City of Seattle Department of Planning and Development. Existing Conditions Report. 2012.

The Ave at NE 50th St

Roosevelt Way NE at NE 52nd St

Ravenna Boulevard

Core Area

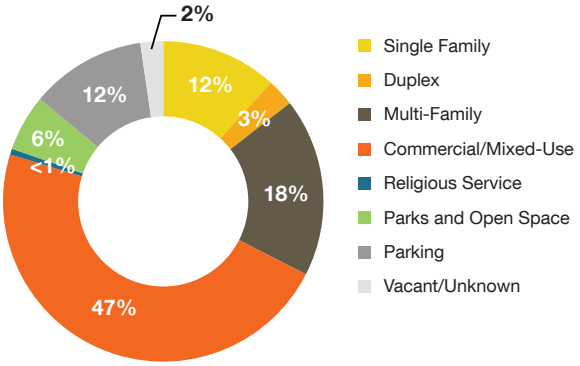
The Core Area includes about 48 acres south of NE 50th Street, north of a portion of the UW west campus, east of I–5 and west of Brooklyn Avenue NE. The entire Core Area is within the designated UCUC. Land use in this area is predominately commercial/mixed-use with a relatively dense mix of residential, commercial, educational, and office uses. Approximately 47% of the land area is in commercial/mixed-use, 18% in multi-family, and 15% single-family and duplex. About 12% of the area is currently devoted to parking, 6% to parks, and 2% of the area is vacant/unknown. (See Figure 3.1.7.)

Building heights range from low-rise to high-rise towers. Many of the buildings are in the 65- to 100-foot range and there are three high-rise structures. At 22 stories and 320 feet high, the University of Washington Tower is the areas tallest. The Hotel Deca is a 16-story structure across from the UW Tower, and the nearby 220-foot University Plaza Condominiums rivals the UW Tower with 24 above-ground floors.

Commercial, office, and mixed-uses are dispersed throughout the Core Area. A large concentration of single-family residential homes surrounds the University Playground at NE 50th Street. The UW Medical Center is located at NE 42nd Street and Roosevelt Way NE and several smaller office uses are clustered around it. Commercial corridors on Roosevelt Way NE and NE 45th Street provide a range of retail and service uses, including larger scale retail businesses and auto dealerships with large surface storage lots.

Between Roosevelt Way NE and I-5, existing development consists of a mix of low- to mid-rise commercial uses transition to residential development at varying densities.

Figure 3.1–7 **Existing Land Use in Core Area**



Source: City of Seattle Department of Planning and Development. Existing Conditions Report. 2012.

Brooklyn Ave NE at NE 50th St

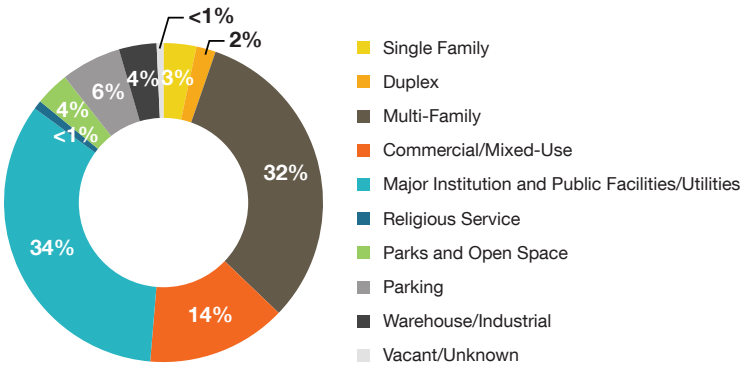
Brooklyn Ave NE at NE 40th St

Roosevelt Way NE at NE 41st St

South Study Area

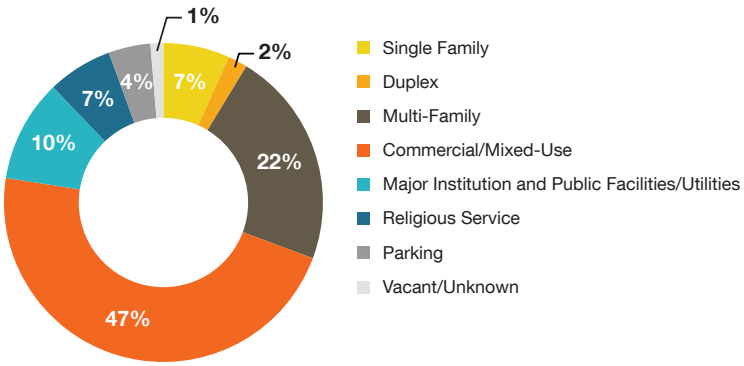
The South Study Area contains about 83 acres, developed primarily with the University of Washington west campus and multi-family housing, which together make up about 66% of the study area. The other major use in the South Study Area is commercial/mixed-use, which comprises about 14% of the study area. The remaining uses each make up 6% or less of the South Study Area.

Figure 3.1–8 **Existing Land Use in South Study Area**



Source: City of Seattle Department of Planning and Development. Existing Conditions Report. 2012.

Figure 3.1–9: **Existing Land Use in University Way NE Corridor**



Source: City of Seattle Department of Planning and Development. Existing Conditions Report. 2012.

University Way NE Corridor

The University Way NE Corridor runs north-south along the eastern edge of the study area, generally between NE Ravenna Blvd on the north and NE Campus Parkway on the south. This area includes about 44 acres encompassing both sides of University Way NE and the east side of 15th Avenue NE. Situated between the campus, residential neighborhoods, and the study area's mixed-use Core, this corridor provides a focal point for commercial activity and cultural life in the U District. It is also important for transit routes going north-south and to the western edge of the UW campus.

Commercial/mixed-use development comprises about 47% of the land area. Other land uses include multi-family at about 22% of land area, major institutions and public facilities/utilities at about 10% of land area, single-family and duplex combined at about 9%, and religious institutions at about 9% of land area. (See Figure 3.1–9.)

UNIVERSITY WAY NE

University Way NE is characterized as a well-established pedestrian-oriented retail corridor. South of NE 50th Street and extending through the Core Area, the corridor is developed with small scale, continuous buildings with narrow storefronts. Streetscape elements such as furniture and lighting give the corridor a distinct and recognizable identity. North of NE 50th Street, retail activity is also a predominant use, but is less densely developed than to the south. Along the entire corridor, many of the small retail and service businesses are oriented toward serving a student population. The diverse mix of shops and eateries are generally recognized as a distinctive characteristic of the corridor. Surface parking lots are scattered throughout the area. The majority of development along the corridor is low-rise, typically less than three stories.

The Ave

15TH AVENUE NE

Between NE Ravenna Boulevard and NE 50th Street, multifamily development is the primary use along 15th Avenue NE. These are generally low-rise structures with small footprints. From NE 50th Street south to approximately NE 45th Street at the UW campus, there is a change in building scale and mix of uses with more mixed-use apartment buildings and public facilities and services. South of the NE 45th Street, the east side of 15th Avenue NE follows the boundary of the UW campus and the west side of 15th Avenue NE includes a mix of commercial, multifamily and church uses.

The Ave

Campus Parkway at 15th Avenue NE

3.1.2 Significant Impacts

Impacts Common to All Alternatives

LAND USE PATTERNS

Under all alternatives, the study area is expected to experience new growth and development, but the overall mix of uses is not expected to significantly change from the existing mixed-use pattern. The alternatives differ primarily in the intensity and location of development and subsequent impacts on land use patterns. These differences are described in the discussion of each alternative, below.

LAND USE COMPATIBILITY

Within the Study Area

North Study Area. Within this area, increased development intensity in the study area could result in land use compatibility impacts at the boundary between the UCUC and the surrounding low density residential area. The potential for this type of impact differs between alternatives. Please see the discussion of land use compatibility for each alternative, below.

Core and South Study Area. In general, because the Core Area and South Study Area are already developed as dense urban areas, new development under any of the alternatives is relatively unlikely to result in significant land use conflicts within these areas. Please see the discussion of land use compatibility for each alternative, below.

Adjacent to the Study Area

Under all alternatives, there is little potential for significant land use conflicts to the north, west and south. To the west and south, the strong boundaries provided by Portage Bay and I-5 minimize the potential for land use conflicts with development in the adjacent areas. To the north, the existing single family residential area provides a transition between the area to the north and more intensive development in the study area.

Potential land use compatibility impacts associated with the surrounding area to the east are discussed for each alternative below.

Alternative 1

LAND USE PATTERNS

North Study Area. The major impact to the land use pattern in the North Study Area is increased potential for mid-rise development, with maximum heights ranging between 65 to 85 feet along the Roosevelt Way NE and University Way NE corridors. In general, the proposed regulatory changes would not impact the type of permitted use (i.e., residential, commercial, etc.), but would allow for greater intensity and density of these uses. Compared to Alternative 2, the potential area for increased height and intensity extends farther north into the North Study Area.

Core Area. In the Core Area, the major impact of Alternative 1 would be to allow the development of high-rise structures. High-rise development would be between 125 and 160 feet, less than permitted under Alternative 2, but greater than permitted under Alternative 3 (No Action). Although high-rise towers would not be as tall as permitted under Alternative 2, Alternative 1 would allow towers to be located closer together, with a minimum of 60 feet separation between towers, compared to 100 feet separation required under Alternative 2. Consequently, the pattern of tower development may be more dense at the street level, compared to Alternative 2. Development along University Way NE would be permitted to develop to high-rise standards, ranging from 125 to 160 feet, depending on location. Proposed regulatory changes would allow mixed-use development, which would continue the types of uses found in the core (i.e., residential, commercial, etc.), but at a greater intensity and density.

South Study Area. No changes are proposed in this area. Over the long run, increased development activity in the balance of the study area might create pressure for conversion of the existing industrial area to more intensive uses. However, because there is ample capacity within the balance of the study area, this is unlikely to happen within the 20-year planning horizon considered in this EIS. In addition, because development will happen on an incremental basis over time, the City will be able to monitor and address any future potential land use imbalances through the GMA comprehensive planning process.

LAND USE COMPATIBILITY

Within the Study Area

North Study Area. In the North Study Area, new or expanded LR (Lowrise)2, LR3, MR (Midrise) and NCP (Neighborhood Commercial) 65–85 zones would be established. The proposed rezones would not introduce any new permitted uses to the area, but would increase the permitted intensity in uses already found in the area. The new NC zones are focused on the Roosevelt Way NE and University Way NE commercial corridors, but would adjoin existing single family areas. Similarly, some of the new LR2 and LR3 zones would adjoin existing single family areas. Although an increase in intensity, the LR and NC zones are relatively low intensity multifamily and commercial zones intended to fit compatibly in residential areas. In addition, City of Seattle development standards, including setbacks and separations, landscaping and screening standards, building façade limits, and noise, light and glare standards, should adequately address potential impacts and minimize the potential for significant impacts.

Within existing multifamily areas, infill development within the new NC3 and MR zoning is likely to be of greater height, bulk and intensity than existing development. As the area transitions to development consistent with the new regulations, there may be some abrupt transitions in building height, density and intensity. However, it is likely that these impacts would be limited in magnitude and duration as the area redevelops.

Core Area. Alternative 1 would allow increased building heights on the University Way corridor, ranging from 125 to 160 feet for much of the corridor, compared to existing zoning which allows maximum heights generally ranging from 40 to 65 feet. As infill development along this corridor occurs, there may be abrupt changes between the larger and taller new development and the existing smaller development pattern. Please see the aesthetics section (3.3) for additional discussion of this potential impact.

In the rest of the Core Area, new building heights would be permitted to reach 125 to 160 feet. New development would be consistent with the existing towers, but, as noted above, there may be some abrupt transitions in building height and scale as new development infills around the existing smaller scale buildings. While noticeable as the area redevelops, it is likely that these impacts would be limited in magnitude and duration.

South Study Area. There are no proposed zoning changes to the South Study Area zoning and no anticipated compatibility impacts internal to the South Study Area.

Adjacent to the Study Area

Along the east boundary of the study area, Alternative 1 provides for the greatest building heights and greatest potential for land use compatibility impacts, compared to the other alternatives. In particular, maximum building heights could increase to 125–160 feet along 15th Avenue NE north of the UW campus. This area adjoins a LR3 zone with a maximum building height of 25 to 40 feet. Please see Aesthetics, Section 3.3, for suggested mitigating measures to address the impacts of high-rise height, bulk and scale adjacent to low-rise development.

Alternative 2

LAND USE PATTERNS

North Study Area. Compared to Alternative 1, Alternative 2 proposes fewer changes to zoning in the North Study Area. Proposed changes would include three new areas of NCP 65 and a new MR zone. Potential changes in development types and land use patterns would be less than Alternative 1 and more than Alternative 3.

Core Area. Relative to the other alternatives, Alternative 2 provides for the greatest building heights and most focused growth around the future transit station. Maximum building heights would be between 240 and 340 feet, but proposed standards would reduce building bulk and increase building separation, compared to Alternative 1.

Compared to Alternative 1, building heights would be more focused in the Core Area around the future transit station. Building heights along the University Way NE Corridor would be limited to 65 to 85 feet, significantly less than Alternative 1. Alternative 2 also includes an area of residential focus in the area generally located between NE 43rd Street, NE 41st Street, Brooklyn Avenue NE and 11th Avenue NE.

South Study Area. As with Alternative 1, no changes are proposed in this area. Over the long run, increased development activity in the balance of the study area might create pressure for conversion of the existing industrial area to more intensive uses. However, because there is ample capacity within the balance of the study area, this is unlikely to happen within the 20-year planning horizon considered in this EIS. In addition, because development will happen on an incremental basis over time, the City will be able to monitor and address any future potential land use imbalances through the GMA comprehensive planning process.

LAND USE COMPATIBILITY

Within the Study Area

North Study Area. Within the North Study Area, Alternative 2 would result in fewer changes to zoning and building heights, compared to Alternative 1. Alternative 2 proposes new areas of NC and MR zoning, with changes focused along the Roosevelt Way NE, University Way NE, and NE 50th Street commercial corridors. As discussed for Alternative 1 these new zones are relatively low intensity multifamily and commercial zones intended to fit compatibly in residential areas. In addition, City of Seattle development standards, including setbacks and separations, landscaping and screening standards, building façade limits, and noise, light and glare standards, should adequately address potential impacts and minimize the potential for significant impacts.

Within the new MR zone, new infill development is likely to be of greater height, bulk and intensity than existing development. As the area transitions to development consistent with the new regulations, there may be some noticeable transitions in building height, density and intensity. However, the new MR zone is a relatively small area and would result in limited increases in intensity compared to the permitted development in the existing LR3 zone.

Core Area. Compared to Alternative 1, Alternative 2 limits the increase in building heights on the University Way corridor to a maximum of 85 feet for much of the corridor. Because this is an incremental increase compared to what is currently permitted, there is reduced potential for compatibility

impacts along this corridor, compared to Alternative 1. It should be noted that Alternative 2 does provide for increased building heights to a maximum of 300 feet along 15th Avenue NE south of NE 45th Street, adjacent to the UW campus.

In the rest of the Core Area, new building heights would be permitted to reach 240 to 340 feet. New development would be consistent with the existing towers, but, as with Alternative 1, there may be some abrupt transitions in building height and scale as new development infills around the existing smaller scale buildings. While noticeable as the area redevelops, it is likely that these impacts would be limited in magnitude and duration.

At the south edge of the Core Area, the proposed maximum height of 340 feet adjoins the UW West Campus MIO. Along this edge the maximum height in the MIO is 105 feet. Consideration should be given to ensure a compatible transition between the MIO and adjoining property. Please see potential mitigation strategies in Section 3.3, Aesthetics.

South Study Area. There are no proposed zoning changes to the South Study Area zoning and no anticipated compatibility impacts internal to the South Study Area.

Adjacent to the Study Area

Along the east boundary of the study area, Alternative 1 provides for reduced building heights, compared to Alternative 2 and corresponding reduced potential for land use compatibility impacts. Maximum building heights could increase to 85 feet along 15th Avenue NE north of the UW campus. This area adjoins a LR3 zone with a maximum building height of 25 to 40 feet. Please see Aesthetics, Section 3.3, for suggested mitigating measures to address the impacts of increased height, bulk and scale adjacent to low-rise development.

As noted above, south of NE 45th Street, a two-block area of mixed-use 300 zoning would allow a maximum building height of up to 300 feet adjacent to the UW campus.

Alternative 3 — No Action

LAND USE PATTERNS

Under the No Action Alternative, incremental development and redevelopment would continue. Because existing development does not fully utilize the development capacity available under current zoning, new development and redevelopment may be at greater intensities than currently exist. However, compared to the action alternatives, development under Alternative 3 would generally be less intensive, and more distributed throughout the study area. Development regulations would not promote increased intensity around the future transit station, as contemplated by the two action alternatives.

LAND USE COMPATIBILITY

Land use compatibility impacts for the No Action Alternative would generally be as described under Impacts Comment to All Alternatives.

3.1.3 Mitigating Measures

Monitor new development to ensure that long-term land use compatibility impacts are not created. If necessary, consider additional standards for building height limits, landscaping, noise or lighting controls or other measures. See also mitigating strategies identified in Section 3.3 Aesthetics of this EIS.

3.1.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to land use are anticipated.

3.1.5 Land Use Plans, Polices, and Regulations

This section describes documentation of pertinent plans, polices, and regulations in effect at the time of the publication of the Draft EIS.

Key plans, polices, and regulations are included from the following sources:

- King County Countywide Planning Policies
- City of Seattle Comprehensive Plan
- University Community Urban Center Plan
- City of Seattle Municipal Land Code

Please also see the other sections of this EIS for a discussion of policies pertinent to each technical topic.

King County Countywide Planning Policies

The Washington Growth Management Act (GMA) requires cooperative regional and local planning efforts to achieve an overall coordinated vision. City and county comprehensive plans must be consistent with one another under a countywide policy framework (RCW 36.70A.210). King County Countywide Planning Policies (KCPPs) designates the City of Seattle as a permanent urban growth area to accommodate future growth and economic development by increasing densities as needed. The KCPPs also establish goals and criteria for city designation of urban centers. Urban centers are those areas with concentrated employment and housing, direct service by high-capacity transit, and a wide range of land uses. The KCPPs recognize the City of Seattle designated University District Urban Center. As such, the City's Comprehensive Plan shall demonstrate compliance and strategies, which include in part: supporting pedestrian mobility, bicycle use and transit use; achieving a target housing density and mix of use; emphasizing superior urban design; and considering local characteristics necessary to support vital urban areas.

***DISCUSSION**: The City of Seattle's Comprehensive Plan is consistent with applicable guidance from the KCPPs. The proposal would maintain the City's existing UCUC designation, as confirmed by the KCPPs. The action alternatives would allow for increased development and intensity focused around the future transit station, supporting pedestrian mobility, bicycle and transit use, and a mix of uses consistent with the intent of a designated urban center.*

City of Seattle 1994 Comprehensive Plan, as amended

The City of Seattle developed its Comprehensive Plan in compliance with the Growth Management Act and the King County Countywide Planning Policies, both of which provide a comprehensive framework for managing growth and coordinating land use planning with the provision of infrastructure. The City of Seattle Comprehensive Plan, Toward a Sustainable Seattle, was first adopted in 1994 and has been amended nearly every year since. The plan contains the elements required by the GMA and those concepts associated with the Puget Sound Regional Council (PSRC) Vision 2040 Multi-County Planning Policies, King County's Countywide Planning Policies (King County, 1992), Seattle's Framework Policies (Seattle, 1992), and the University Community Urban Center Plan, 1998. GMA requires comprehensive plan review and update every eight years as necessary to address changing conditions or to manage new issues. The City is currently in the process of preparing this update, scheduled to be complete in 2015.

The City's Comprehensive Plan consists of eleven major elements— urban village, land use, transportation, housing, capital facilities, utilities, economic development, neighborhood, human development, cultural resources and environment. Each element contains goals and policies intended to "guide the development of the City in the context of regional growth management" for a 20-year time horizon. Relevant to land use, applicable goals in the Urban Village, Land Use, Housing and Neighborhood Planning elements are considered below. Please also see the other sections of this EIS for a discussion of policies pertinent to technical topics.

URBAN VILLAGE ELEMENT

The Comprehensive Plan describes the City's urban village strategy:

> *As Seattle's population and job base grow, urban villages are the areas where conditions can best support increased density needed to house and employ the city's newest residents. By concentrating growth in these urban villages, Seattle can build on successful aspects of the city's existing urban character, continuing the development of concentrated, pedestrian-friendly mixed-use neighborhoods of varied intensities at appropriate locations throughout the city.*

The Urban Village Element includes a map of the University Community Urban Center, shown in Figure 3.1–2.

URBAN VILLAGE STRATEGY

UVG1 Respect Seattle's human scale, history, aesthetics, natural environment, and sense of community identity as the city changes.

UVG2 Implement regional growth management strategies and the countywide centers concept through this Plan.

UVG3 Promote densities, mixes of uses, and transportation improvements that support walking, use of public transportation and other transportation demand management (TDM) strategies, especially within urban centers and villages.

UVG4 Direct the greatest share of future development to centers and urban villages and reduce potential for dispersed growth along arterials and in other areas not conducive to walking, transit use, and cohesive community development.

UVG5 Accommodate planned levels of household and employment growth. Depending on the characteristics of each area, establish concentrations of employment and housing at varying densities and with varying mixes of uses.

UVG8 Use limited land resources more efficiently and pursue a development pattern that is more economically sound, by encouraging infill development on vacant or underutilized sites, particularly within urban villages.

UVG16 Guide public and private activities to achieve the function, character, amount of growth, intensity of activity, and scale of development of each urban village consistent with its urban village designation and adopted neighborhood plan.

DISTRIBUTION OF GROWTH

UVG29 Encourage growth in locations within the city that support more compact and less land-consuming, high quality urban living.

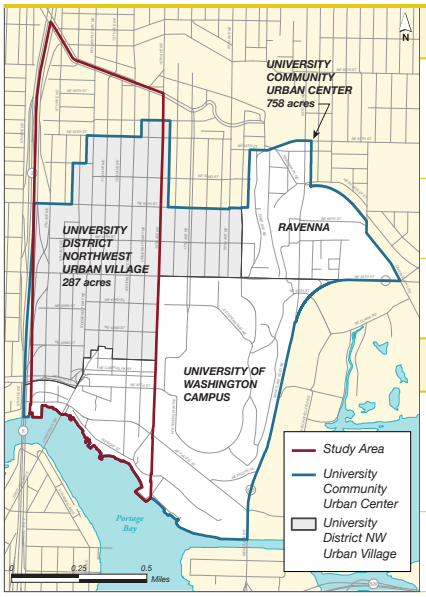
UVG30 Concentrate a greater share of employment growth in locations convenient to the city's residential population to promote walking and transit use and reduce the length of work trips.

UVG31 Plan for urban centers to receive the most substantial share of Seattle's growth consistent with their role in shaping the regional growth pattern.

UVG33 Plan for a distribution of growth to each urban village that accomplishes the goals of the urban village strategy, and recognizes local circumstances, community preferences as expressed in neighborhood plans, and the need for equitable distribution of growth across the city.

UVG34 Achieve growth in urban centers that are consistent with the 20-year residential and employment growth targets contained in Urban Village Appendix A, below:

Table 3.1–1: **2004–2024 Household and Employment:** Growth Targets for the University Community Urban Center



Households (HH)	Existing Qty *2004*	Existing Density *HH/acres*	HH Growth Target *quantity*	2024 Density *HH/acres, estimate*
University Community Urban Center (758 acres)	**6,850**	**9**	**+2,450**	**12**
University District NW (287 acres)	**5,230**	**18**	**+2,000**	**25**
Employment (Jobs)	Existing *2002*	Existing Density *Jobs/acre*	Growth Target *Job Growth*	2024 Density *estimate*
University Community Urban Center (758 acres)	**32,260**	**43**	**+6,140**	**51**
University District NW (287 acres)	**6,170**	**21**	**+2,640**	**56**

Source: City of Seattle Comprehensive Plan Urban Village Element, Appendix A

OPEN SPACE NETWORK

UVG39 Enhance the urban village strategy through the provision of:

1. Amenities in more densely population areas
2. Recreational opportunities for daytime population in urban centers
3. Mitigation of the impacts of large scale development

***DISCUSSION**: Consistent with the goals and policies identified for the City's Urban Village Strategy, the EIS alternatives would increase residential and employment density within the U District to accommodate planned future household and employment growth, resulting in a compact mixed-use area where residents could live near services, employment, and transit.*

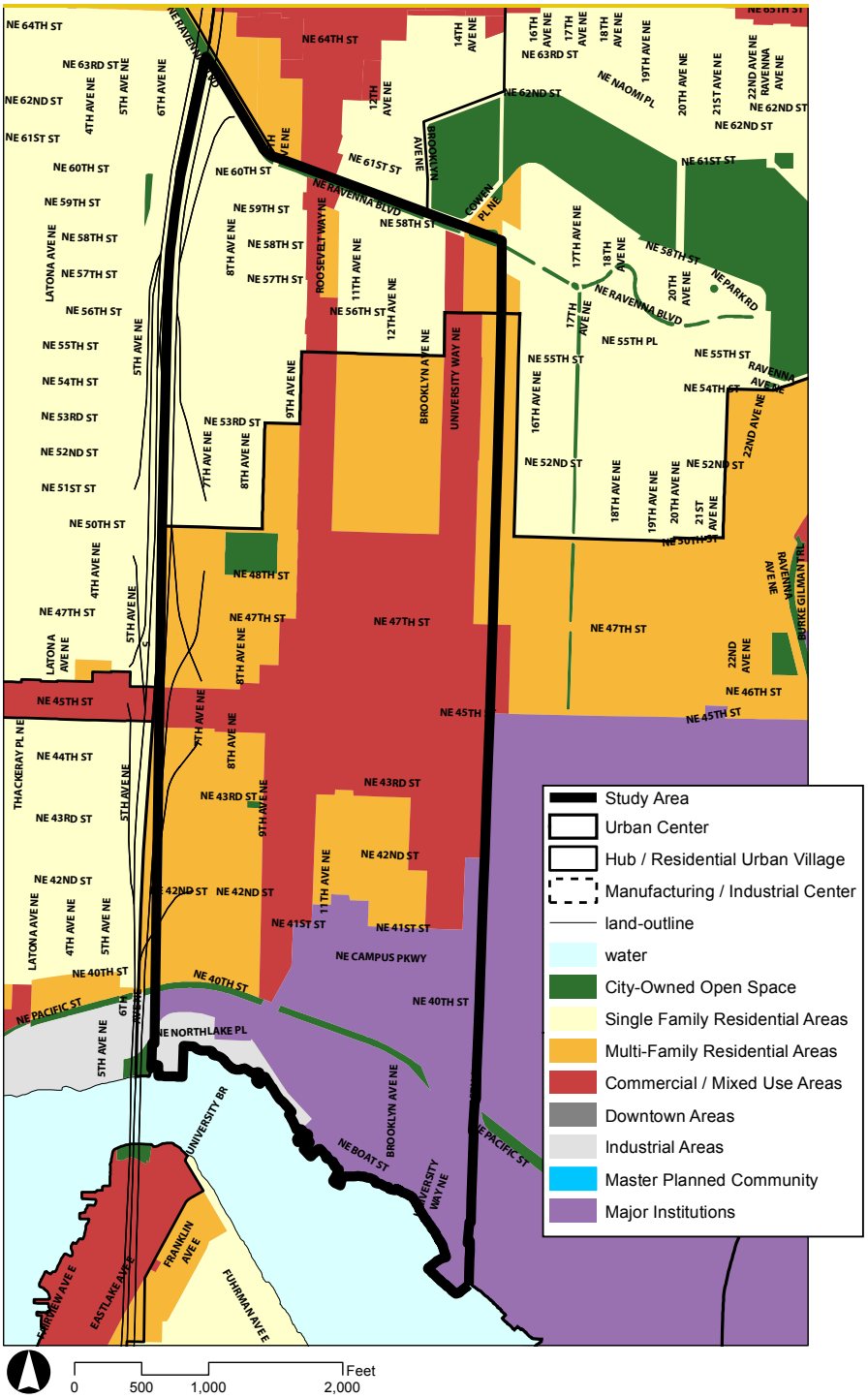
Consistent with the goals and policies identified for Urban Centers, the action alternatives would increase residential and employment density within the U District, helping to create a mixed-use area where residents can live near services, employment, and transit.

Of the three EIS alternatives, Alternative 2 would provide for the greatest focus around the future light rail transit station. To a lesser degree Alternative 1 would also focus growth around the transit station. Alternatives 1 and 2 would also provide increased development capacity for employment and residential units. Alternative 3 would retain the existing zoning and would essentially represent a continuation of the current development trend within the subarea.

All of the alternatives are supportive of the City's adopted 2024 growth targets for the University Community Urban Center. As discussed in Chapter 2 of this Draft EIS, new planning estimates for growth that extend the planning horizon to 2035 are being reviewed as part of the City's comprehensive plan update.

Regarding the open space network, please see the discussion of parks and open space in Section 3.7 of this EIS.

Figure 3.1–10
Future Land Use in U District Study Area



LAND USE ELEMENT

The City of Seattle Future Land Use Map divides the city into a number of broad categories to implement land use strategies and development

regulations. Land use categories in the U District include Single-Family Residential, Multifamily Residential, and Commercial/Mixed-use with an Urban Center overlay. Figure 3.1–10 shows how those categories are distributed within the study area.

Applicable goals for the mixed-use commercial, multifamily and single family designations are listed below.

Mixed-Use Commercial Areas Goals and Policies

LUG17 Create strong and successful commercial and mixed-use areas that encourage business creation, expansion and vitality by allowing for a mix of business activities, while maintaining compatibility with neighborhood serving character of business districts, and the character of surrounding areas.

LUG18 Support the development and maintenance of areas with a wide range of characters and functions that provide for the employment, service, retail and housing needs of Seattle's existing and future population

LUG19 Include housing as part of the mix of activities accommodated in commercial areas in order to provide additional opportunities for residents to live in neighborhoods where they can walk to services and employment.

Single-Family Areas Goals and Policies

LUG8 Preserve and protect low-density, single-family neighborhoods that provide opportunities for home-ownership, that are attractive to households with children and other residents, that provide residents with privacy and open spaces immediately accessible to residents, and where the amount of impervious surface can be limited.

Multi-Family Areas Goals and Policies

LUG11 Encourage the development and retention of a diversity of multifamily housing types to meet the diverse needs of Seattle's present and future populations.

LUG12 Promote a residential development pattern consistent with the urban village strategy, with increased availability of housing at that promote walking and transit use near employment concentrations, residential services and amenities.

DISCUSSION: *As mentioned above, the Seattle Comprehensive Plan Future Land Use Map designates the U District study area as Commercial/Mixed-Use, Multi-family Residential, Major Institution, and Industrial. The portion of the study area that is within the UCUC is designated with an Urban Center Overlay. The zoning use designations proposed in the action alternatives are consistent with the future land use map. However, the action alternatives would expand areas designated Commercial/Mixed-use and reduce those designated Multi-family Residential. In order to avoid a future inconsistency with the Comprehensive Plan Future Land Use Map, either the current zoning should be retained or the Future Land Use Map should be amended to maintain consistency with new zoning designations adopted as part of this proposal.*

The action alternatives would allow increased residential and employment density within the Core Area around the future transit station, which would help to create a mixed-use area where residents of the City can live near services, employment, and transit. The built character and compatibility of the alternatives is illustrated and discussed in Section 3.10, Aesthetics.

HOUSING ELEMENT

The Housing Element contains goals for the percentage of housing units that will be affordable to lower income households and identifies incentives and other tools the City can use to achieve these goals.

Accommodating Growth & Maintaining Affordability

HG1 Accommodate 47,000 additional households over the 20 years covered by this Plan.

Encouraging Housing Diversity & Quality

HG4 Achieve a mix of housing types that are attractive and affordable to a diversity of ages, incomes, household types, household sizes, and cultural backgrounds.

HG4 Promote households with children and attract a greater share of the county's families with children.

HG7 Accommodate a variety of housing types that are attractive and affordable to potential home buyers.

HG9 Consider new ground-related housing such as townhouses and cottage housing as part of the City's strategy for creating home ownership opportunities.

HG11.5 Implement strategies and programs to help ensure a range of housing opportunities affordable to those who work in Seattle.

Providing Housing Affordable to Low Income Households

HG13 Provide new low income housing through market rate housing production and assisted housing programs.

HG14 Preserve existing low income housing, particularly in urban centers and urban villages where most redevelopment pressure will occur.

Housing policy guidance for affordable housing provides specific direction to meet affordable housing needs, described in Policy H30, below.

H30 Address the city's share of affordable housing needs resulting from expected countywide household growth, consistent with the countywide affordable housing policies, by planning for:

a. At least 20 percent of expected housing growth to be affordable to households earning up to 50 percent of median income (estimated 9,400 affordable units).

b. At least 17 percent of expected housing growth to be affordable to households earning between 51 percent and 80 percent of median income (estimated 7,990 affordable units).

c. At least 27 percent of expected housing growth to be affordable to households earning between 81 percent and 120 percent of median income (estimated 12,690 units).

Both new housing and existing housing that is acquired, rehabilitated or preserved for long-term low-income and affordable occupancy count toward meeting this policy.

DISCUSSION: *Consistent with the goals outlined above, the alternatives as identified would encourage economic development and promote housing within the U District study area, which could help to create a mixed-income, mixed-use community where residents can live near services, employment, and transit. However, under any of the alternatives, the housing developed will be responsive to market demand. Housing programs, regulatory measures and incentives implemented by the City may influence—but not fully control—what the private market will supply.*

Regarding consistency with policies supporting affordable housing, the action alternatives may promote greater affordability by providing more regulatory capacity for housing development. However, new infill development may replace existing, older, relatively low cost housing, resulting in a short-term loss of affordable housing. See Section 3.2 of this EIS for a detailed discussion of housing affordability and impacts associated with the alternatives.

Neighborhood Planning Element—University Community Urban Center Goals

UC-G1 Stable residential neighborhoods that can accommodate projected growth and foster desirable living conditions.

UC-G2 Vibrant commercial districts serving local needs and offering regional specialties.

UC-G4 A community in which the housing needs and affordability levels of major demographic groups, including students, young adults, families with children, empty nesters, and seniors, are met and which balances home ownership opportunities with rental unit supply.

UC-G5 A community with a wide range of neighborhood recreation facilities and open space and which meets the Comprehensive Plan's open space goals.

UC-G6 A community that builds a unique physical identity on its historical and architectural resources, attractive streets, university campus, and special features.

UC-G8 A community in which public education resources are readily available.

UC-G11 A community where people are and feel safe.

UC-G12 A community where historic resources, natural elements, and other elements that add to the community's sense of history and unique character are preserved.

University Community Urban Center Policies

As part of the 2015 update of the Comprehensive Plan, the City will consider potential amendments to UCUC policies in the Neighborhood Planning Element. Policies that specifically address the study area are identified below.

UC-P2 Encourage high-quality development, up to 65 feet, or about five stories, south of NE 43rd Street, and from just east of Brooklyn to

the west, to enhance this residential area with excellent proximity to the University and to LRT stations.

UC-P3 Encourage a vibrant mixed-use residential neighborhood in the University Gardens Core area (between NE 50th Street, Brooklyn Avenue NE, NE 43rd Street, and 9th Avenue NE.)

UC-P5 Strengthen pedestrian-oriented retail on University Way through physical improvements to the street and sidewalk and encouraging private property owners to improve their properties.

UC-P6 Strengthen a diverse mix of retail and commercial activities on NE 45th Street and Roosevelt Avenue NE.

UC-P17 In order to serve existing residents to the north and emerging residential neighborhoods, organize a services spine roughly along NE 50th Street. Include a wide variety of public, recreational, educational, community, and human services, plus churches, playfields, and other facilities.

UC-P21 In the Southwest Quadrant (the area generally south of NE 45th Street and west of Roosevelt Avenue NE), make convenient pedestrian connections to nearby parks and the waterfront and seek to develop a small shoreline park on the Lake Union shoreline at the south end of 7th Avenue NE.

UC-P22 In Lower Brooklyn (the area generally south of NE 43rd Street between Roosevelt Avenue NE and the UW campus), provide open space for the large population including residents, workers, and students and strengthen physical connections to the waterfront and campus. Encourage better physical integration between the campus and the community.

UC-P23 In the University Gardens Core (the area generally between NE 50th Street, Brooklyn Avenue NE, NE 43rd Street, and 9th Avenue NE), create a connected network of open spaces integrated with development. Provide open space and recreation facilities for seniors.

UC-P25 In University Way-15th Avenue NE corridor between NE 55th Street and NE 41st Street, encourage the provision of more street-oriented public space through both public and private investment

UC-P29 Enhance gateways into the University Community, especially at NE 50th Street at Roosevelt Avenue NE, NE 50th Street at University Way NE, 11th Avenue NE at NE 41st Street, 25th Avenue NE at NE 55th Street, NE 45th Street at 25th Avenue NE, and

Roosevelt Avenue at NE 42nd Street. "Gateways" means visual enhancements, such as improved landscaping, signage, artwork, or other features, that signify the entries into the community.

***DISCUSSION**: Overall, the alternatives are supportive of the adopted UCUC goals. The alternatives would support more intensive urban development in the subarea, additional housing development opportunities, preserve stable single family residential areas, and promote vibrant commercial districts. It should also be noted that some of the goals address long-standing community concerns related to open space, schools and public safety and that the additional development capacity provided by the action alternatives could increase demand for these services. Please see the relevant sections of this EIS for additional discussion of these issues.*

The alternatives may not be consistent with some specific policies excerpted above. Adopted policies should be reviewed for outdated information, such as subarea names and consistency with any adopted actions associated with the proposal. As needed, policies should be amended, or the final proposal revised, to ensure continued consistency.

All of the action proposals will provide additional capacity and opportunity for development of affordable housing, consistent with adopted City policy. Please see the discussion of affordable housing in Section 3.2 of this EIS.

University Community Urban Center Plan

Completed in 1998, the University Community Urban Center Plan was developed through a collaborative process that included neighborhood representatives, the UW and the City. The plan was not formally adopted by the City, but was approved by resolution. Many of the findings and direction of this plan helped inform the City's University Community Urban Center section of the Comprehensive Plan Neighborhood Planning Element. The vision statement and plan directives are listed below.

VISION STATEMENT

The University Community will:

- Be an inviting and welcoming, people-oriented urban community meeting the social, educational, residential, and commercial

needs of a diverse array of people in an environmentally pleasing setting. The University Community will build on its current strengths and assets and proceed in new directions to accomplish its vision of the future.

- Offer a wide range of quality housing options to meet the needs of its diverse and growing population while retaining a sense of neighborhood and community.
- Be a vital and progressive economic area, an integral part of the city and the region, acknowledging the role of the University of Washington in our regional economy and recognizing the community's diverse needs as well as those of the City.
- Be the hub of efficient, environmentally sound multi-modal transportation serving the needs of residents, students, customers and visitors.
- Seek an active partnership with the University of Washington as a catalyst for positive change in both residential and business concerns.

The plan translates the vision statement in to several overarching strategies or directives, intended to direct and organize specific actions. The plan directives are listed below:

4. Create/enhance/protect stable residential neighborhoods that can accommodate projected growth and foster desirable living conditions.
5. Support vibrant commercial districts serving local needs and offering regional specialties.
6. Integrate transportation modes into an efficient, balance system.
7. Provide housing to serve a broad spectrum of lifestyles and affordability levels.
8. Provide neighborhood recreation facilities and open space.
9. Upgrade the area's physical identity
10. Actively work with the UW on areas of mutual interest.
11. Coordinate and expand the community's arts and cultural activities to be an important aspect of the community's identity.

12. Build on present youth-oriented activities and organizations to provide an integrated social service delivery network that serves the entire community.
13. Increase public security and lower the crime rate as both a necessary ingredient and an outgrowth of a high quality of life in the community.
14. Enforce the existing building and housing codes and regulations to promote the health, welfare and quality of life of all community members and increase the level of public activity.
15. Conserve the historic resources and other elements that add to the community's sense of history and unique character.
16. Increase public education resources in the community.

DISCUSSION: *Key goals and policies from the University Community Urban Center Plan were incorporated into the Neighborhood Planning Element of the City's Comprehensive Plan. Please see the discussion above of this element.*

U District Urban Design Framework

The U District Urban Design Framework (UDF) proposes a shared design vision and implementation strategy for the U District. The document describes that, between now and the 2021 opening of the U District light rail station, the City will revise Comprehensive Plans, zoning and regulations and design guidelines for the U District. The UDF is intended to inform these processes in a clear and holistic manner.

With support from the City of Seattle, the UDF was developed through an interactive public process led by a stakeholders group, the U District Livability Partnership, of residents, businesses, social service providers, the faith community, representative from the University of Washington, students and neighbors from outside the study area.

The UDF provides specific recommendations for the following areas:

- Urban Design Recommendations
- Gateways, hearts and edges
- Land use character
- Public space network
- Station surroundings

- Urban form
- Building height
- Incentive zoning
- Retail activation
- Housing choices
- Environmental Sustainability
- Mobility
- Landscaping
- Green stormwater infrastructure
- Green building
- District infrastructure
- Community health
- Environmental planning and governance

The guiding principles identified in the UDF are excerpted below:

1. Recognize light rail as a catalyst for change. Light rail will make the U District better connected, support existing and future commercial uses, and allow more people to live within walking distance of high-capacity transit. The station should be a focal point for redevelopment.
2. Balance regional with local. The U District has its own patterns and flavor. It is also a draw for the region, as home to the city's largest employer and the state's largest educational institution. As light rail increases the regional influences, maintain elements of the eclectic local character.
3. Provide a network of great streets and public spaces that creates inviting, memorable neighborhood spaces that support public life.
4. Grow and diversify jobs while maintaining thriving retail and services. The strength and diversity of the U District's small businesses are major assets of the community; protect these while striving to expand the job base to include more office, tech, and research and development.
5. Welcome a diversity of residents. As residential density increases, provide choices for residents of all ages and income levels, including market rate, workforce, and low-income housing. Provide support services and amenities to meet the needs of residents, including social services, childcare, open space, and other livability factors.
6. Improve public safety by increasing natural surveillance in the built environment and encouraging beneficial street activity.

7. Encourage quality and variety in the built environment, with a particular focus on good design where buildings meet the public realm.
8. Build an environmentally sustainable neighborhood. In addition to the inherent environmental benefits of dense, mixed-use development served by transit, environmental performance can improve through green building, retrofits of existing buildings and green infrastructure.
9. Improve integration between UW and the U District by opening the west edge of Central Campus to the U District and building on existing partnerships between the University and neighborhood groups.
10. Support and coordinate active transportation choices, improving bicycle and pedestrian infrastructure while continuing to support transit and cars.

DISCUSSION: *Work conducted on the UDF provided a framework for defining the alternatives considered in this EIS, including focused growth within the core, separation between towers, street-level setbacks and mid-block crossings. Recommendations also inform applicable mitigation strategies in this EIS, especially those identified in the aesthetics element, see Section 3.3 of this EIS.*

City of Seattle Municipal Land Use and Zoning Code

Consistent with provision of the Growth Management Act, Seattle's Municipal Land Use and Zoning Code implements the goals and policies of the City's Comprehensive Plan. Through a system of zones, the Seattle Land Use Code identifies how land may be used in the city. The Land Use Code identifies development standards for structures such as height, lot configuration, allowable densities, among other standards.

Existing zoning designations are described in Table 3.1–2.

DISCUSSION: *As described in Chapter 2, the City is proposing alternatives that would change the existing zoning designations to increase building height and intensity in certain areas of the U District study area. Two action alternatives have been identified, each of which describes a different approach to the pattern of development in the study area. Please see Chapter 2 for a description of these changes.*

In general, Alternative 2 would provide for the greatest increases in building height and for the greatest focus in the core of the study area. Alternative 2 would provide for relatively few changes in the area north of the core and no

Table 3.1–2: **Existing Zoning Designations**

Study Area Designations	Principal Uses	Selected Development Standards
Residential—Single Family		
SF 5000	Single family dwelling unit	Minimum lot size 5,000 sf Maximum Building height: 25–35 feet
Residential—Multifamily		
Low Rise (LR1, LR2, LR3)	Multifamily residential	Maximum densities: No limit for rowhouse, townhouse or apartment Building height: 25–40 ft Floor Area Ratio (FAR): 1.1–2.0
Midrise (MR)	Multifamily residential	Maximum densities: No limit Building height: 60–75 ft FAR: 3.2–4.25
Commercial		
Neighborhood Commercial (NC1, NC2)	Residential and commercial uses that provide a pedestrian-oriented retail and services	Building height: as identified on zoning map FAR: 5.75–6.0*
Commercial (C1)	Broad range of commercial uses, including auto-oriented development	Building height: 60–75 ft FAR: 5.75–6.0*
Industrial		
Industrial Commercial	Industrial and commercial uses, including light manufacturing and research and development	Building height: as identified on zoning map FAR: 2.5
Industrial Buffer	Provides a transition between industrial areas and adjacent residential or commercial zones. Typical land uses include general manufacturing, commercial and entertainment uses	Building height: as identified on zoning map FAR: 2.5
Major Institution Overlay		
University of Washington MIO, approved in 2003	The MIO requires development of a campus master plan intended to: (1) establish clear guidelines and development standards on which the institution can rely on for long-term development; (2) provide the neighborhood advance notice of development plans; (3) allow the city to anticipate and plan for public capital or programmatic actions: (4) provide the basis for defining measures to avoid or reduce adverse impacts from major institution growth.	Development standards established through the MIO review and approval process. Maximum development heights in the study area range from 40 to 105 feet. Maximum building heights are generally lowest near the shoreline and highest on the properties farthest from the shoreline.

** For NC 65 and 85 in the Station Area Overlay District*

changes to area south of the core. Alternative 1 would provide for slightly lower building heights and an area of expanded height and intensity that extends farther from the core, compared to Alternative 2. Compared to Alternative 1, Alternative 2 would allow greater heights along the University Way NE corridor and more intensive development north of the core. Alternative 3 would retain the existing zoning standards and height limits.

Seattle Environmental Policies and Procedures

Seattle Municipal Code Chapter 25.05 establishes local SEPA rules, as authorized by WAC 197-11. The City's SEPA rules set policies to minimize or prevent adverse impacts of development and other activities. 25.05.675 provides specific policy guidance for the review of environmental impacts under SEPA.

DISCUSSION: *Analysis of zoning alternatives in this EIS follows the guidance provided by the City's SEPA Rules. Where appropriate, analyses of specific elements of the environment included in Chapter 3 provide a short summary of the environmental policies found in SMC 25.05.675 for the topic under consideration. Please see individual elements of the environment in Chapter 3 of this EIS.*

Mitigating Measures

In order to avoid a future inconsistency with the Comprehensive Plan Future Land Use Map, either the current zoning should be retained or the Future Land Use Map should be amended to maintain consistency with new zoning designations adopted as part of this proposal.

Adopted UCUC Neighborhood Element policies should be reviewed for consistency with the proposal. As needed, policies should be amended, or the final proposal revised, to ensure continued consistency.

3.1.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to plans and policies are anticipated.

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3.2 Population, Housing, Employment

This section addresses population, employment, and housing within the U District study area. It identifies how regulatory changes contemplated under each alternative could impact the nature of population, employment, and housing. The analysis reviews existing employment and the potential change in mix and type of jobs qualitatively. The analysis also includes an evaluation of citywide development targets and capacity relative to each alternative. Lastly, the analysis reviews current and future housing conditions. Housing affordability is specifically addressed in Section 3.2.5.

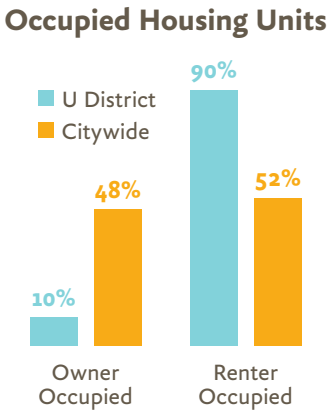
Numbers and percentages have been rounded to the nearest whole number. In some cases, percentages may not total 100% due to rounding.

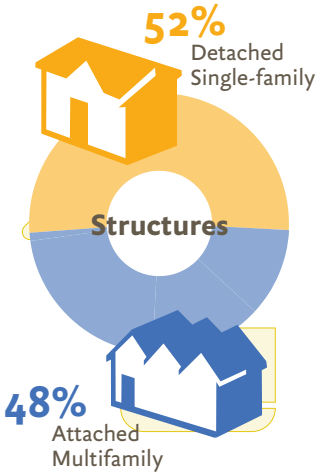
3.2.1 Affected Environment

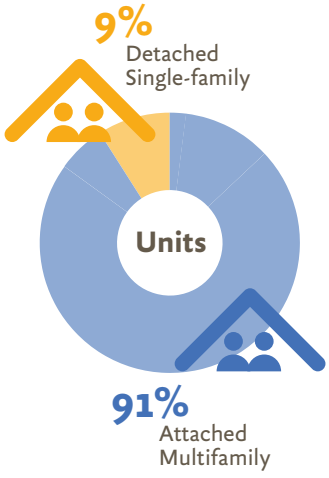
Population

As of 2010, the total population of the study area was 14,200. The population increased by 2,800 new residents during the preceding decade. The population of the study area trends young—approximately 75% of the population was between the ages of 19 and 29. The demographics of the study area are largely driven by the University of Washington (UW), which has a current enrollment of approximately 40,000 students. The area population is generally more diverse than the city of whole. According to the 2010 census, approximately 46% of residents were persons of color, compared to 31% in the city as a whole.[1]

1 *U.S. Census Bureau, 2010 Census – Summary File 1, Tables P5, P8, PCT4, PCT5, PCT8, and PCT11*







The distribution of household types in the study area differs from the City as a whole, and is characterized by the high proportion of students. There are approximately 6,137 households currently in the study area. Of those, approximately 51% are classified as one-person households, 16% are families and 4% are identified as families with children. Citywide, roughly 41% of households are one-person households, roughly 43% are families and approximately 18% are families with children.[2]

Housing

There were an estimated 6,689 housing units in the study area as of 2012 with the majority in multi-unit structures, many of which are renter occupied. Occupied housing units comprise about 92% (6137 units) of the housing stock. Of those, approximately 10% (625 units) are owner occupied and the remaining 90% (5,512 units) are renter occupied.[3] This differs from the city as a whole where approximately 48% of occupied housing units are owner-occupied and 52% are rented.

The most common residential structure type in the study area is the detached single-family house, which comprise 52% of residential structures. However, 91% of the area's housing units are multi-family (as defined by the King County Assessor). Table 3.2–1 below presents the percentages of residential structures and units by structure within the study area.

Table 3.2–1: **U District Study Area Housing Mix (2013)**

Housing Type	Percentage of Residential Structures	Percentage of Residential Units
Detached Single-family Structures	52%	9%
Townhouse	12%	2%
Duplex, Tri-plex, 4-plex	14%	11%
Apartments	22%	72%
Condominiums	1%	6%

Source: King County Assessor, 2013; and BERK, 2013.

The tilt of unit mix toward multi-family housing is also reflected in recent citywide development trends. According to data provided by Puget Sound

2 *U.S. Census Bureau, 2010 Census – Profile of General Population and Housing Characteristics: 2010 DP–1*
3 *City of Seattle. Department of Planning and Development. 2012. University District Urban Design Framework Existing Conditions Report. Seattle, WA. June 2012.*

Regional Council (PSRC), in 2008 through 2011, the majority of residential units permitted citywide were in larger multi-family structures. Approximately 16,965 new residential units were permitted in Seattle from 2008 to 2011. Of those only 3.2% were single-family, with the remainder in multi-family structures. Of those multi-family units, 82% were within structures that had 50 or more units.

The age of the housing stock varies by geography. The majority of the buildings in the study area were built before 1960, with continued development throughout the area from the 1960s to present day. The period between 1960 and 1980 saw sporadic construction activity. In particular, the period between 1980 and 2000 saw significant construction activity in the area between I-5 and Roosevelt Way NE, south of NE 45th Street.

Employment

There are approximately 6,332 jobs in the study area including approximately 2,000 jobs attributed to UW (included in the education sector). Jobs in the study area are distributed into the sectors shown in Table 3.2–2.

Table 3.2–2: **U District Study Area Employment by Sector (2012)**

Sector	Number	Percent
Manufacturing	73	1%
Retail	1,512	24%
Services	2,600	41%
Wholesale Trade, Transportation, Utilities	20	≤1%
Government	127	2%
Education	2,000	32%
Total*	**6,332**	

Note: * Includes suppressed construction and finance, insurable and real estate (FIRE) jobs

Source: Puget Sound Regional Council, 2013 and BERK, 2013.

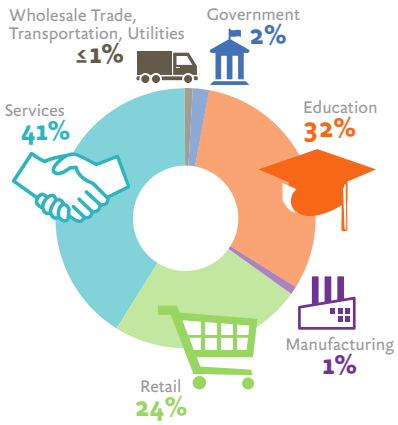


Table 3.2–2 shows employment and an estimate of some of the UW campus jobs within the study area. Only about 2,000 of the University of Washington's 25,000 jobs are within the study area.[4] Under current conditions, employment in the study area is overwhelmingly influenced by the University of Washington—either from direct employment or via the spending of students.

4 *King County Assessor, 2013*

The University of Washington has a strong research and innovation presence in the study area. However, the limited commercial real estate options in the area have not provided the supply of space that job-creating, research-intensive firms may desire. The UW has expressed interest in an "innovation district" where innovative businesses, partnering with UW, could find incubator space close enough to UW laboratories and equipment, but not located on campus itself. The innovation district would provide a place to grow and nurture businesses during early phases of start-up.

Planning Context

The City, as part of its comprehensive planning efforts, establishes population and employment planning estimates for growth. Those estimates are then allocated throughout the City. It has been the City's policy to allocate most of its growth to Seattle's urban centers and urban villages. The City's most recently adopted growth projections for 47,000 additional householdsin the period from 2005 to 2024. Since 2005, Seattle has added over 29,000 units to its housing stock (through the end of 2012).[5]

The City is currently updating its Comprehensive Plan, including new growth estimates through 2035. These growth estimates have not yet been allocated to individual urban centers or urban villages.

Since 1994, the University Community Urban Center (UCUC) has been designated as one of Seattle's six urban centers. As an urban center, the UCUC is one of the areas designated by the City to receive the greatest share of future growth in households and jobs. The University District Northwest is a designated Urban Center Village within the UCUC. The boundaries of the University District Northwest are not exactly the same as the current study area, but are approximately close for comparability when discussing anticipated future growth. The University District Northwest had a 2005–2024 planning estimate for growth of 2,000 additional households. Through the third quarter of 2013, 92% of that estimate was accounted for, when considering constructed and permitted buildings.

Based on past trends, new regional growth projections and a market study,[6] this analysis established growth targets of 3,900 new households (or occupied

5 *City of Seattle. Department of Planning and Development. 2013a. About Seattle. Accessed December 2013 at: www.seattle.gov/dpd/cityplanning/populationdemographics/aboutseattle/housing/default.htm*

6 *Heartland LLC. 2013. U District Urban Design Framework Support Analysis Memo. Prepared for City for Seattle Department of Planning and Development. Seattle WA. June 2013*

housing units) and 4,800 jobs within the study area by 2035. These targets are assumed for all of the alternatives (both Action Alternatives and the No-Action Alternative) in this EIS.

3.2.2 Significant Impacts

Impacts Common to All Alternatives

POPULATION AND HOUSING

Household growth estimates are consistent across the alternatives. The Action Alternatives (Alternative 1 and 2) would rezone portions of the study area allowing for taller buildings, more density and more flexibility in terms of building types. In general, demographic trends and light rail will likely encourage increased density, particularly in the walkshed of the light rail station.

All of the alternatives, provide ample capacity for the estimated growth. Analysis of capacity considers what lands have the redevelopment potential and zoning to accommodate growth. The City has completed a process of estimating capacity in the study area.[7] The results of the capacity analysis are estimates of housing and jobs that can be accommodated in the study area. As shown in Table 3.2–3 and Table 3.2–4, there is currently more than sufficient capacity in the study area to accommodate both the residential and employment growth estimates under each fo the alternatives.

Numerous market factors will determine the types of residential units developers will build. However, based on the City's residential unit development history noted above, new private development will likely be market rate rentals in larger, multi-unit structures. The city and the study area have not experienced substantial market pressure for larger units, although new development types and arrival of the light rail station may alter that trend.

Table 3.2–3: **Net Development Capacity of each Alternative**

	Units		
	Alt 1	**Alt 2**	**Alt 3***
Gross Capacity	9,404	10,080	6,862
Redevelopment Reduction	274	278	256
Net Capacity	9,130	9,802	6,606
Growth Assumptions	3,900	3,900	3,900
Additional Capacity (Difference)	**5,230**	**5,902**	**2,706**

Note: * No Action

Source: Studio 3MW, Hewitt and BERK, 2013

7 *Specific methods of the capacity analysis are contained in Appendix B.*

EMPLOYMENT

Outside of education, retail jobs and service jobs are the most prevalent type of employment. It is likely that this pattern will continue. The market will drive the types of buildings developed during the planning horizon of this plan. However there are several factors that may provide insight into the future jobs pattern. As shown in the transportation analysis of this EIS (Section 3.5), commuters in the study area commute using transit and walking more than in the city as a whole. The introduction of light rail to the neighborhood will likely bolster this pattern. An increase in local commuters will likely continue to support local retail and retail jobs. New buildings that have commercial/office space in addition to residential and retail space may attract additional service businesses. Light rail and proximity to the University of Washington may create a better environment for professional service and technology firms looking to locate in the area.

Table 3.2–4: **Net Development Capacity of each Alternative**

	Jobs		
	Alt 1	**Alt 2**	**Alt 3***
Gross Capacity	18,917	20,312	10,928
Redevelopment Reduction	2,483	2,481	2,527
Net Capacity	16,434	17,831	8,401
Growth Assumptions	4,800	4,800	4,800
Additional Capacity (Difference)	**11,634**	**13,031**	**3,601**

Note: * No Action

Source: Studio 3MW, Hewitt and BERK, 2013

Alternative 1

POPULATION AND HOUSING

Alternative 1 represents an increase in density compared to Alternative 3 (No Action). It would allow larger building heights (125 and 160 feet) in the core with medium building heights (65 and 85 feet) pushing further out into the neighborhood, particularly along Roosevelt Way and the Ave, north of NE 50th Street. Proposed Alternative 1 zoning would support a development pattern that is more concentrated in the study area's core relative to the No Action Alternative and more distributed compared to Alternative 2.

Most of the capacity for new development would be in mixed-use zones in the study area core. Based on past trends and the conclusions of the Heartland market analysis, new housing would likely be smaller units in a relatively high density multi-family and mixed-use configuration. The emphasis on mixed used zoning could allow for more flexibility in building design and unit mix.

Alternative 1 also proposes a conversion of the existing multifamily zoning to higher densities. For example, the existing LR1 zone would convert to LR3 and the existing LR3 zoning would convert to MR. Similar to the increased mixed use zoning designations, these proposed changes to the multifamily designations in the study area increase residential capacity in the study area.

EMPLOYMENT

As noted above, employment in the study area is overwhelmingly influenced by the University of Washington's jobs (an estimated 2,000 jobs out of a systemwide total of 25,000). As noted previously, there is currently no formal plan for an innovation district associated with the UW, but much of the zoning flexibility in building and space configurations contemplated in this alternative (and Alternative 2) close to both the UW and transit stop embody the principles needed to accommodate this.

As with all of the alternatives, numerous market factors will drive the types of buildings developed and the types of firms offering employment during the planning horizon. However, there are factors unique to this alternative that may provide insight into the future jobs pattern: greater height in the Core Area of the neighborhood as well as increased flexibility for land uses. These factors, along with introduction of light rail to the neighborhood and proximity to the University of Washington, may make the area more attractive to firms seeking these amenities.

Alternative 2

POPULATION AND HOUSING

Alternative 2 represents an increase in density compared to the No Action Alternative and Alternative 1. It would allow the greatest building heights (240 and 340 feet in the core) and greatest concentration of growth in the core. Density would be concentrated in a smaller area compared to Alternative 1. In contrast to Alternative 1, only modest increases in building heights are proposed along the Ave. As with all the alternatives, zoning changes would further encourage increased density in the walkshed of the light rail station. Capacity increases and zoning changes would allow for a variety of building forms and uses. This would provide for a high level of flexibility for developers to respond to market demands.

Similar to Alternative 1, Alternative 2 focuses most of the capacity in the mixed-use zone in the core of the study area. It also includes an area of residential emphasis in an area generally bounded by NE 43rd Street, NE 41st Street, Brooklyn Avenue NE and Roosevelt Way NE. New housing would likely be in smaller units and in a relatively high density, multi-family, and mixed-use configuration. The factors affecting the types of units built will be the same as those discussed under Alternative 1.

EMPLOYMENT

Employment factors would be the same as discussed under Alternative 1. To a greater extent than Alternative 1, new higher intensity zoning allowing higher buildings (up to 340 feet) would provide another location in the city for employers looking for larger, suitable building locations and space configurations. Also as noted above, much of the zoning flexibility in building and space configurations contemplated in this alternative are close to both the UW and the proposed transit stop and embody the principles needed to make an innovation district function on the land use side of the equation.

Alternative 3 (No Action)

POPULATION AND HOUSING

Current zoning and allowable heights in the study area generally follow the established development pattern. Commercial uses and commercial zones are largely designated along the main arterials of Roosevelt Way NE and University Way NE. Residential zones are generally designated along non-arterial streets. Most of the residential and commercial density in the central area is located within the NC zones, between arterials to the east and west, south of NE 50th Street and north of roughly NE 42nd Street. Heights currently allowed in the core area range from 65 to 85 feet. The 85 foot height limits apply to the area around the NE 45th/University Way intersection in the MR zones. Beyond the north/south corridors and central area, residential and commercial development is in less dense low-rise buildings and single-family structures.

EMPLOYMENT

Under the No Action Alternative, employment would likely continue to follow changes in market demands.

3.2.3 Mitigating Measures

All of the alternatives would achieve sufficient capacity to absorb the neighborhoods' growth targets for housing and employment. No significant impacts to population, employment, or housing were identified.

3.2.4 Significant Unavoidable Adverse Impacts

No significant adverse impacts to population, housing and employment are anticipated.

3.2.5 Housing Affordability

Affected Environment

Housing affordability is a key concern for the U District community. Since the vast majority of households in the study area are renter-occupied (81% of all housing units), this discussion is limited to renter-occupied housing (however, many of the same issues are applicable to ownership housing as well). Renter households tend to have relatively less income than people who own their homes. According to the 2012 estimates from the American Community Survey, households earning less than $25,000 comprise about 31% of all renters and only about 8% of all homeowners.

Typical housing affordability measures are expressed in terms of rent-to-income ratios. This analysis uses the most frequently cited U.S. Department of Housing and Urban Development (HUD) "30% of household income" standard of housing affordability. Under this standard, HUD defines a housing unit as affordable if a household spends 30% or less of its gross income on rent and basic utilities (adjusted for household size). The affordability of a unit is estimated based on the size of the unit and presumed household size (1 person for 0 bedrooms, and an average of 1.5 persons per bedroom for larger units).

HOUSING AFFORDABILITY IN THE STUDY AREA

Housing Costs are an Increasing Share of Households Budgets

As shown in Table 3.2–5, an estimated 66% of renter households in the study area paid over 30% of their household income on rent (compared to 47% of households citywide). This estimate is up nominally from the 2009 estimate of 65%. In addition, between 2009 and 2011, the study area saw a substantial jump in the proportion of households who are severely cost burdened. These figures are substantially higher than the city as whole. It is likely that the income share spent on housing is higher due the high prevalence of students in the area, which is common in many university and college communities across the U.S.

Table 3.2–5: **Gross Rent as Share of Household Income in U District Study Area and in Seattle**

	U District Study Area		Seattle	
	2009	2011	2009	2011
Less than 30%	35%	34%	54%	53%
Over 30%	65%	66%	46%	47%
30-40%	*11%*	*10%*	*15%*	*16%*
40-50%	*10%*	*7%*	*8%*	*9%*
Over 50%	*43%*	*49%*	*22%*	*22%*

Source: American Community Survey, U.S. Census Bureau, 5-year Estimates, 2009 and 2012

Population Growth and a Limited Housing Supply have Contributed to Higher Rental Prices

Since 2000, Seattle has added over 60,000 people to its population and 46,000 housing units to its housing supply (U.S. Census Bureau, 2010). In times of growth and rising demand like the conditions Seattle is currently experiencing, the development of additional housing units typically lags household formation and migration into an area. This translates into low vacancy rates, tight inventory, and rising rents. The more that housing unit construction exceeds population/household growth, the greater the housing supply leads to high vacancy rates and less upward pressure on housing rents. The closer housing unit growth matches household growth, the tighter the vacancy rate leading to more upward pressure on housing rents.

As Table 3.2–6 shows, this is what has been happening in Seattle. Since 2000, the ratio of households to housing units has been around 1.0, which means that the number of households is roughly equal to the number of housing units. This is a common feature of many U.S. coastal metropolitan areas that also have limited undeveloped land supply and which are growing. In non-constrained regions (mostly in the mid-west and southern U.S.), housing unit to household ratios can be in the 1.5 to 2.0 range.[8] Where ratios are greater than 1.0, the excess supply can contribute to downward pressures on rents.

Table 3.2–6: **Ratio of Housing Units to Households**

	2000	2010	2012
Housing Units (HU)	270,524	308,516	309,612
Households (HH)	258,510	283,510	289,790
Ratio of HU to HH	**1.05**	**1.09**	**1.07**

Source: American Community Survey, U.S. Census Bureau, 1-year Estimates (2010, 2012);

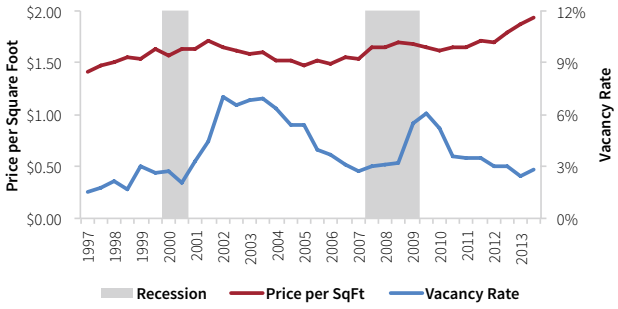
Examining the data on rental prices in Seattle shows a relationship between vacancy rates in rental housing and the rents charged. While the factors that influence residential investment and pricing are complex and subject to both macro- and micro-economic factors, the basic relationship between supply and demand effectively sets market prices. Table 3.2–7 (on the following page) shows the real price (rent) per square foot for rental housing in Seattle based on historic and current rent surveys. Economic recessions in 2000 and 2008 translated into less demand for housing and lower real rental prices. However, as the current economic recovery proceeds, rental vacancies have become extremely low and prices have increased to their highest point in over 15 years.

Similarly, Table 3.2–8 (on the following page) shows the U District submarket[9] where high vacancies have depressed rent prices and tight vacancies have increased prices.

8 *It should be noted that places with higher ratios typically face other housing issues, including housing quality and abandonment.*

9 *The University Submarket only surveys a portion of the study area, but also includes portions of the Roosevelt, Ravenna, and Laurelhurst neighborhoods.*

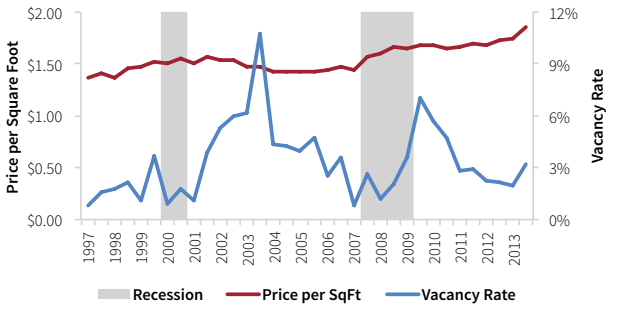
Table 3.2–7:
Rental Price and Vacancy Rate in Seattle



Note: All values inflation-adjusted to 2013 dollars.

Source: The Apartment Vacancy Report, Dupre + Scott Apartment Advisors, Inc., Fall 2013

Table 3.2–8: **Rental Price and Vacancy Rate in U District Submarket**



Notes: The University submarket surveys a portion of the study area and some of the Roosevelt, Ravenna, and Laurelhurst neighborhoods. All values inflation-adjusted to 2013 dollars.

Source: The Apartment Vacancy Report, Dupre + Scott Apartment Advisors, Inc., Fall 2013

CHALLENGES OF SUPPLYING AFFORDABLE HOUSING

New Market Rate Housing Is Typically Not Affordable to Lower Income Households

New construction is typically not affordable to lower income households. All things being equal, this is due to high land costs in urban areas, the cost of building materials, building code requirements, the cost of labor, and the need for capital investment to earn competitive market returns.

"Filtering" can Contribute to Lower Cost Market Rate Housing

While household income, particularly for low-income renters, is a major factor driving the housing cost burden issue; the difficulty of supplying units with more affordable rents to low-income households is also a major challenge. However, the private market does provide lower cost housing. It does this through a process called "filtering". This is not to suggest that it is adequate or efficient given rising housing cost burdens, but to illustrate that market forces create fundamental challenges for building housing units within the reach lower income households.

Housing is a very durable asset in that it lasts a long time. Once constructed, housing adapts to the local marketplace primarily through depreciation as it ages. While individual housing structures/units are fairly inflexible, housing demands are not—especially in the current conditions seen in Seattle. As Seattle becomes more affluent, there is more demand for newer, higher quality/amenity housing. When such housing is developed, this resulting new supply allows households to move up the price-quality spectrum and leaves older, depreciated housing to households with less income. The rising demand for housing has translated into both more housing units and higher quality housing units through the construction of new housing; upgrading of existing housing; and the demolition and rebuilding of existing lower-quality housing and/or under-used building sites. This adaptation of the housing market to changes in area demand and new housing supply is called "filtering".

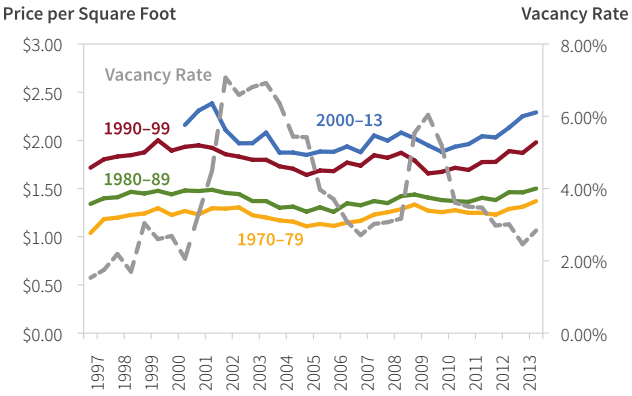
While the relative depreciation of the housing stock creates units affordable to households with lower incomes, there is concern that the filtering process may compel the lowest income households to live in structurally deficient housing when the housing supply is tight. Most urban cities have code enforcement regulations that address substandard housing. Regardless, the filtering process helps underscore the somewhat difficult trade-off households—particularly lower income households—make between quality and affordability.

Table 3.2–9 (on the following page) shows what filtering in the Seattle apartment market looks like. As units age and depreciate, they command less in rent. For example, rents for buildings constructed in the 1970s rent for about 40% the value of units constructed during the last decade. The overall vacancy rate is shown to illustrate how less demand and more supply affected the real rental price.

For Seattle, population growth and increase demand for housing combined with limited urban land actually dampen the effect of filtering so that there is less difference among rental prices for the newest properties versus the older properties because the higher rental values also increase the incentive for property owners to maintain older properties and extend their income producing life.

While the pattern is not as strong as in the broader Seattle market place, the same filtering process is seen in the study area rental market as shown in Table 3.2–10 (on the following page).

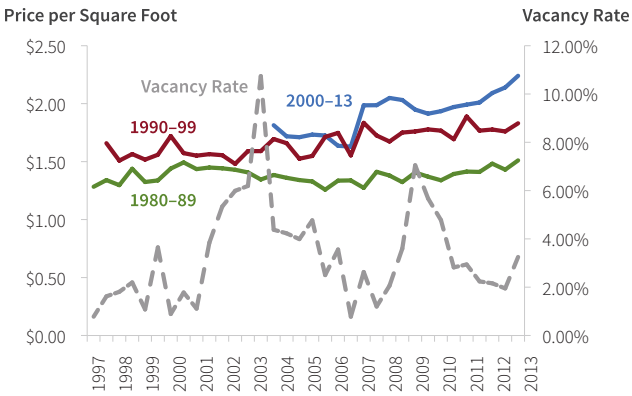
Table 3.2–9:
Apartment Rental Price Filtering in Seattle



Note: All values inflation-adjusted to 2013 dollars.

Source: The Apartment Vacancy Report, Dupre + Scott Apartment Advisors, Inc., Fall 2013.

Table 3.2–10: **Apartment Rental Price Filtering in the University Submarket**



Notes: The University Submarket only surveys a portion of the study area, but also includes portions of the Roosevelt, Ravenna, and Laurelhurst neighborhoods.
All values inflation-adjusted to 2013 dollars.

Source: The Apartment Vacancy Report, Dupre + Scott Apartment Advisors, Inc., Fall2013

PUBLIC PROGRAMS FOR HOUSING AFFORDABILITY

Yet simply because the apartment market moves in the right direction by adding supply and filtering units down to lower income households does not mean it is adequate to address lagging incomes and the impact of rising housing cost burdens. Even if real rental costs fell significantly (either from loosening land use regulation or from additional housing supply from new development), it is likely that the vast majority of lower income households would still be living in rental units considered unaffordable due primarily to their low income. Due to both of these challenges, the City of Seattle and its housing partners use a myriad of public funding sources and tools to address housing affordability challenges. These sources and tools fall into two broad categories:

- Federal, state, and local resources directed toward the development of affordable housing units, or to assist income-eligible households in purchasing, rehabilitating, or renting housing. These programs are typically underwritten by federal tax credit programs and the City of Seattle's Housing Levy.

- Local land use and financial incentives directed at private developments intended to create affordable housing units. These are primarily the City of Seattle's Incentive Zoning and Multifamily Property Tax Exemption programs.

Rent-restricted Affordable Housing

Since 1981, residents of the City of Seattle have voted to impose an additional property tax for the purpose of creating affordable housing in the City. Overall, Seattle has now funded over 10,000 affordable apartments for seniors, homeless families, and low- and moderate-income households.

The Housing Levy has five programs:

- **Rental Production & Preservation Program.** funding the production and preservation of affordable housing
- **Acquisition & Opportunity Loans.** to acquire and preserve affordable rental and ownership housing
- **Operating & Maintenance Program.** to support the operation and maintenance of units serving extremely low-income residents
- **Homebuyer Program.** that assists first-time home buyers with lending while preserving affordability
- **Rental Assistance Program.** providing short-term rental assistance to households at risk of homelessness

Within the study area, these programs, leveraged with a mix of other funding and program sources, have developed and preserved affordable housing units, including:

- **Gossett Place**. 62 units for homeless individuals and couples, including veterans. The building has an affordability requirement through 2060.
- **Ninth House, Tolson House, and Wright House.** Three individual single family homes targeted at households and individuals with needing substance abuse assistance. Affordability requirements are: Ninth House through 2034, Tolson House through 2036, and Wright House through 2028.
- **Sortun Court Townhouse.** 16 units, with an affordability requirement through 2038

The Seattle Housing Authority owns and operates two buildings in the study area through its Low Income Public Housing Program:

- **University House.** An apartment building with 101 units, all one-bedrooms.
- **University West.** An apartment building with 112 units, all one-bedrooms.

The Michelle Apartments is an unsubsidized apartment building offering four income eligible units at 80% AMI or less.

Incentive Zoning

Incentive zoning is a voluntary land use tool that enables building developers to gain additional floor area above what is allowed by base zoning as an incentive for providing, or contributing funds, to affordable housing (although, in some zones additional floor is offered as an incentive to achieve other non-housing amenities). Affordable housing and amenities in these programs help mitigate the impacts of new development. Through these programs, a portion of the value of additional developable floor area is used to offset contributions to income eligible housing via the Land Use Code. The additional floor area is used to provide income-eligible households with a reduced rent housing unit. For rental housing, the program is intended to serve households with incomes up to 80% of area median income. Developers whose projects achieve extra height or density through incentive zoning must provide affordable housing equivalent to a calculated percentage of the bonus floor area, for a period of 50 years, or a cash contribution to be awarded by the City for development of low-income rental housing or home buyer assistance.

Within the study area, only residential projects within the Midrise Multifamily Residential (MR) zone are eligible to participate. Currently, the payment option is not available to incentive zoning projects in zones with height limits ≤85 feet, such as MR, so the developers provide affordable units for income-eligible households as part of the project (commonly referred to as housing "set asides" or "performance housing"). As of the end of 2013, there were three projects in the study area using incentive zoning. These projects will account for 15 affordable units available to qualified households with incomes ≤80% AMI. The affordability term for designated units within the projects is 50 years.

Multifamily Property Tax Exemption Program

The Multifamily Property Tax Exemption (MFTE) Program provides a property tax exemption on the residential improvements on multifamily projects (land and non-residential improvements are not tax exempt). The property tax exemption works as a financial incentive for projects to set aside 20% of their respective units for moderate income households for as long as the exemption is in place (up to 12 years). Depending on the unit type, rent and household income limits currently range from 65% of AMI for studio to 85% of AMI for two-bedroom or larger units. The property tax exemption can remain in place for a maximum of 12 years provided the project adheres to the rules of the program.

The MFTE program is available in 39 residential targeted areas across the City, including the "University District NW" Hub Urban Village. This area overlaps much of the study area, but is not fully contiguous with its boundaries. As of the end of 2013, there were six MFTE projects that were either completed or in construction within the study area. These projects will account for 120 affordable units available to income eligible households at 65–85% AMI.

Significant Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

The discussion thus far has summarized the housing affordability challenge in the area, which by all accounts is large. By most measures, housing costs are consuming a greater portion of household incomes and the lowest income households are most at risk of being extremely cost burdened. The issues of stagnating household incomes and scarce public resources for developing affordable housing units for income-eligible households—while important—are outside the scope of the analysis.

However, when it comes to evaluating the alternatives, there are two dimensions that either directly or indirectly affect housing affordability that should be discussed:

> ***Does the regulatory framework expand the potential supply of housing above the likely market demand?*** *There are two components to this question. First, it is important to evaluate if zoning designations restrict the supply of housing to levels less than demand. Second, it*

is important to evaluate whether and how supply additions can filter down to lower income households over time.

Does the regulatory framework expand the potential use of housing affordability tools? *Both incentive zoning and the multifamily property tax exemption program have provided income-eligible households with lower cost housing in the study area. It is important to consider how development incentives can provide housing contributions for income qualified households through the multifamily property tax exemption and incentive zoning programs.*

Housing Supply

All of the alternatives provide zoning capacity to support a supply of housing above the planning growth estimates established by the City. From this perspective, there is ample regulatory (zoning) capacity to accommodate potential increases in demand. Overall, the excess regulatory capacity (as opposed to a condition where supply is more tightly regulated) removes the regulatory supply limitation as a contributing factor toward upward pressure on rents and therefore reduces the impact on housing cost burdens. A regulatory framework that constrains the market supply of housing effectively reduces the supply of low-cost housing because it inhibits filtering. However, this does little to ameliorate the short-term cost impacts households feel since adding supply and filtering takes a long time to materialize (measured in decades in this analysis).

Both Alternatives 1 and 2 provide more capacity for housing in denser multifamily structures which are overwhelmingly renter occupied in the area. Regulation that might favor the supply of units that have the lowest average cost, such as apartment buildings, can help address the overall affordability challenge. The implication of this increased regulatory flexibility could place more of the added housing into the rental market and accentuate the benefits of additional supply where housing cost burdens are the greatest. Also, the concentration of denser housing zones close to the future light rail transit station in Alternatives 1 and 2 could provide additional benefits to households by reducing household transportation costs through lower cost transit options—even if housing costs continue to consume larger shares of household income.

Alternatives 1 and 2 also contemplate more mid and high-rise construction. Construction of these taller structures relies on reinforced steel and concrete construction, which costs more (on a square foot basis) than low- and mid-

rise construction. All things being equal, residential uses in these buildings will rent for more (on a square foot basis) then buildings constructed for lower costs. In order to maintain a comparable housing unit rental rate with low- or mid-rise development, units would need to be relatively smaller in high rise structures.

The retirement of older, lower-quality housing usually takes place among the lowest rent properties (especially if they are sitting on underlying valuable land as is the case in the University District). It is likely that these properties will be replaced by newer, higher rent housing units translating into an immediate loss of low cost housing. This situation is common across all of the alternatives. As described in Section 3.3.2, potential re-developable sites were identified based on historic development trends and a recent assessment of market potential. Based on this information and the proposed zoning designations under each alternative, a representative development pattern was identified for each alternative. Based on this, redevelopment under Alternatives 1 and 2 would displace about 40 housing units and under Alternative 3, 60 housing units. This analysis is not a projection of housing displacement but seeks to stress how Alternatives 1 and 2 envision more flexibility for a more efficient use of land allowing for higher concentrations of housing. The implication of this framework is the need for less land (and the potential demolition lower cost housing) to meet the target population.

Estimated housing displacement under Alternatives 1 and 2 is 40 units. Estimated housing displacement under Alternative 3 is 60 units.

If additional housing supply can out pace household growth over the long-run, there might not be a net loss of lower market rate housing units as units continue to filter down the price-quality spectrum to lower income households. However, because the filtering down of housing stock can take years or decades, this does not address the short-term cost burdens of households in the area.

Housing Affordability Tools and Incentives

None of the alternatives consider changes to the MFTE program. The flexibility for more multifamily structures with rental units considered in Alternatives 1 and 2 may lead to a higher number of affordable units for income-eligible households created through the MFTE program compared to the No Action Alternative.

Currently, incentive zoning is only available in the MR zone in the study area. Incentive zoning is implemented as part of an up zone. Alternatives 1 and 2 could provide additional incentive zoning. In this respect, incentive

zoning has the potential to create a higher number of affordable units for income-eligible households compared to the No Action Alternative.

Table 3.2–11 provides a comparison of potential affordable housing that could be created through incentive zoning under each alternative. This analysis assumes the following:

- **Floor Area.** Bonus floor area is based on the difference between permitted FAR under current zoning and FAR proposed by each action alternative in the mixed use zones. For Alternative 3 (No Action), bonus floor area is limited to the MR zone and is the difference between the assumed base FAR (3.2) and the maximum FAR (4.25).
- **Eligible Area.** Under the action alternatives, up to 60% (for residential uses) or 75% (for commercial uses) of the bonus area could be achieved through the incentive zoning affordable housing provision. Under the No Action Alternative, 100% of the bonus area could be achieved through the incentive zoning provision.
- **Affordable Housing.** For residential development, 14% of the eligible area is used for affordable housing. For commercial development, 15.6% of the eligible area is used for affordable housing. Average residential unit size is 850 sf.

Based on these assumptions, affordable housing that could be generated by each alternative is shown in Table 3.2–11.

Table 3.2–11: **Incentive Zoning and Affordable Housing**

	Alternative 1 Mixed Use Zones		Alternative 2 Mixed Use Zone		Alternative 3 MR Zone
	Residential	Commercial	Residential	Commercial	
Bonus Area[1]	675,648 sf	981,212 sf	1,078,255 sf	1,269,803 sf	52,417 sf
Affordable Housing Area[2]	94, 591 sf	153,069 sf	150,956 sf	198,089 sf	7,338 sf
Affordable Housing Units[3]	111	180	177	233	8

[1] No For action alternatives, 60% of the bonus area for residential uses and 75% of the bonus area for commercial uses is assumed. For the No Action Alternative, 100% of the bonus area is assumed.

[2] 14% of the bonus area for residential uses and 15.6% of the bonus area for commercial uses is assumed to be developed as affordable housing.

[3] Total units if average unit size is assumed at 850 sf.

Source: Hewitt, Studio 3MW, and City of Seattle, 2014

The estimates shown in Table 3.2–11 are shown for the purpose of comparison between alternatives only. While the assumptions provide a common basis for comparison, it is understood that individual developer decisions about how to achieve the bonus area will vary and that incentive zoning provisions for the study area may provide options that differ from these assumptions.

Mitigating Measures

No significant impacts to housing affordability were identified across the alternatives. However, housing affordability remains a major challenge even if no action is taken. There are a number of code and programmatic steps the City could take that could address part of this challenge, including:

- Expanding incentive zoning for affordable housing in concert with all commercial and residential upzones.
- Continuing to prioritize local funding for construction and preservation of affordable housing units for income-eligible households.
- Implementing new programs for preservation of existing affordable housing in key locations.

Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to affordable housing are anticipated.

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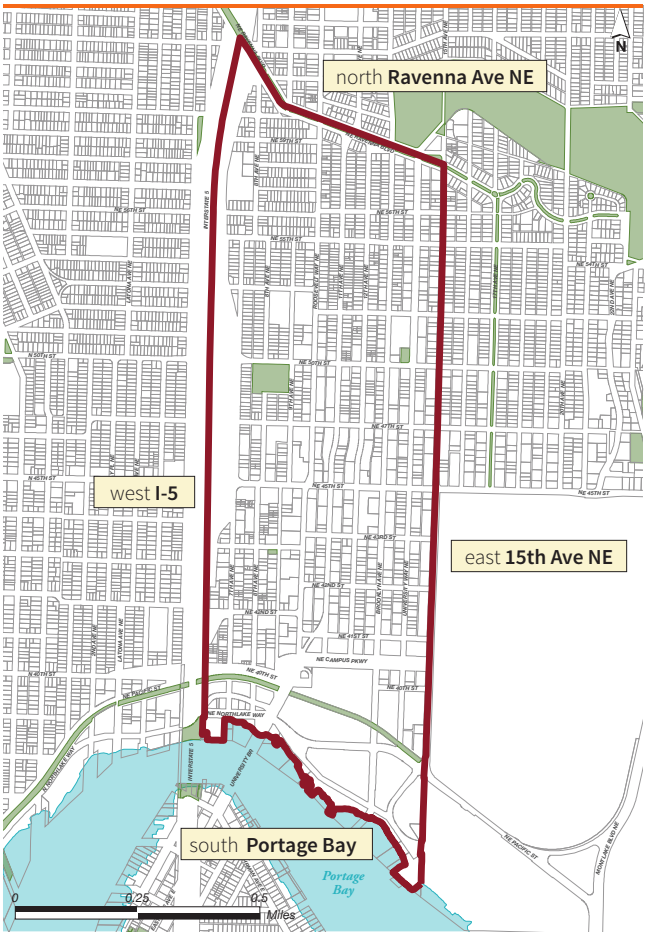
3.3 Aesthetics

The aesthetics chapter illustrates and describes the physical character of the study area and its immediate surroundings. Three dimensional modeling has been incorporated into the analysis to illustrate potential impacts. Illustrations based on the visual model provide representative views of potential development under No Action (Alternative 3) and two action alternatives that would intensify development around the neighborhood core (Alternatives 1 and 2). All three alternatives would achieve a common planning estimate for growth, described in Chapter 2. The alternatives differ in building form and geographic distribution of growth throughout the study area. Representations for each alternative include selected viewpoints, shadow studies and potential light and glare impacts.

Fig. 3.3–1
U District Study Area Boundaries



Source: City of Seattle, 2013

3.3.1 Affected Environment

Area Context

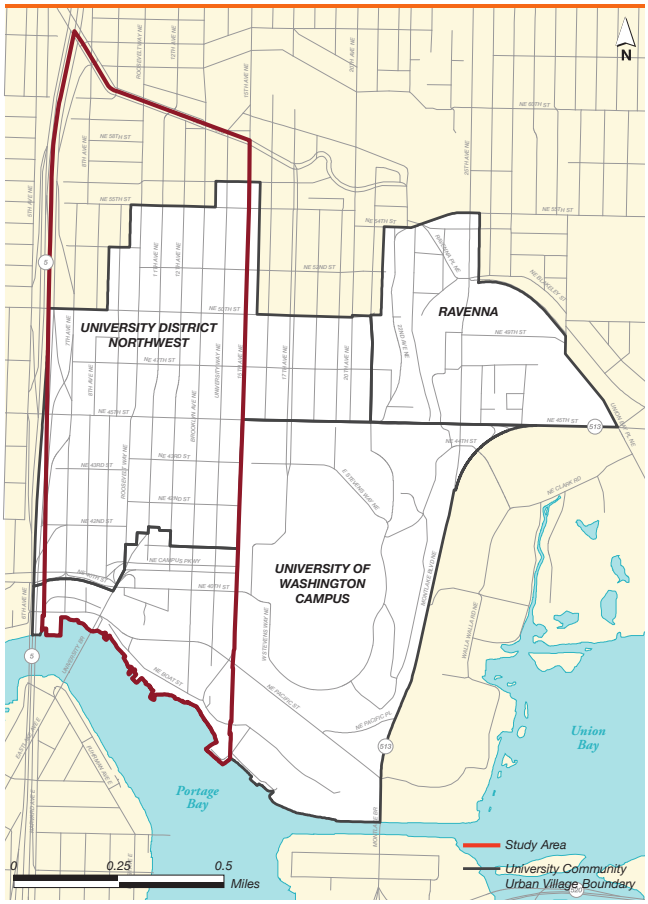
The University District sits north of downtown Seattle and Capitol Hill, east of the Wallingford Neighborhood, south of the Roosevelt Neighborhood and west of the Laurelhurst Neighborhood. These areas are all urban in character with primarily low-rise and single-family residential and commercial structures. The study area within the University District is bounded by Interstate 5 to the west, Lake Washington Ship Canal and Portage Bay to the south, University of Washington main campus and 15th Avenue NE to the east and southeast, and NE Ravenna Boulevard to the north, as shown in Figure 3.3-1.

Most of the U District study area is designated by the City of Seattle as part of the University Community Urban Center and, as such, is a neighborhood with high potential to accept growth and density. The University Community Urban Center includes two urban villages (University District Northwest and Ravenna) as well as the University of Washington campus. The majority of the U District study area is located in the University District Northwest Urban Village. (See Figure 3.3–2.)

The street network in the University District is generally orthogonal with long, narrow rectangular lots in a north-south orientation. In the north/south direction, most of these blocks range from 400 to 600 feet in length and have no provisions for mid-block pedestrian connections. In the east-west direction, block lengths are about 220 feet. (See Figure 3.3–3.)

NE 45th Street provides access to Interstate-5 (I-5) and is the main east-west connector and gateway to and from the University District. It is characterized by commercial use at the street level. This street carries high traffic volumes and also serves as a transit corridor. Sidewalks are narrow and street trees and landscaping treatment along the sidewalk is not continuous. NE 50th Street is another east-west connector that provides a soft boundary between the commercial core area to the south and the lower intensity commercial and residential area to the north. On the north-south orientation, the Ave (University Way NE), Brooklyn Avenue NE, 15th Avenue NE, Roosevelt Way NE, 11th Avenue NE and 12th Avenue NE serve as thoroughfares. Roosevelt Way NE is a one-way street heading south and 11th Avenue NE is a one-way street heading north.

Fig. 3.3–2 **U District Study Area with the University Community Urban Center and Village Designations**



The study area contains three designated Neighborhood Green Streets:

- Brooklyn Avenue NE, extending through the study area
- NE 43rd Street, from I-5 to the west edge of the UW campus
- NE 42nd Street, from I-5 to the west edge of the UW campus

Neighborhood Green Streets are generally defined as a street right-of-way that, through a variety of design and operational treatments, give priority to pedestrian circulation and open space over other transportation uses.[1]

Current bus routes serve University Way NE, Roosevelt Way NE, 15th and 11th Avenue NE traveling north-south and on NE 45th and 50th Streets in the east-west direction. Bike lanes are prevalent throughout the study area with on-street lanes, sharrows, signed bicycle routes and unsigned connectors.

Street rights-of-way with north-south orientations are 60 feet wide with the exceptions of Brooklyn Avenue NE (south of NE 45th Street), which is 70 feet wide, as well as 15th Avenue NE and the Ave (north of NE 50th Street), which are both 80 feet wide. In the east-west direction, NE 45th Street is 70 feet wide. Sidewalks are present and are continuous throughout the study area.

Basic Green Streets Design Principles

Emphasize pedestrians and open space over other street functions

Complement and enhance adjacent land uses

Keep traffic speeds and volumes low

Respond to site specific conditions

Seattle Right-of-Way Improvements Manual, Sec. 6.2.4

NEIGHBORHOOD CHARACTER

The study area's identity is largely defined by its proximity to the University of Washington and the residents and businesses that are affiliated with this institution. In general, the U District is an eclectic mix of residential and commercial development with building styles that range from late Victorian to early 20th century brick buildings to contemporary structures. Building heights are generally low- to mid-rise, with the notable exceptions of a few high-rise towers. Structures that stand out due to their size or features include: UW Tower, Hotel Deca, University Plaza Condominiums, the new developments in the UW West Campus, the steeples of the Blessed Sacrament Church and The Church of Jesus Christ of Latter-day Saints, and the red brick buildings of the University of Washington.

NE 50th Street provides a soft northern boundary to the core area, with primarily single-family and low-rise multifamily developments extending to the north. Most apartments in this area are used for student housing.

Figure 3.3–3: **Block pattern**

Source: City of Seattle Department of Planning and Development Existing Conditions Report, 2012

1 *Seattle Rights-of-Way Improvements Manual, Section 6.2 Green Streets, accessed online January 2014.*

The exceptions to the residential character are the Roosevelt Way NE and University Way NE commercial corridors.

Roosevelt Way NE is an active southbound thoroughfare with low-rise commercial uses, multi-family housing, single-family housing, and the public library. It runs from the Roosevelt Neighborhood and connects to the north slope of Capitol Hill. In the north study area, both Roosevelt Way NE and University Way NE are characterized by primarily low-rise commercial structures.

At the corner of NE 50th Street and the Ave, a former elementary school now serves as a community center with many service-oriented programs and events. The University Heights Community Center is a Seattle landmark listed on the National Register of Historic Places. The Seattle Parks and Recreation Department is redeveloping the south parking lot into public open space for the neighborhood. The area is accessed from NE 50th and NE 52nd Streets.

In the central core, generally between NE 50th and NE 41st Streets, development consists primarily of mid-rise commercial and multifamily structures. This area also contains the tallest buildings in the study area, including the 24-story University Plaza Condominiums, the 22-story UW Tower and the 16-story Hotel Deca. There are several at-grade surface parking lots in the area bounded by NE 45th and 47th Streets, University Way NE, and Roosevelt Way NE. South of NE 41st Street, the development pattern consists of a dense mix of University buildings, multifamily, commercial and light industrial uses.

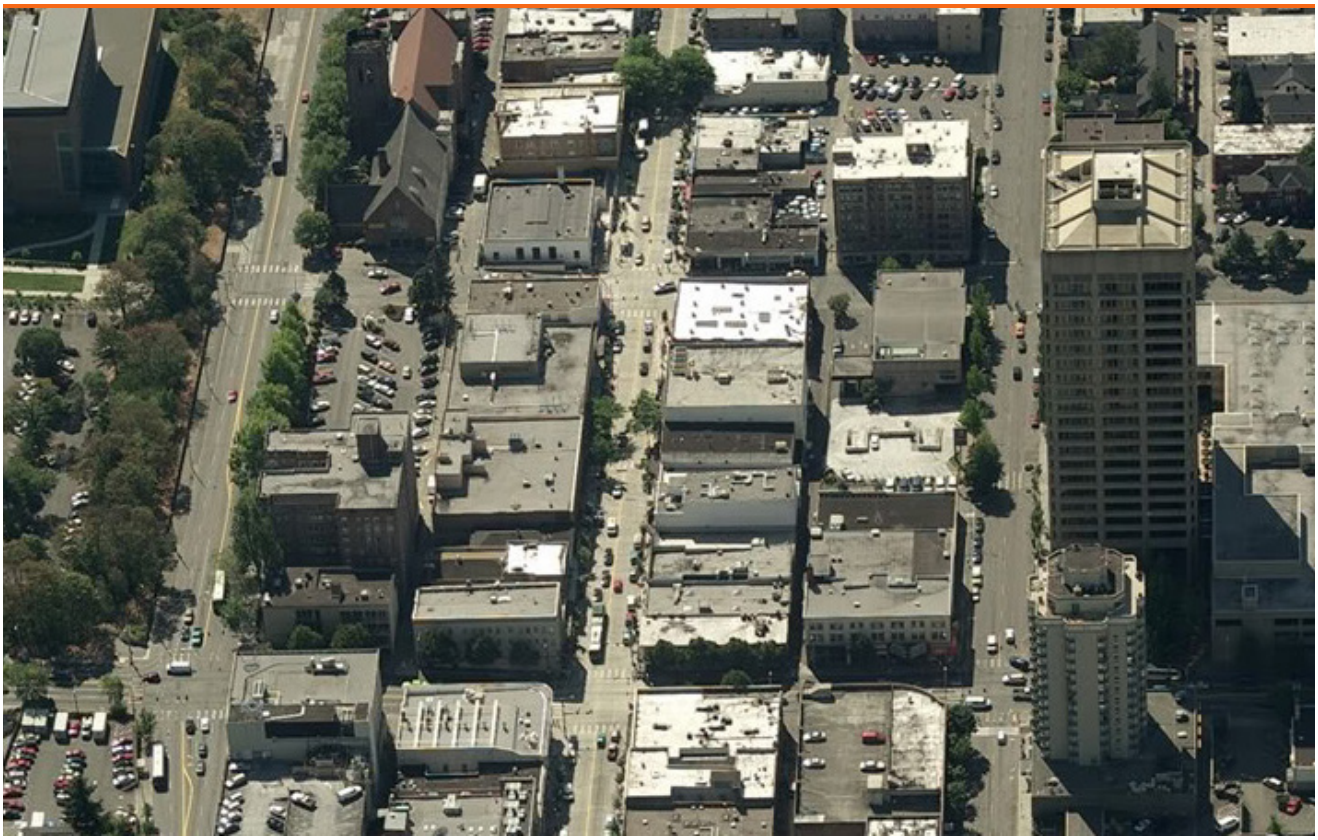
The corridors of University Way NE, Brooklyn Avenue NE, Roosevelt Way NE, NE 45th Street, and NE 50th Street are characterized by commercial uses. Auto dealerships are located along Roosevelt Way NE between NE 50th and NE 45th Streets.

Blessed Sacrament Church

Univeristy Heights Community Center

The Ave—University Bookstore

Figure 3.3–4: **Aerial view of the Ave looking south**



As shown in Figure 3.3–3, the study area contains many alleys. For the most part, these alleys are used for overhead utility infrastructure and for service and delivery access to existing buildings.

The Ave (University Way NE) is a lively continuous retail corridor from NE Pacific Street in the south to NE Ravenna Boulevard in the north. Home to a diverse mix of locally owned and independent businesses in low-rise buildings, it has a distinctive character with narrow storefronts that establish a pedestrian retail street. Recent street improvements (from NE Campus Parkway to NE 50th Street) have added such amenities as benches, plantings and additional lighting. North of NE 50th Street, the right-of-way is wider with angled off-street parking.

South of 45th, the topography slopes down toward the Portage Bay such that taller buildings in this area appear less conspicuous.

The Ave looking south from NE 47th St

The Ave looking north from NE 43rd St

The new underground light rail station, scheduled to open 2021, will be located at Brooklyn Avenue NE between NE 45th Street and NE 43rd Street. The half-mile walkshed surrounding the future U District station extends from I-5 on the west to the UW campus on the east and from NE 52nd Street in the north to NE Pacific Street in the south.

Figure 3.3–5: **Rendering of U District Station**

Source: Sound Transit, 2013

To the south of the core area, NE 41st Street is a soft edge with primarily UW affiliated low- and mid-rise housing and low-rise commercial. The study area is bounded on the east and south by the UW campus. This campus area is being redeveloped with streetscape improvements, and new residential and student life facilities that are regulated by the UW Campus Master Plan. Recent improvements with wider entrances at street intersections along 15th Avenue NE help to welcome the community onto campus.

Figure 3.3–6: **University Parkway Streetscape**

University buildings west of 15th Avenue NE relate to the urban grid and have visual and physical connections to the street network, with entrances and transparent facades along the street. New mid-rise University housing is located along NE Campus Parkway. This housing generates pedestrian traffic north to the future U District Station and the commercial node on the Ave. (See Figure 3.3–6 and Figure 3.3–7.)

Figure 3.3–7: **UW Poplar Hall**

HEIGHT, BULK AND SCALE

It is the City's policy to regulate the height, bulk and scale of development in relation to the neighborhood, surrounding structures and topography to create a reasonable transition between the various zones. *[T]he height, bulk and scale of development projects should be reasonably compatible with*

> *the general character of development anticipated by the goals and policies set forth in Section B of the land use element of the Seattle Comprehensive Plan regarding Land Use Categories, the shoreline goals and policies set forth in Section D-4 of the land use element of the Seattle Comprehensive Plan, the procedures and locational criteria for shoreline environment re-designations set forth in SMC Sections 23.60.060 and 23.60.220, and the adopted land use regulations for the area in which they are located, and to provide for a reasonable transition between areas of less intensive zoning and more intensive zoning.*
>
> *—Seattle Municipal Code (SMC) 25.05.675 G2a*

For the most part, development within the study area ranges between low-rise to mid-rise, up to about 85 feet. These structures include single-family, low- and mid-rise residential, low- and mid-rise commercial, mid-rise medical, a fire station and churches. Commercial uses are along the main arterials and residential zones are typically along non-arterial streets. The study area core contains some high-rise buildings (up to about 320 feet) which were developed under prior zonings standards.

North of NE 50th Street, buildings are predominantly single-family with heights under 35 feet. Exceptions to this single-family residential character are found along 15th Avenue NE, the Ave and Roosevelt Way NE. 15th Avenue NE has a mix of single-family and low-rise multifamily structures with heights under 35 feet. Development along the Ave is primarily low-rise commercial with a number of new mixed-use developments under construction in the area south of NE Ravenna Boulevard. Development along Roosevelt Way NE is a mix of low-rise commercial developments, townhomes and low-rise residential.

The core of the study area contains the largest mix of structure heights. There are several high-rise buildings including the UW Tower at 320 feet, University Plaza Condominiums at over 220 feet, Hotel Deca at 170 feet and a number of other buildings that range between 65 and 100 feet. These taller buildings stand out in contrast to the lower rise buildings around them.

South of NE 41st Street development consists primarily of single-family homes, townhomes and four- to six-story mid-rise buildings to the edge of the University of Washington West Campus.

VIEWSHEDS

The City of Seattle Municipal Code Section 25.05.675 P contains SEPA policies related to public view protection, stating:

> *(i)t is the City's policy to protect public views of significant natural and human-made features: Mount Rainer, the Olympic and Cascade Mountains, the downtown skyline, and major bodies of water including Puget Sound, Lake Washington, Lake Union and the Ship Canal, from public places consisting of the specified viewpoints, parks, scenic routes, and view corridors...*
>
> *—SMC 25.05.675 P2a.i.*

Designated viewpoints are identified in Attachment 1 to that section of the code. All potential designated viewpoints were assessed from various points within the study area. Due to its location and topography, the study area does not impact views from the viewpoints designated in Attachement 1 to the features identified in SMC 25.05.675, above. Therefore, viewsheds are not further discussed in this EIS.

Seattle's SEPA regulations do not protect specific views from private property, but they do encourage reducing private view impacts through height, bulk and setback controls in the Land Use Code.

HISTORIC LANDMARKS

It is also the City's policy

> *to protect public views of historic landmarks designated by the Landmarks Preservation Board and, which, because of their prominence of location or contrasts of siting, age, or scale are easily identifiable visual features of their neighborhood or the City and contribute to the distinctive quality or identity of their neighborhood or the City.*
>
> *—SMC 25.05.675 P2b*

There are eight designated structures[2] in the University District that meet one or more of the City's designation criteria (SMC 25.12.350). Additional information on historic landmarks is provided in Section 3.4 of this EIS.

SCENIC ROUTES

City of Seattle Ordinances #97025 (Scenic Routes identified by the Seattle Engineering Department's Traffic Division) and #114057 (Scenic Routes

2 *University District Historic Survey Report, prepared by Caroline Tobin and Sarah Sodt, September 2002*

identified as protected view rights of way by the Seattle Mayor's Open Space Policies Recommendation) identify specific scenic routes throughout the City from which view protection is to be encouraged. In the study area, I-5, NE 40th Street from I-5 to 15th Avenue NE and 15th Avenue NE from NE 40th Street to NE 45th Street are designated as scenic routes. (See Figure 3.3–8.)

Figure 3.3–8: **Scenic Routes in North Seattle**

Interstate-5

Views toward the study area from I-5 at the Universtiy Bridge are primarily of low- and mid-rise development. Existing tall towers, including the UW Tower and University Plaza Condominiums and others, are notable amid the lower buildings. (See Figure 3.3–17.0.) Views from I-5 at NE 45th Street are similar, with a few tall towers standing out from the overall low- to mid-rise development pattern. (See Figure 3.3–16.0.)

NE 40th Street from I-5 to 15th Avenue NE

Traveling east on NE 40th Street from I-5 the views are of trees and shrubs to the north and UW buildings to the south. Continuing to the east, the street runs under Eastlake Avenue NE, and development consists primarily of mid-rise UW facilities. At 15th Avenue NE, the street intersects with the main entrance to the UW Campus. Buildings on this street generally range from 5 to 11 stories, although there are some lower-rise buildings. (See Figure 3.3–9 and Figure 3.3–10.)

Figure 3.3–9:
NE 40th Street approaching Eastlake Avenue NE

Figure 3.3–10:
NE 40th Street at 15th Avenue NE

15th Avenue NE from NE 40th Street to NE 45th Street

15th Avenue NE heading north from NE 40th Street is a two-way arterial with bus, car and bicycle traffic. The main UW campus is to the east with University buildings to the west until NE 45th Street and the end of the campus. There is a pedestrian bridge over 15th Avenue NE north of NE Campus parkway that connects the UW campus on either side of 15th Avenue NE. From north of NE 41st Street to NE 45th Street, UW campus buildings east of 15th Avenue NE are recessed into the campus and a short continuous wall defines the edge of the property. (See Figure 3.3–11 and Figure 3.3–12.)

Figure 3.3–11: **Campus Parkway at 15th Avenue NE**

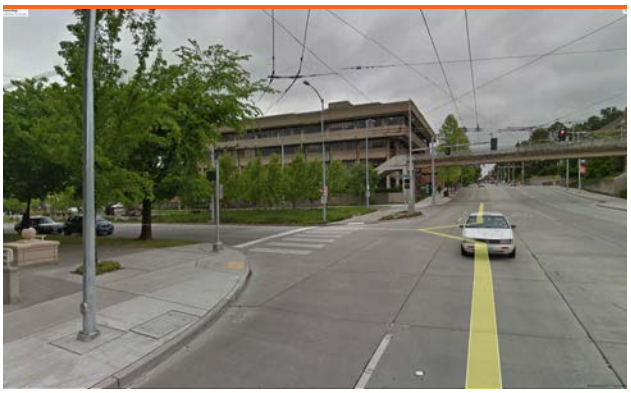


Figure 3.3–12: **15th Avenue NE at NE 42nd Street**

SHADOWS

It is the City of Seattle's SEPA policy to "minimize or prevent light blockage and the creation of shadows on open spaces most used by the public" (SMC 25.05.675 Q2). The concern is the impact to these public places in terms of topography, the built environment and vegetation.

The study area topography is shaped like an inverted bowl with NE 45th Street at the center. It has a gentle slope to the southwest towards the freeway and a steeper slope that runs north-south. The surrounding neighborhoods (Wallingford, University Park, Laurelhurst, Roosevelt and Portage Bay) are at higher elevations.

In areas of the City outside Downtown, City policy (SMC 25.05.675 Q2a) indicates that the following areas are to be protected:

- Publicly owned parks;
- Public schoolyards;
- Private schools which allow public use of schoolyards during non-school hours; and
- Publicly owned street-ends in shoreline areas.

Within the study area, the particular areas that could meet the City's criteria for minimizing or preventing light blockage and the creation of shadows include:

University Heights Open Space—University Way NE and NE 50th Street
This new open space will be a multi-use community asset for public use. Located in the southeast parking lot of the historic University Heights Elementary School, this site will include seating areas, landscaping and a half-court basketball court.

Christie Park—corner of 9th Avenue NE and NE 43rd Street
This small neighborhood pocket park features small grassy nooks and a half-court basketball area surrounded by three to four story buildings to the west, north and east and single-family development to the south.

University Playground—corner of 9th Avenue NE and NE 50th Street
This 2.7-acre active park features tennis courts, a baseball diamond, playground, exercise equipment and bathroom facilities. Residential development, consisting primarily of single-family structures, surrounds this park.

Peace Park—NE 40th Street and NE Pacific Street
This green space is bounded by Burke Gilman Trail is to the south, 7th Avenue NE is to the west, Eastlake Avenue NE to the east and NE 40th Street to the north.

Two additional parks, Northlake Park and North Passage Park, are located along the Portage Bay shoreline at the south boundary of the study area. Because none of the alternatives propose any change in this area, there is no potential for shadow impacts. Therefore, these two parks are not discussed further in the shadow analysis.

As described in the Municipal Code,

> *(t)he analysis of sunlight blockage and shadow impacts shall include an assessment of the extent of shadows, including times of the year, hours of the day, anticipated seasonal use of open spaces, availability of other open spaces in the area, and the number of people affected."*
>
> *—SMC 25.05.675 Q2c*

In areas outside Downtown, if analysis indicates that a proposed project would substantially block sunlight from protected open spaces

> *at a time when the public most frequently uses that space... (the City) ...may condition or deny the project to mitigate the adverse impacts of sunlight blockage.*
>
> *—SMC 25.05.675 Q2d*

Appendix F contains shadow diagrams depicting probable shading cast by proposed development from each of the alternatives for two days of the year: autumnal equinox (approximately September 21) and winter solstice (approximately December 21), when the sun is at its lowest altitude. The analysis shows shadows cast at three times of day: 9:00 am, noon and 3:00 pm. For this analysis, maximum building height and bulk of surrounding development was modeled in order to identify worst case impacts.

Seattle's SEPA regulations do not protect private property from specific view impacts, but they do encourage reducing private shadow impacts through height, bulk, and setback controls in the Land Use Code.

LIGHT AND GLARE

The University District has typical urban lighting sources including street lights, building lights, vehicle headlights, signage and security lighting.

There are a number of auto dealerships along Roosevelt Way NE that produce bright artificial lighting. The future U District Station will also have additional illumination that would help identify the station and its entrances. Major arterials are well-lit corridors including NE 45th Street, NE 50th Street, Roosevelt Way NE, University Way NE and 15th Avenue NE. Pedestrian scale light fixtures provide additional lighting on the Ave at the central core. The mixture of commercial and residential uses does not appear to create any significant sensitivity to nighttime light exposure.

3.3.2 Significant Impacts

In this section, the impacts of the three alternatives to the aesthetic character of the U District study area are considered. In order to assess impacts, representative development under each alternative has been identified based on a review of the City's planning estimates for growth, historic development trends and a recent assessment of market potential based on an analysis prepared by Heartland.[3] These assumptions are described in Chapter 2 and include the following:

- All three alternatives will meet a common planning estimate for growth, described in Chapter 2.

3 *U District Urban Design Framework Support Analysis Memo, Heartland, June 2013*

- Likely development sites were identified based on the Potential Development Map, U District Urban Design Framework, June 2013.
- Modeled growth should show the maximum height and FAR allowed under each zoning scenario.
- All projects will take advantage of the ability to develop ground level retail and ground-related housing without including this area in calculation of the development's FAR.
- A range of residential, commercial, mid-rise and high-rise development could occur and should be represented.
- On-site structured parking is assumed to be below grade.
- New public open space is not shown because of the amount and location of open space is not known and would be speculative.

While these assumptions provide a basis for this analysis, actual development could occur on other properties based on individual development decisions that differ from these assumptions.

For reference, the alternatives are briefly characterized below. For a complete description, please see Chapter 2 of this EIS.

Floor area ratio is the ratio of the total square feet of a building to the total square feet of the property on which it is located.

Alternative 1	High-rise development in the core up to 160 feet. Compared to Alternative 2, buildings are more closely spaced and taller buildings extend further north and south of the core. Building heights of 125 feet to 160 feet would be allowed along University Way NE.
Alternative 2	High-rise development in the core up to 340 feet. Compared to Alternative 1, greater spacing between towers and development would be more focused in the core, with few zoning changes to the north and south. Maximum building heights on University Way NE would be between 65 feet to 85 feet.
Alternative 3	Existing zoning to remain, allowing a continuation of the existing low-rise and mid-rise development pattern. Development would generally be dispersed throughout the study area.

Methodology

It is recognized that the assessment of aesthetic impacts is subjective and can vary between individuals based on perspectives and preferences. In order to provide a common basis for the discussion in this impact section, the analysis assumes Alternative 3 No-Action as the baseline and evaluates impacts in terms of significant impacts to this baseline.

Impacts Common to All Alternatives

All of the alternatives would result in a denser urban environment in the core of the study area and, to varying degrees, surrounding the core. All alternatives would retain the single family residential areas in the north of the study area as well as the existing University of Washington MIO and industrial area in the south of the study area. All three alternatives would continue to allow for mix of residential and commercial uses in the study area.

On the following pages Figures 3.3–14 through 3.3–17 illustrate multiple aerial views of each alternative. The perspectives show views from:

1. Roosevelt Way NE looking south
2. NE 45th Street looking west from 17th Avenue NE
3. NE 45th Street at I-5 looking east
4. Looking northeast from I-5 at the University Bridge

For comparison purposes, the existing development pattern is shown for each view. The alternatives show representative development based on the assumptions described above.

AREA CONTEXT

Alternatives 1 and 2 are similar in that they both propose greater height and density in the core of the study area, generally the area north of the UW campus and south of NE 50th Street. The difference between the two alternatives is largely one of scale. Comparatively, Alternative 2 allows for significantly taller development in a more tightly clustered pattern, while Alternative 1 would result in a development pattern with lower building heights, but more dispersed throughout the neighborhood. Under both scenarios, the core would appear more densely developed, with taller and bulkier buildings, compared to the No Action Alternative. Overall, the development pattern anticipated by either alternative would reinforce the highly urban character of development in the U District study area and is not considered a significant impact.

Alternative 3, No Action, would result in a continuation of existing development patterns.

NEIGHBORHOOD CHARACTER

All alternatives would result in a greater amount of development. Although differing in scale, the character of the study area under either of the action

alternatives will be of increased urbanization with a greater density of buildings. Residents and employees of these buildings will create a more urban environment, with related increases in pedestrian and vehicular traffic. This transition would be focused primarily around the core, with Alternative 2 focused the most tightly and Alternative 1 slightly more dispersed.

In general, the character of the Ave would also become more urban, with taller buildings and more intensive development under both action alternatives. However, the alternatives differ in their development character—specific impacts to the Ave are described in the discussion of each alternative, below.

Under Alternatives 1 and 2, along designated Green Streets—Brooklyn Avenue NE, NE 42nd and NE 43rd streets—landscaped setbacks would create linear park-like environments. In addition, widened sidewalks along NE 45th and NE 50th streets would help offset the anticipated tower heights while providing safer pedestrian circulation. (See Figure 3.3–13.)

Figure 3.3–13: **Examples of extra wide sidewalks and landscaping**

Overall, the two action alternatives would reinforce the urban character of the core and preserve the existing single-family character at the north end of the study area. Specific differences between the alternatives are described in the discussion of each alternative.

Under Alternative 3, a continuation of existing development trends under existing zoning would also result in a more urban and intensely developed pattern in the study area, but in a more dispersed manner and to a significantly lesser degree than as contemplated under the action alternatives.

HEIGHT, BULK AND SCALE

Both action alternatives increase the allowable building height and scale for the neighborhood with more mid-rise buildings and high-rise towers ranging from 125 to 340 feet. Under Alternative 1 and 2, floor plates on towers 160 feet or less would be limited to 24,000 SF above the podium. For taller buildings, bulk would be reduced by limiting floorplate size as height increases; the maximum floor plate would be limited to 24,000 SF above the podium and 11,000 SF above 120 feet.

To the north, both alternatives would retain predominately single-family and low-rise residential except around Roosevelt Way NE and the Ave.

Note: On these and the following six pages, the tan buildings represent potential new development under the various alternatives.

Figure 3.3–14.0: **Roosevelt Way NE looking south—Existing Conditions**

Figure 3.3–14.1: **Roosevelt Way NE looking south—Alternative 1**

Figure 3.3–14.2: **Roosevelt Way NE looking south—Alternative 2**

Figure 3.3–14.3: **Roosevelt Way NE looking south—Alternative 3**

Figure 3.3–15.0: **NE 45th Street looking west from 17th Avenue NE—Existing Conditions**

Figure 3.3–15.1: **NE 45th Street looking west from 17th Avenue NE—Alternative 1**

Figure 3.3–15.2: **NE 45th Street looking west from 17th Avenue NE—Alternative 2**

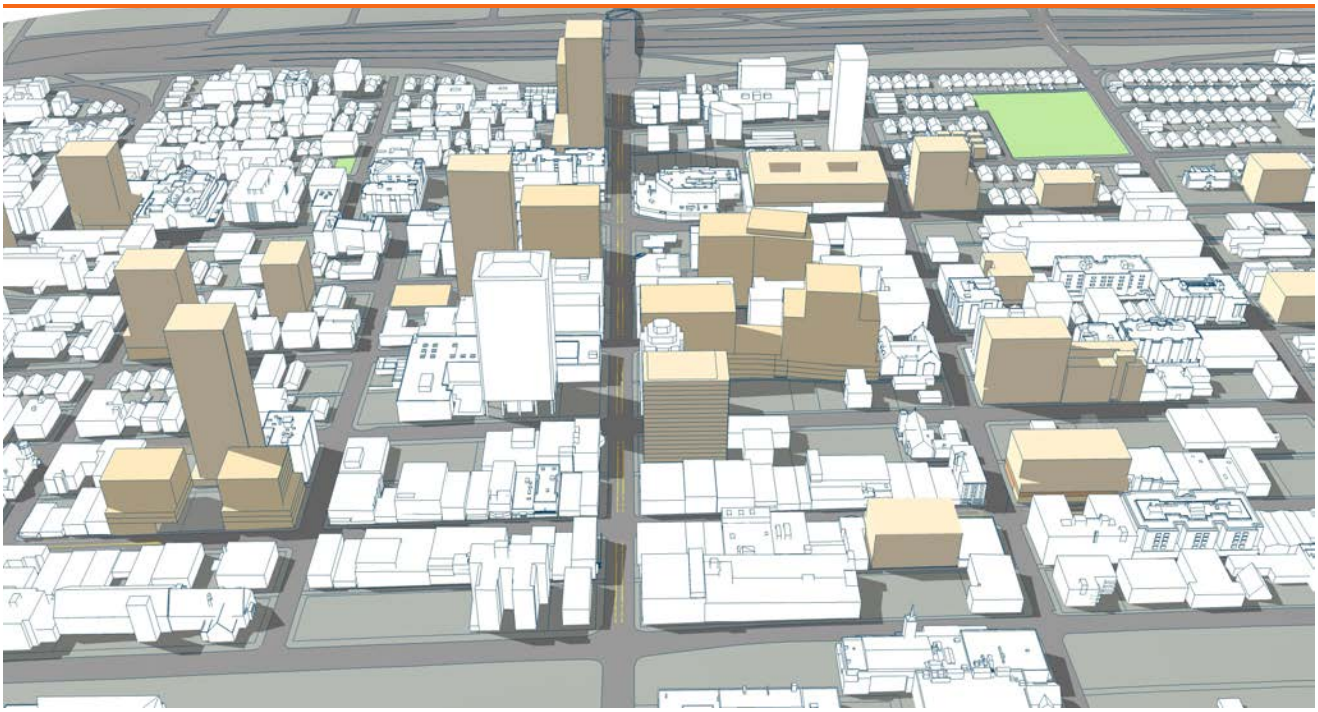


Figure 3.3–15.3: **NE 45th Street looking west from 17th Avenue NE—Alternative 3**

Figure 3.3–16.0: **NE 45th Street at Interstate-5 looking east—Existing Conditions**

Figure 3.3–16.1: **NE 45th Street at Interstate-5 looking east—Alternative 1**

Figure 3.3–16.2: **NE 45th Street at Interstate-5 looking east—Alternative 2**

Figure 3.3–16.3: **NE 45th Street at Interstate-5 looking east—Alternative 3**

Figure 3.3–17.0: **Looking northeast from Interstate-5 at the University Bridge—Existing Conditions**

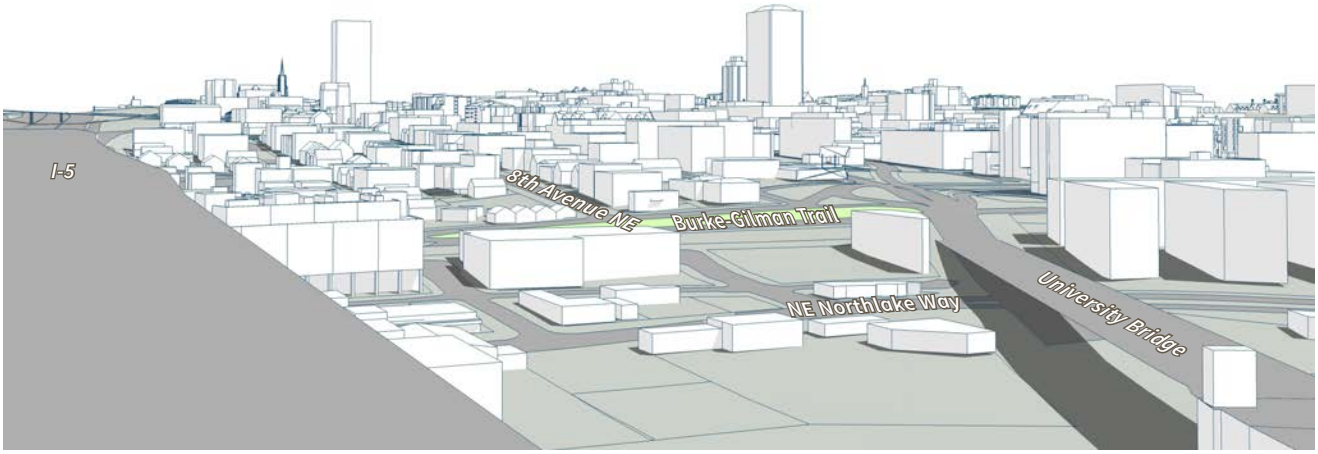


Figure 3.3–17.1: **Looking northeast from Interstate-5 at the University Bridge—Alternative 1**

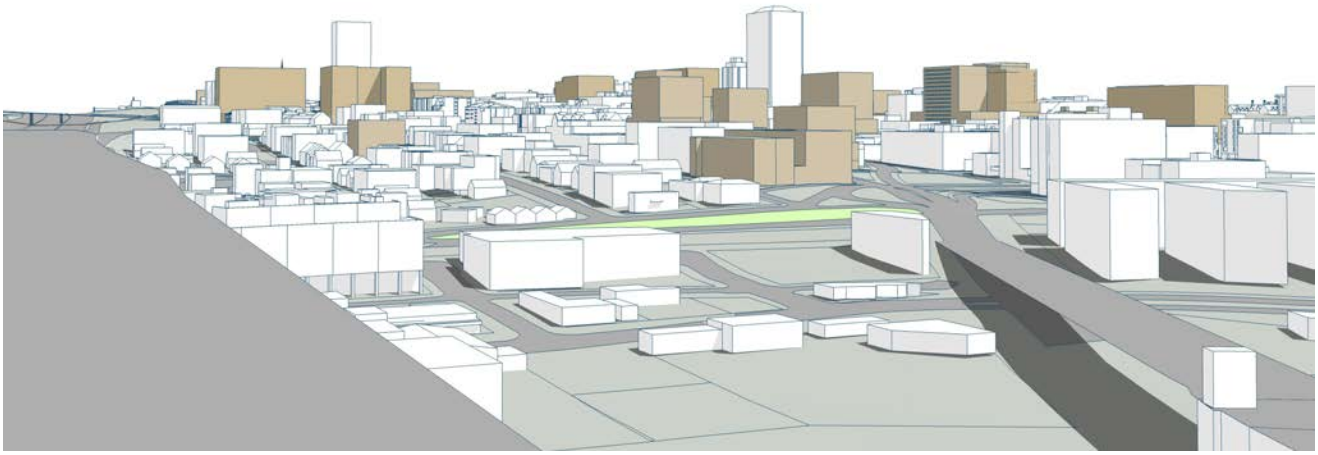


Figure 3.3–17.2: **Looking northeast from Interstate-5 at the University Bridge—Alternative 2**

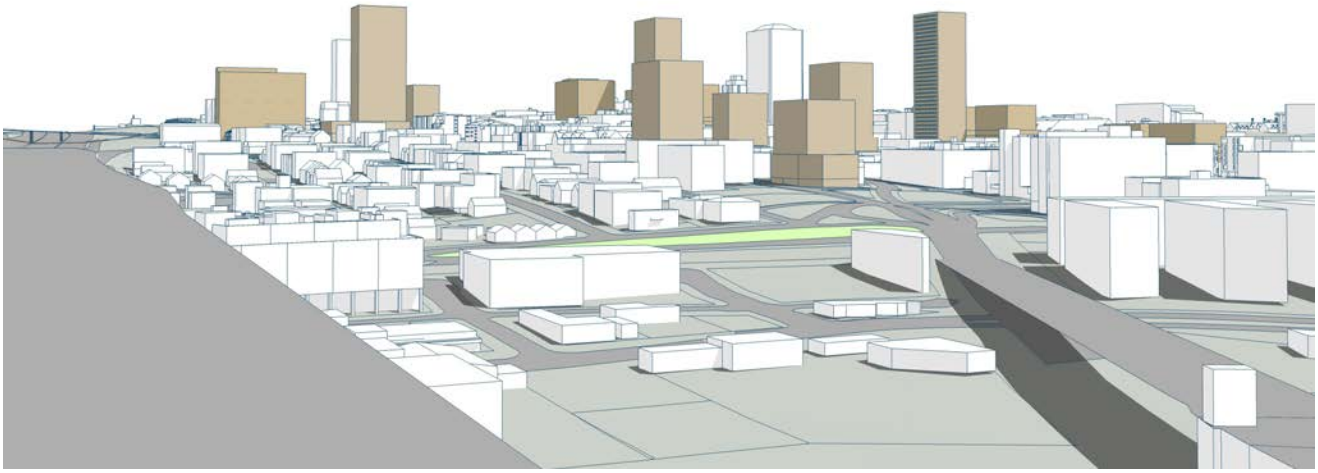
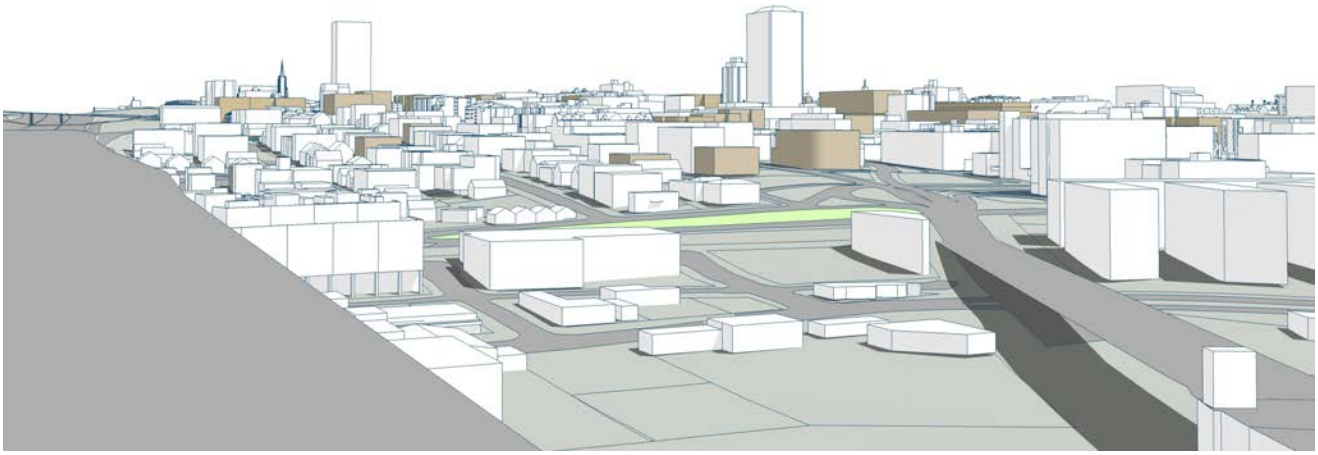


Figure 3.3–17.3: **Looking northeast from Interstate-5 at the University Bridge—Alternative 3**



It should be noted that there are some specific differences between the alternatives in how single family and low-rise zoning in this area is treated; these differences are described in the discussion of each alternative, below. In this area, building heights along Roosevelt Way NE would generally be between 40 and 65 feet and on the Ave a maximum of 65 feet.

Under Alternative 3, a continuation of existing development trends under current zoning would result in new development height, bulk and scale similar to that found today. To the extent that new development maximizes development potential under current zoning, some new development may be slightly larger and/or taller than existing buildings on adjacent parcels.

SCENIC ROUTES

All three alternatives would result in blockage of private views, due to increased development in the study area. Given the variables of where and how development will occur, it is not possible to predict specific impacts. Generally, taller buildings under Alternatives 1 and 2 would create more view blockage for the existing three highrise buildings in the core of the neighborhood. Midrise buildings spread throughout the neighborhood would tend to block views from more existing lowrise and midrise buildings in the neighborhood.

Impacts to the scenic route are evaluated based on changes to the character of development immediately adjacent to the corridor and views to development in the larger area. Please see the discussion under each of the alternatives.

SHADOWS

Increased shade and shadow would result from all three alternatives due to the increased amount of development in the study area. Generally, the infill development on undeveloped or under-developed sites would increase the local shadows on streets and adjacent properties.

Comparison of the alternatives reveals slight differences in the impacts to the noted public parks in the study area. The location and extent of shadows vary and are described in each alternative. Diagrams can be found in Appendix F. For this analysis, maximum building height and bulk of surrounding development was modeled in order to identify worst case impacts.

Overall, impacts are typical of an urbanizing area changing from lower intensity development to that of more intensive development. Generalized impacts to each of the parks in the study area are briefly described below.

University Heights Open Space. Under all alternatives, development to the north, east and west of the University Heights Open Space would result in shadows during some daylight hours.

Christie Park. Under all alternatives, development to the southwest of Christie Park would create shadows on portions of the park.

University Playground. Development surrounding University Playground will increase in all alternatives and result in shade and shadow impacts.

Peace Park. Because development can only occur along Roosevelt Way NE to the east of Peace Park, no increased shade or shadow impacts are expected under any of the alternatives.

All three alternatives would result in increased shading to private property, due to increased development in the study area. Given the variables of where and how development will occur, it is not possible to predict specific impacts. Generally, taller buildings under Alternatives 1 and 2 would create longer shadows in the core of the neighborhood. Development under existing zoning in Alternative 3, spread out across the neighborhood, would typically be larger than the surrounding buildings; this development would tend to cast shadows on immediate neighbors.

LIGHT AND GLARE

More buildings would increase the amount of artificial illumination within the study area and would increase with the density of development. Because the U District study area is already a highly urbanized area with commensurate levels of light, increased lighting under any of the alternatives is not expected to result in significant impacts.

Alternative 1

Alternative 1 would allow an increase in building heights up to 160 feet with development focused around the study area core and U District Station. Compared to Alternative 2, development would be lower in height and more dispersed.

AREA CONTEXT

Alternatives 1 and 2 would result in increased development intensity and density, but differ in scale and, consequently, impacts to the surrounding context. Compared to Alternative 2, Alternative 1 would result in a built skyline that is lower in height and more spread out into the surrounding neighborhood to the north, east and west. When viewed from I-5, new high-rise and mid-rise development would be a visible change to the skyline, although to a lesser degree than under Alternative 2.

NEIGHBORHOOD CHARACTER

As redevelopment occurs, it is anticipated that under-developed and vacant lots would develop to the zoning permitted under the proposed zoning. Although new development would be focused in the core area, growth would also be distributed to the north and south. The character of the study area would be one of continued urbanization.

North of NE 50th Street, changes to study area character would be limited, but would be greater than under Alternative 2. In general, increased building heights along the commercial corridors of Roosevelt Way NE and University Way NE would allow more intensive development along these corridors, compared to the other alternatives.

In the study area core, increased building heights would result in a more urban high-rise character. However, proposed development heights would remain below the height of existing high-rise towers. UW Tower and University Plaza Condos would continue to be notable and stand out above the surrounding development. (See Figure 3.3–21.1 and Figure 3.3-23.1.)

Along University Way NE, increased building heights up to 160 feet would match development in the core area to the west. To help reduce building bulk, 10 foot setbacks on buildings above 65 feet are proposed. In addition, a minimum of 60 feet would be required between towers.

South of NE 41st Street, mixed-use development with a maximum building height of 125 feet will transition to the UW campus. In this area, UW development of student facilities and housing on NE Campus Parkway contribute to increased activity and vitality in the study area. No changes to existing zoning are proposed in this area.

HEIGHT, BULK AND SCALE

To the north of the core area, proposed zoning would allow a combination of low- and mid-rise, neighborhood commercial (NC3) along the University Way NE and Roosevelt Way NE corridors. Along these commercial corridors, permitted building heights would range from 40 to 65 feet along NE Ravenna Boulevard to 85 feet south of NE 55th Street on the University Way corridor. Building heights would transition up to 125 feet immediately south of NE 50th Street.

As discussed, the tallest building heights are permitted around the core of the study area and U District Station. Building heights would range from 125 to 160 feet with a more dense configuration of buildings than permitted under Alternative 2.

To the south, building height transitions from 160 feet to 125 feet at NE 42nd Street to NE 41st Street on the east and NE 40th Street on the west adjacent to the UW West Campus edge. At a maximum height of 125 feet, building heights east of Roosevelt Way NE would be similar to the maximum 105-foot building heights in the UW MIO. West of Roosevelt Way NE, building heights would rise above the UW MIO maximum building heights of 45 to 65 feet.

Mid-rise multifamily would be permitted along I-5 in the southwest, with up to a 40 foot increase over the existing permitted building height.

Street-level views shown in Figures 3.3–18 through 3.3–22 illustrate existing and potential development under all three alternatives. In these images, existing buildings are depicted in white and potential development are shown shaded in color.

Figure 3.3–18.0 **Existing Conditions on the Ave** (University Way NE) looking north from NE 41st Street

Figure 3.3–18.1 **Alternative 1 on the Ave** (University Way NE) looking north from NE 41st Street

Note: On these and the following eight pages, the colored buildings represent potential new development under the various alternatives.

Figure 3.3–18.2 **Alternative 2 on the Ave** (University Way NE) looking north from NE 41st Street

Figure 3.3–18.3 **Alternative 3 on the Ave** (University Way NE) looking north from NE 41st Street

Figure 3.3–19.0 **Existing Conditions on the Ave** (University Way NE) looking south from NE 47th Street

Figure 3.3–19.1 **Alternative 1 on the Ave** (University Way NE) looking south from NE 47th Street

Figure 3.3–19.2 **Alternative 2 on the Ave** (University Way NE) looking south from NE 47th Street

Figure 3.3–19.3 **Alternative 3 on the Ave** (University Way NE) looking south from NE 47th Street

Figure 3.3–20.0 **Existing Conditions on NE 45th Street**
looking east from 7th Avenue NE

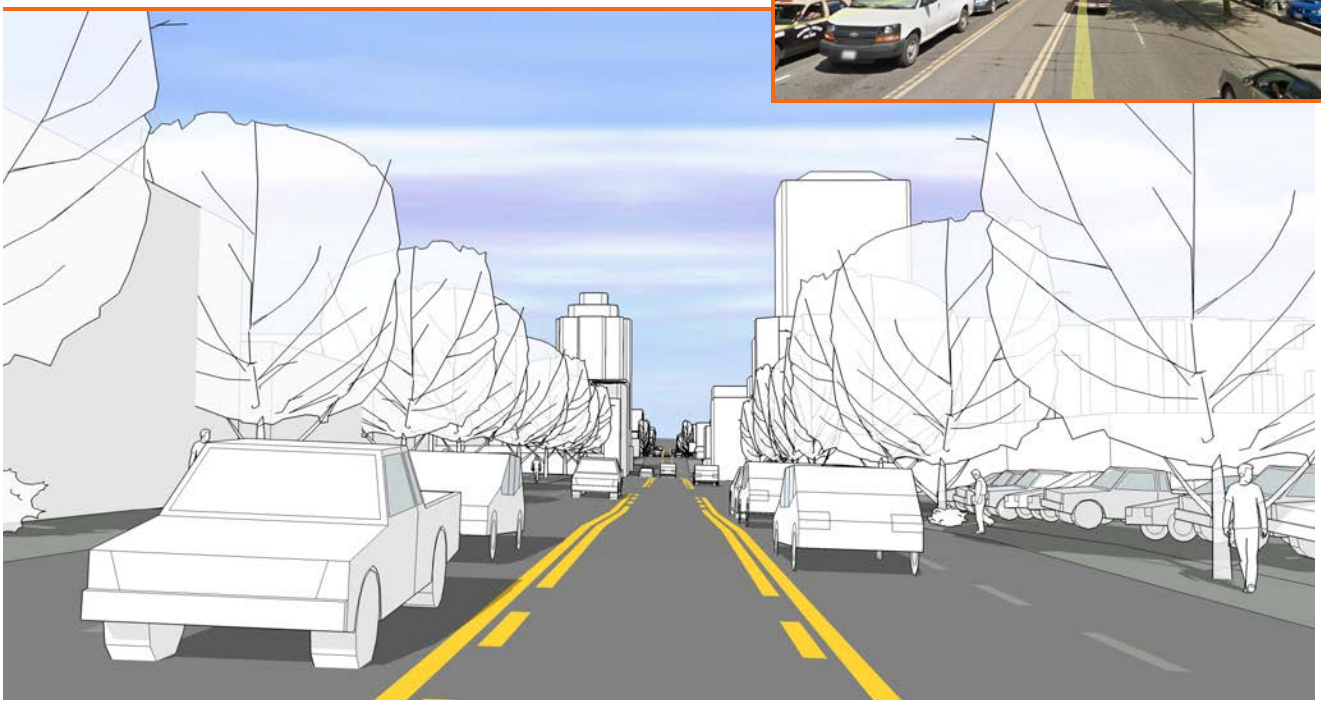


Figure 3.3–20.1 **Alternative 1 on NE 45th Street**
looking east from 7th Avenue NE

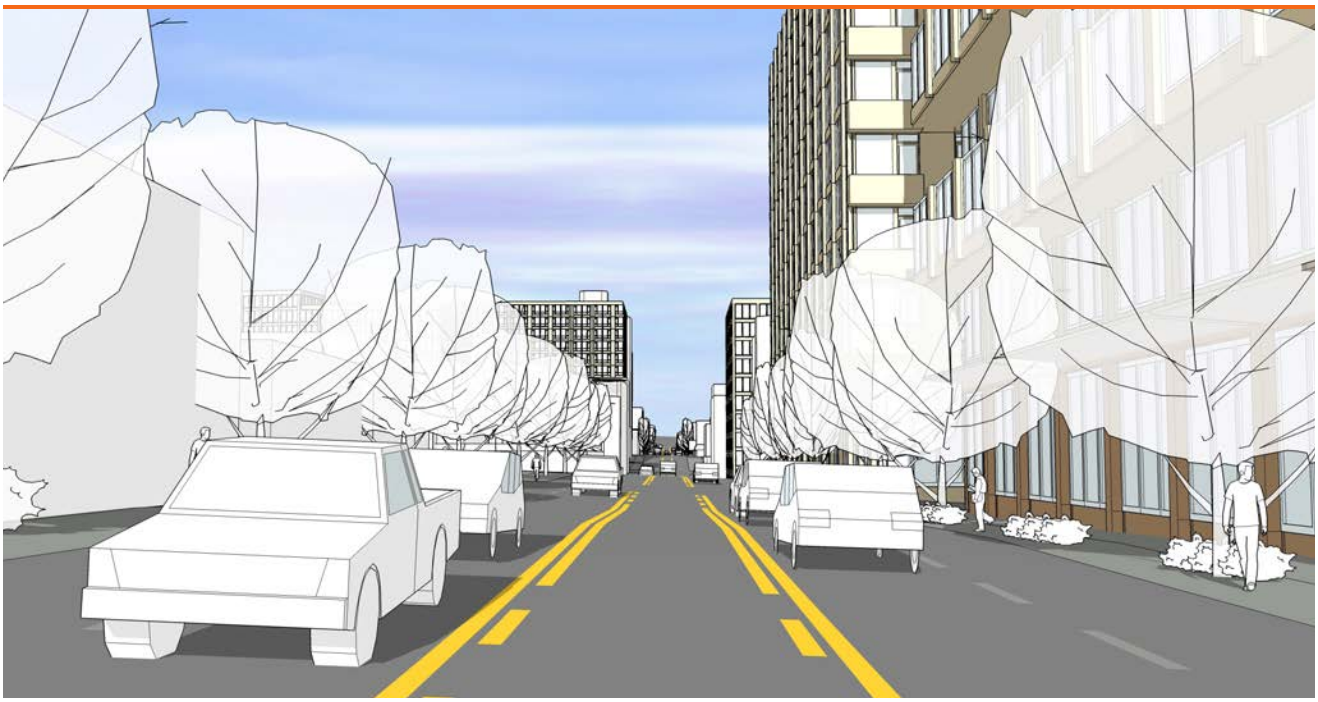


Figure 3.3–20.2 **Alternative 2 on NE 45th Street**
looking east from 7th Avenue NE

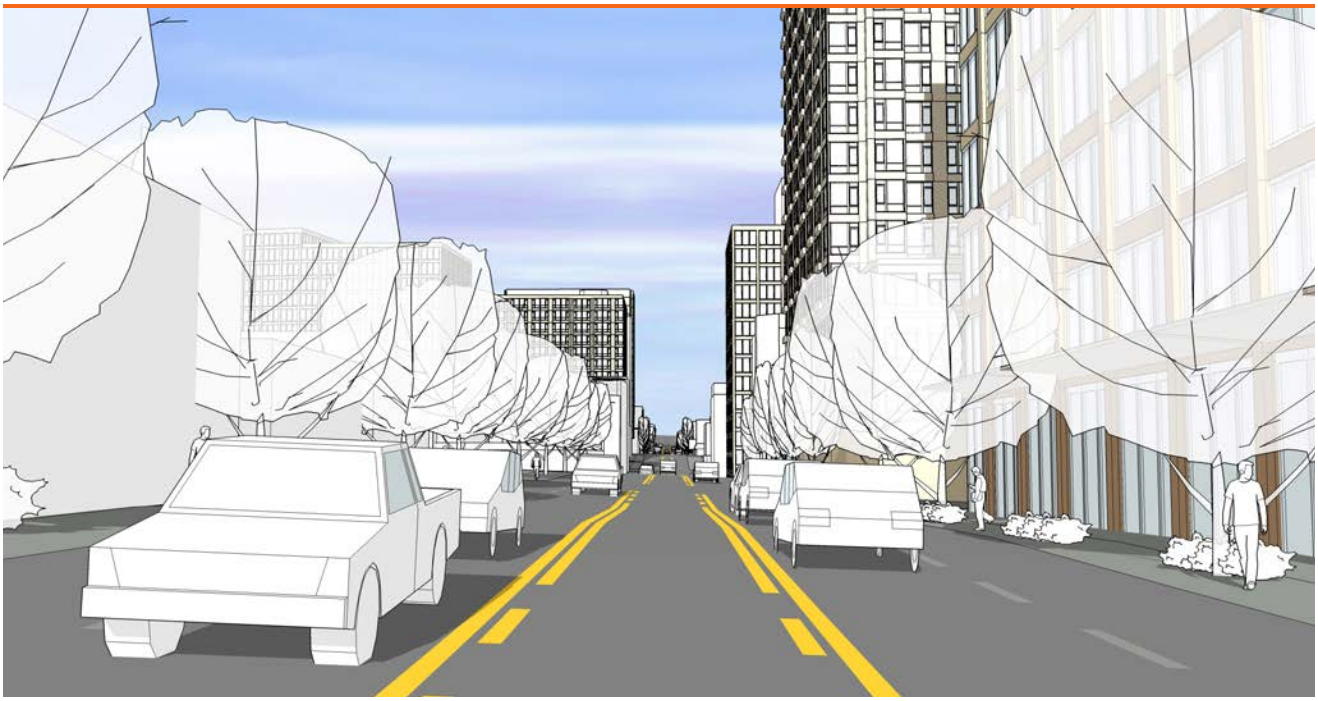


Figure 3.3–20.3 **Alternative 3 on NE 45th Street**
looking east from 7th Avenue NE

Figure 3.3–21.0 **Existing Conditions on NE 45th Street**
looking west from 15th Avenue NE

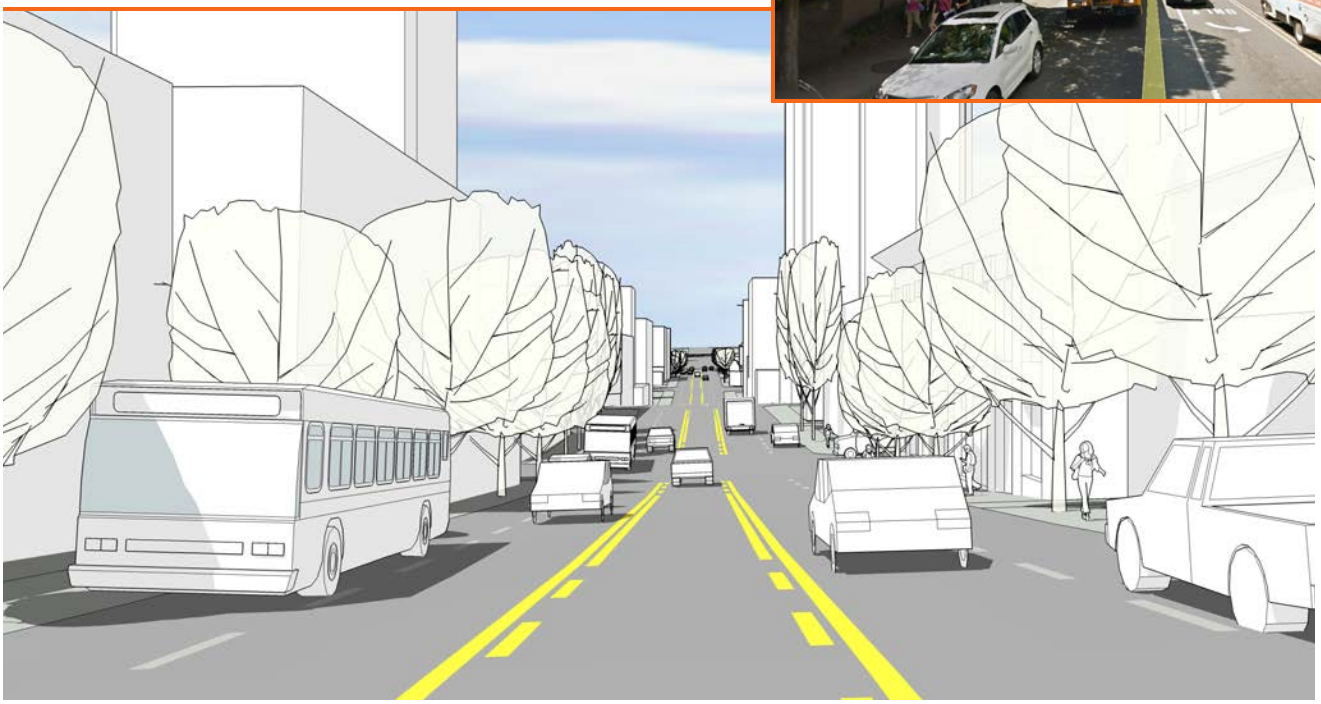


Figure 3.3–21.1 **Alternative 1 on NE 45th Street**
looking west from 15th Avenue NE

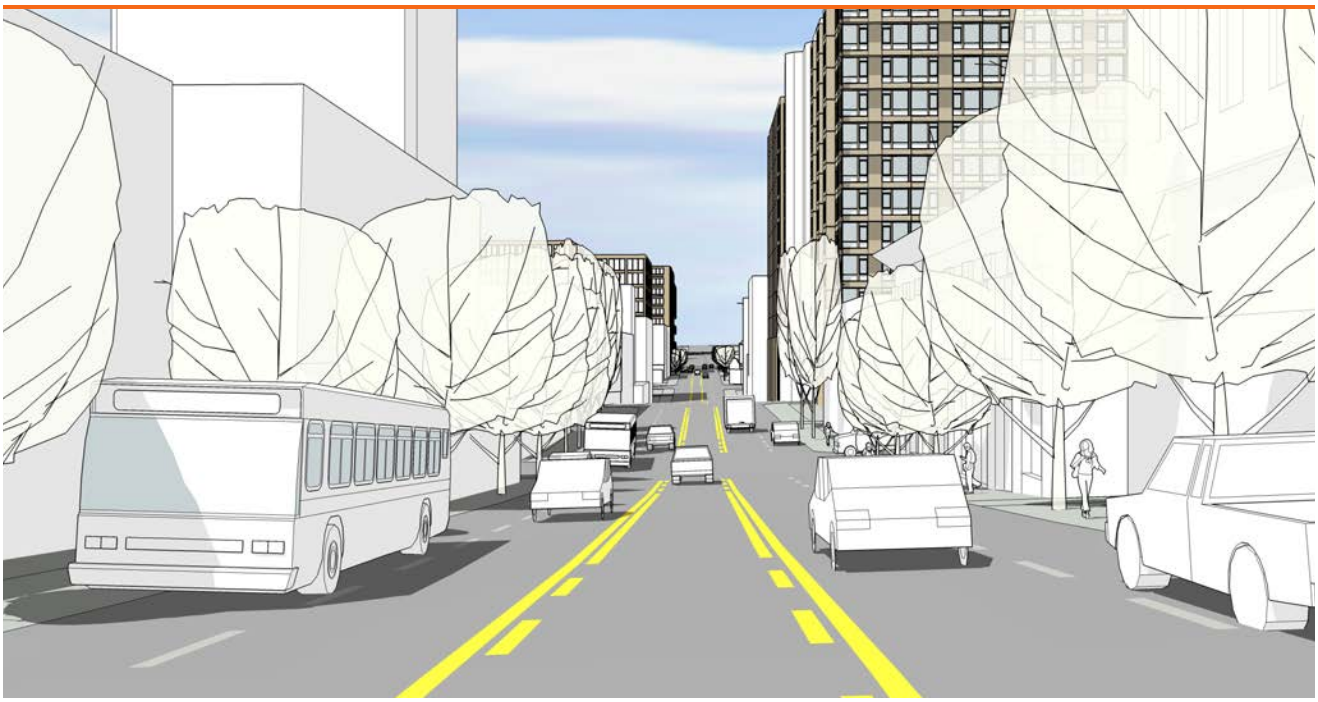


Figure 3.3–21.2 **Alternative 2 on NE 45th Street**
looking west from 15th Avenue NE

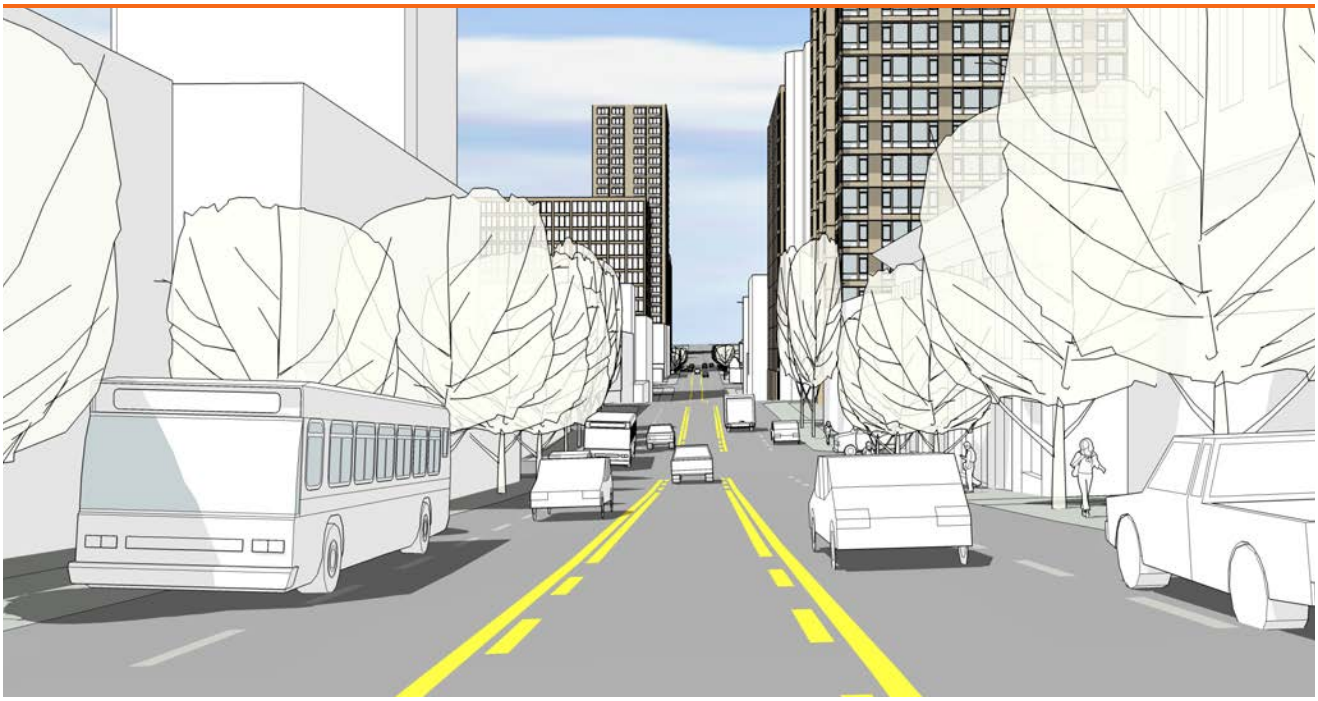


Figure 3.3–21.3 **Alternative 3 on NE 45th Street**
looking west from 15th Avenue NE

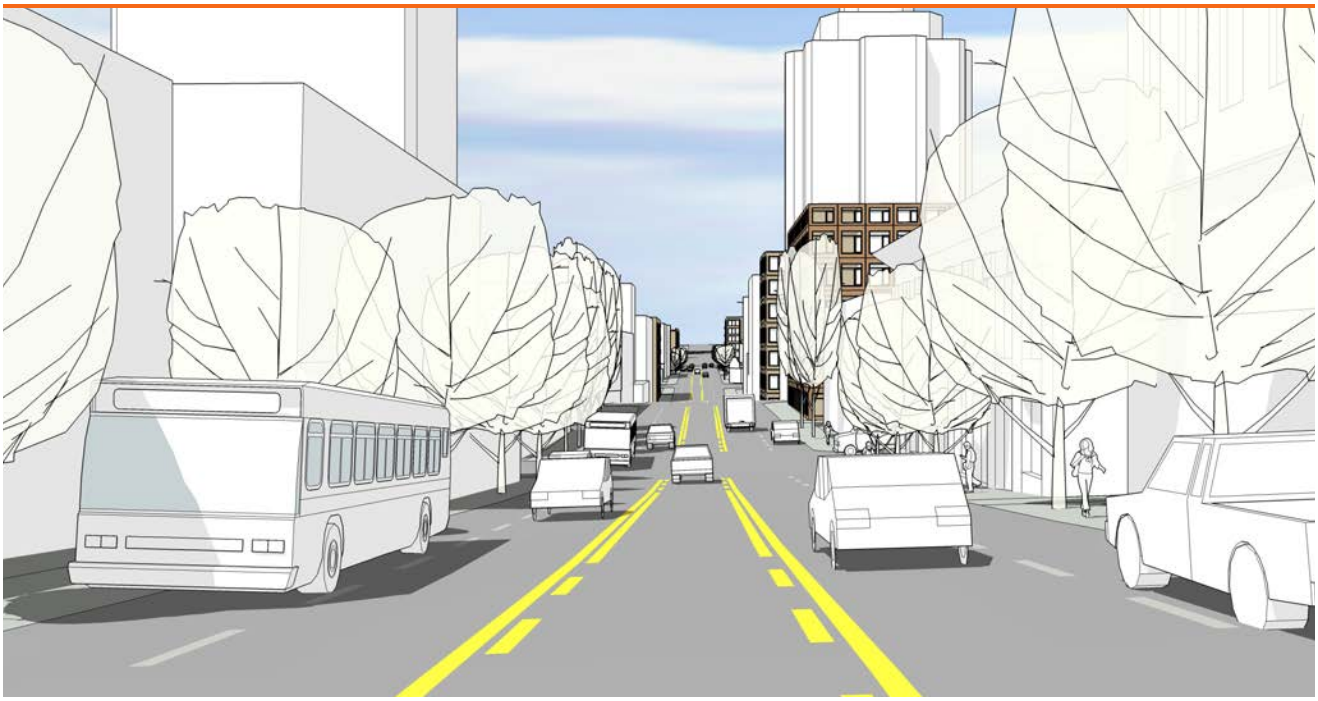


Figure 3.3–22.0 **Existing Conditions on Brooklyn Ave NE**
looking north from NE 40th Street

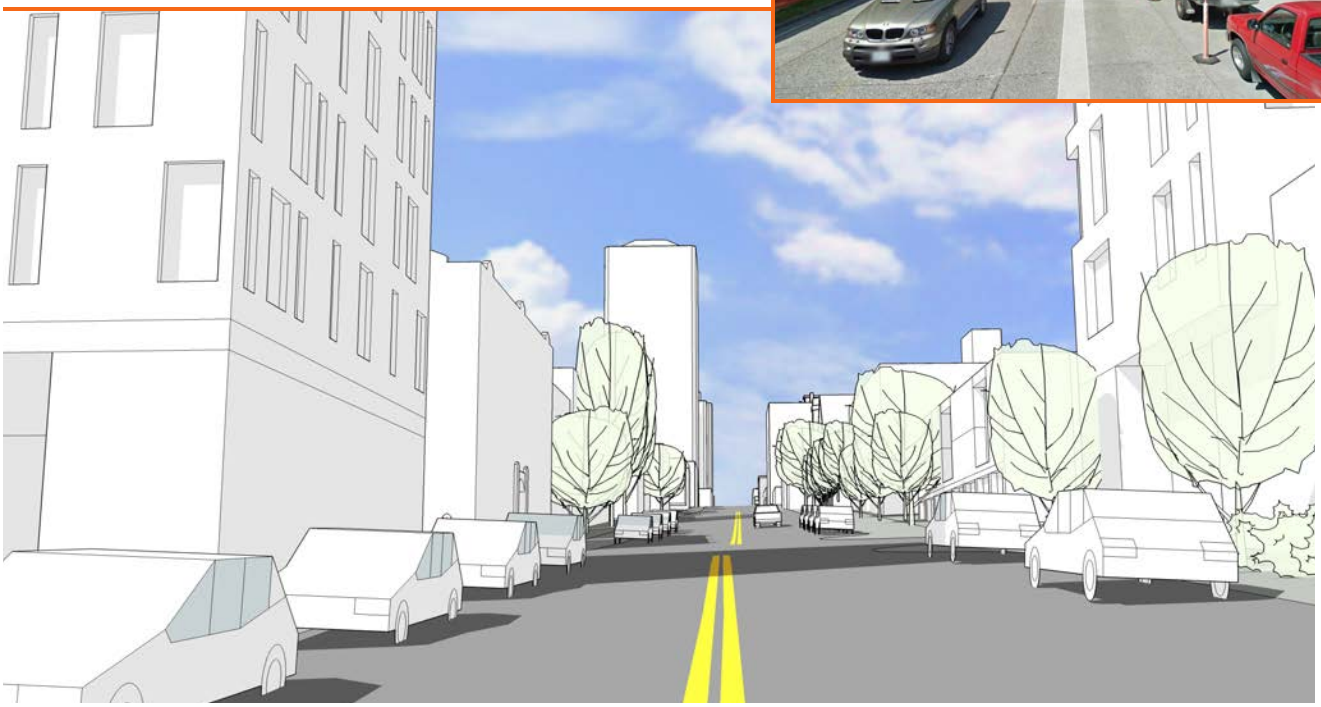


Figure 3.3–22.1 **Alternative 1 on Brooklyn Ave NE**
looking north from NE 40th Street

Figure 3.3–22.2 **Alternative 2 on Brooklyn Ave NE**
north from NE 40th Street

Figure 3.3–22.3 **Alternative 3 on Brooklyn Ave NE**
north from NE 40th Street

UNIVERSITY WAY NE—LOOKING NORTH FROM NE 41ST STREET

Ref. Figure 3.3–18.1, p. 28

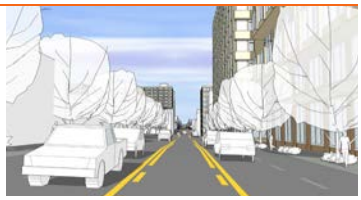
From this perspective, new high-rise development would frame the west side of the street. The proposed development standard of a 10-foot setback above 65 feet is visible and intended to reduce the appearance of scale from the street-level. The upper level setback is intended to mimic the building heights of existing development in the surrounding vicinity. At 65 feet, this setback is taller than existing development across the street, but consistent with the existing NC3P-65 zoning along this corridor.

UNIVERSITY WAY NE—LOOKING SOUTH FROM NE 47TH STREET

Ref. Figure 3.3–19.1, p. 30

From this perspective, new high-rise development would frame both sides of the street. Although building heights in this location could rise to 160 feet, the height of development on the west side of the street is limited by the proposed floor area ratio so that maximum building height is not achieved.

NE 45TH STREET—LOOKING EAST FROM 7TH AVENUE NE



Ref. Figure 3.3–20.1, p. 32

In the foreground, new development would replace an existing parking lot. Overall, new development would frame the NE 45th Street corridor. Compared to Alternative 3, a widened sidewalk would improve the pedestrian environment and street character.

NE 45TH STREET—LOOKING WEST FROM 15TH AVENUE NE

Ref. Figure 3.3–21.1, p. 34

In this view, high-rise towers are visible in the distance. In this area, widened sidewalks are found along new development. However, due to the location of the existing and assumed development pattern, this change is not easily discernible.

BROOKLYN AVENUE NE—LOOKING NORTH FROM NE 40TH STREET

Ref. Figure 3.3–22.1, p. 36

Looking north of NE 40th Street, new development is visible in the distance. In this area, widened sidewalks are found along new development. Similarly, an upper level 10-foot setback above 40 feet is intended to help reduce the apparent scale of new buildings from street-level. However, due to the location of the existing and assumed development pattern, these changes are not easily discernible in this view.

As shown in these representative street views, Alternative 1 is unlikely to result in significant incompatibilities in height bulk or scale with adjacent development.

SCENIC ROUTES

Along I-5, views toward the study area would be of continued urbanization at greater intensity and density. Although new development would be taller than currently permitted, the existing towers would remain notable in the skyline. Compared to Alternative 2, development would appear more dispersed, but lower on the skyline.

On the local streets, Alternative 1 would allow development at heights greater than is currently permitted. To the north of NE 40th Street, between I-5 and the University Bridge, heights could range from 85 feet to 125 feet. West of 15th Avenue NE, between NE 42nd Street and NE 45th Street, development of up to 160 feet would be permitted. These changes would result in the potential for increased density and intensity immediately along the scenic route. However, this change would be an incremental intensification of the existing urban character along the scenic route. Existing topography and development do not currently permit views to more distant scenic views. For these reasons, no significant impacts to the scenic route are anticipated.

SHADOWS

Appendix F contains shadow diagrams depicting probable shading cast by proposed development. Impacts specific to each of the noted parks are described below. For this analysis, maximum building height and bulk of surrounding development was modeled in order to identify worst case impacts.

University Heights Open Space. Proposed zoning to the north, east and west would result in the potential for a 20-foot increase in development height. To the south, the proposed zoning would allow a maximum of 125 feet, compared to the existing zoning maximum building height of 65 feet. During the fall months, this open space will experience limited shadows in the northeast corner in the morning hours and to the south half of the park after 3:00 pm. During the winter months, afternoon shadows will cover the entire park.

Christie Park. Around Christie Park, zoning would change from LR3 (with a maximum building height of 40 feet) to a mixed use designation with a maximum building height of 160 feet. At noon in the fall months, the south half of this space will be covered in shadow and will be completely covered by 3:00 pm. In the winter months, the entire park will be in shadow all day.

University Playground. As proposed by Alternative 1, zoning surrounding University Playground will change from LR1 (30 feet) to LR3 (40 feet) for potential development on the north, south and west sides. To the east, zoning changes from NC3 65 to mixed use with a maximum height of 125 feet. During the morning hours throughout the winter, this space will experience additional shadows in the northeast corner of the park.

Peace Park. Under this alternative there will be no change to the zoning to the west, south and east of Peace Park. To the north, proposed zoning would change from LR3 to MR and Mixed Use up to 125 feet. There will be no shadow impacts to this space under Alternative 1.

LIGHT AND GLARE

Taller buildings will have more light exposure and visibility to the surrounding neighborhoods. There will be a proportionate increase in artificial illumination with increased development. These new structures will have building lights, security lighting, signage and parking. This Illumination will be visible from I-5 and the UW West Campus.

Since development under this option is more dispersed than Alternative 2, illumination will also be more dispersed. Artificial illumination from the new structures will be visible from the UW West Campus with similar intensity as the other existing structures.

Alternative 2

Development under proposed Alternative 2 creates the tallest potential building heights and density concentrated around U District Station.

AREA CONTEXT

Alternatives 1 and 2 would result in increased development intensity and density, but differ in scale and, consequently, impacts to the area context. Compared to Alternative 1, Alternative 2 would result in a built skyline that is higher and more concentrated around the study area core. When viewed from I-5, new high-rise and mid-rise development would be a visible change to the skyline to the greatest extent of any of the alternatives.

NEIGHBORHOOD CHARACTER

As redevelopment occurs, it is anticipated that under-developed and vacant lots would develop to the height permitted under the proposed zoning. New development would be focused in the core area and the study area character would be one of continued urbanization, particularly in the core.

Alternative 2 proposes fewer changes to zoning in the area north of NE 50th Street, including no changes to the existing single-family zoning. In this area, proposed changes under Alternative 2 are focused on areas along Roosevelt Way NE, University Way NE and an area immediately north of NE 50th Street. Along NE 50th Street, the proposed mixed use zone—with a maximum building height of 240 feet—would adjoin proposed LR, NC and MR zones with maximum building heights of 40 to 85 feet.

In the study area core, proposed maximum development heights, at 340 feet, would meet or exceed the height of the existing high-rise towers. These existing towers would blend into the increased skyline height in the core area. In order to mitigate building bulk and intensity, upper level setbacks and a minimum 100 feet between towers would be required.

Along the Ave, increased building heights up to 85 feet would be lower than building heights in the core and about 20 feet taller than permitted under existing zoning. Compared to Alternative 1, Alternative 2 would retain a building height and scale that is closer to existing conditions. However, it should be noted that development heights immediately west of this corridor could be 155 to 255 feet higher than permitted along the Ave. In addition, in

the area between NE 43rd and NE 45th streets, the corridor would be bordered to the east and west by potential development heights that could be 215 to 255 feet higher than the maximum 85-foot height limit along the Ave.

South of NE 41st Street, mixed-use development with a maximum building height of 340 feet will rise above the structures on the UW campus. East of Roosevelt Way NE, maximum building heights would be 235 feet higher than the existing UW MIO maximum height of 105 feet. West of Roosevelt Way NE, this difference is greater, with the 340 height limit adjoining a maximum building height of 45 feet to 65 feet in the UW MIO.

HEIGHT, BULK AND SCALE

North of NE 50th Street, permitted development height and bulk would remain largely unchanged, except in specific small areas. No significant impacts to height bulk or scale are anticipated in this area.

Alternative 2 proposes the tallest towers at the core, rising up to 340 feet in the central core, with a minimum 100 feet separation between towers. In addition a small area of mixed use zoning with a maximum building height of 300 feet is located on the west side of 15th Avenue NE between NE 45th Street and NE 42nd Street. To provide a transition to the lower scale development north of NE 50th Street, zoning in the area between NE 47th and NE 50th Streets ranges from the existing low-rise zoning east of Roosevelt Way NE, to a maximum height of 240 feet west of Roosevelt Way NE to Brooklyn Avenue NE, to a maximum height 85 feet east of Brooklyn Avenue, including the Ave.

UNIVERSITY WAY NE—LOOKING NORTH FROM NE 41ST STREET

Ref. Figure 3.3–18.1, p. 29

The view from this perspective is very similar to Alternative 1. The primary difference is that the upper-level setback is lower, at a height of 45 feet, compared to 65 feet under Alternative 1. As with Alternative 1, the upper level setback is intended to mimic the building heights of existing development in the surrounding vicinity. At 45 feet, this setback is more similar than Alternative 1 to the existing development across the street. However, it is lower than the building heights permitted by the existing NC3P-65 zoning along this corridor. Because Alternative 2 focuses more growth in the core, it does not show distant new development on the east side of University Way NE that is visible under Alternative 1.

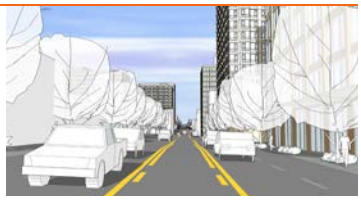
UNIVERSITY WAY NE—LOOKING SOUTH FROM NE 47TH STREET

The view from this perspective is very similar to Alternative 1. However, development in Alternative 2 is built to the full permitted height of 85 feet, so rises higher than comparable development in Alternative 1. In both cases, development would frame both sides of the street.

Ref. Figure 3.3–19.1, p. 31

NE 45TH STREET—LOOKING EAST FROM 7TH AVENUE NE

The view from this perspective is very similar to Alternative 1. New development would replace an existing parking lot and frame the 45th Street corridor. Compared to Alternative 3, a widened sidewalk would improve the pedestrian environment and street character.



Ref. Figure 3.3–20.1, p. 33

NE 45TH STREET—LOOKING WEST FROM 15TH AVENUE NE

Similar to Alternative 1, new development is visible in the distance. In this area, widened sidewalks are required in front of new development. However, due to the location of the existing and assumed development pattern, from to this view the change is not easily discernible.

Ref. Figure 3.3–21.1, p. 35

BROOKLYN AVENUE NE— LOOKING NORTH FROM NE 40TH STREET

Looking north of NE 40th Street, a new tower is visible in the distance. Because new development is more distant, finer-grain changes, such as widened sidewalks and upper-level setbacks are not easily perceived.

Ref. Figure 3.3–22.1, p. 37

As shown in these representative street views, the increased building heights anticipated under Alternative 2 are unlikely to result in significant incompatibilities in height bulk or scale with adjacent development.

SCENIC ROUTES

Along I-5, views toward the study area would be of increased urbanization, with taller buildings and greater intensity and density of development. New development would be similar in height to the existing towers, which would blend into the new skyline. Compared to Alternative 1, development would be taller, but more focused around the core of the study area.

On the local streets, development potential along a portion of the designated scenic route along NE 40th Street would remain unchanged. However, on the north side of NE 40th Street, between 8th Avenue NE and University Bridge, maximum building heights of 340 feet would be permitted. Compared to the other alternatives, this is the largest change in building heights along the corridor. However, because this development potential is limited to a relatively small area and does not result in impacts to distant scenic views, no significant impacts to this portion of the scenic route are anticipated.

Along 15th Avenue NE, proposed zoning under Alternative 2 would increase maximum building heights from 65 feet to 300 feet. However, because this development potential is limited to a relatively small area and does not result in impacts to distant scenic views, no significant impacts to this portion of the scenic route are anticipated.

SHADOWS

Appendix F contains shadow diagrams depicting probable shading cast by proposed development. Potential shade impacts under Alternative 2 are similar to those for Alternative 1. They are specifically described below.

University Heights Open Space. To the west, proposed zoning changes from LR3 (40 feet) to MR (85 feet), while to the east LR3 (40 feet) changes to NC3P 85 feet. Area to the north of this open space will remain LR2 (up to 40 feet). During the fall months, this space will experience shadows to the northeast and southeast corners during the morning hours, the south end of the space will be shaded by noon and all but the northwest tip will be covered by 3:00 pm. During the winter months, this space will be entirely covered in shadow.

Christie Park. Around Christie Park, the proposed zoning would allow a significant increase in building height, from LR3 (40 feet) to a maximum of 340 feet. In the morning hours, this park will be covered in shadow in the fall months and in the afternoon in the winter months.

University Playground. Zoning at the immediate surroundings of University Playground will remain unchanged under this alternative. However, development of towers to 240 feet in height to the east would cast shadows in the morning hours during the fall and winter months.

Peace Park. There will be no change to the zoning west, south and east of Peace Park. However, to the north, the zoning will change from LR3 to Mixed

Use up to 340 feet. Since most of the proposed development occurs on the north side of the park, no shadow impact is anticipated.

LIGHT AND GLARE

This alternative would permit the tallest buildings, therefore the most light exposure and visibility to the surrounding neighborhoods and I-5. As with Alternative 1, there will be a proportionate increase in artificial illumination with increased development. These new structures will have building lights, security lighting, signage and parking.

As in Alternative 1, artificial illumination will be visible from the UW west campus with similar intensity as the other existing structures.

Alternative 3 (No Action)

Alternative 3 would retain the existing zoning for the entire University District neighborhood.

AREA CONTEXT

Development is dispersed throughout the study area with no concentration of density. No significant change to the area context is anticipated with regard to future development of the neighborhood under current zoning.

NEIGHBORHOOD CHARACTER

No significant change to neighborhood character is anticipated with future development under current zoning. Over time, the neighborhood would become more urban, but retain its current low- and mid-rise character. Development will be dispersed throughout the study area and density will not be increased at the core and the transit center area.

HEIGHT, BULK AND SCALE

Because the entire neighborhood would retain current zoning, Alternative 3 would not have an impact on height bulk and scale. Because many of the existing buildings are not developed to maximum building height under current zoning, some increase in heights is likely with new development. However, heights of new buildings would be roughly equivalent to those in the existing development and would remain lower than those in Alternative 1 and 2.

UNIVERSITY WAY NE—LOOKING NORTH FROM NE 41ST STREET

Ref. Figure 3.3–18.3, p. 29

Compared to the action alternatives, growth would not be concentrated in the core area. Consequently, more development may occur in other areas, such as University Way NE. In this view, new development would frame both sides of the street with maximum building heights of 65 feet. This would more clearly define the corridor with a reduced view of the sky compared to Alternatives 1 and 2.

UNIVERSITY WAY NE—LOOKING SOUTH FROM NE 47TH STREET

Ref. Figure 3.3–19.3, p. 31

This view would be very similar to the action alternatives. The primary difference is that development on west side of the street is noticeably lower in height and scale than shown under the action alternatives. New development, however, would rise higher than the adjoining existing development to the north.

NE 45TH STREET—LOOKING EAST FROM 7TH AVENUE NE

Ref. Figure 3.3–20.3, p. 33

The view from this perspective would be very similar to the action alternatives. The primary differences are lower development heights on the north side of the street than either action alternative and sidewalk widths adjacent to new development would not benefit from the widening shown in the action alternatives.

NE 45TH STREET—LOOKING WEST FROM 15TH AVENUE NE

Ref. Figure 3.3–21.3, p. 35

The Hotel Deca would rise above adjoining new mid-rise development. Compared to the action alternatives, relatively little change is visible from this perspective.

BROOKLYN AVENUE NE—LOOKING NORTH FROM NE 40TH STREET

Ref. Figure 3.3–22.3, p. 37

Compared to the action alternatives, new building heights are lower and relatively little change is visible from this perspective. Under Alternative 3, existing zoning and setbacks, street level character and pedestrian experience are maintained.

Under Alternative 3, existing zoning and setbacks, street level character and pedestrian experience are maintained.

SCENIC ROUTES

Along I-5, views toward the study area would be of continued low- and mid-rise development, similar to what is currently occurring in the study area.

Along local streets, very little new development is anticipated along this corridor and views along the scenic route should not be affected.

SHADOWS

Development under Alternative 3 would result in some increased shade and shadow as described below.

University Heights Open Space. As with Alternatives 1 and 2, this space will experience shadows to the northeast and southeast corners during the morning hours in the fall months. The extreme south end of the space will be shaded by noon in the fall months. During the winter months, this space will be entirely covered in shadow except for the morning hours in the north third of the park.

Christie Park. This park will experience limited increases in shading except for the winter months in the afternoon when the space will be entirely in shadow.

University Playground. Zoning at the immediate surroundings of University Playground will remain unchanged under this alternative. Potential development to the east side would cast shadows in the morning and late afternoon hours during the winter months.

Peace Park. Zoning of the area surrounding the of Peace Park will remain unchanged under this alternative. No shadow impacts are anticipated to affect the site.

LIGHT AND GLARE

Alternative 3 has the most dispersed development pattern and less height, compared to the action alternatives. Illumination will increase proportionate to development and be dispersed throughout the study area.

3.3.3 Mitigating Measures

Height, Bulk and Scale

Potential approaches for mitigation of height bulk and scale are outlined below including recommendations contained within SMC 25.05.665:

- Limiting the height of the development
- Modifying the bulk of the development
- Modifying the development's facade including but not limited to color and finish material
- Reducing the number or size of accessory structures or relocating accessory structures including but not limited to towers, railings, and antennae
- Repositioning the development on the site
- Modifying or requiring setbacks, screening, landscaping or other techniques to offset the appearance of incompatible height, bulk and scale

In addition to the above, the U-District Urban Design Framework includes recommendations to ease height, bulk and scale impacts to the neighborhood. Recommendations include:

- Careful consideration when transitioning from high density at the core to low density areas at the north
- High-rise separation to reduce the appearance of bulk
- Mid-block pedestrian access to improve east/west connection through long blocks
- Upper level setbacks to open up views
- Development standards to encourage modulations to break up large facades
- Control the height of the lower portion of high-rise to maintain a lower-scale street edge in key locations
- Establish standards for building width to avoid monotony along a block face
- Limit the footprint of the tallest buildings for slimmer building form
- To enhance pedestrian environment, all buildings, including high-rise structures should focus design details on high quality materials in the first 30 feet above grade

- Street level setbacks for wider sidewalks
- Widening sidewalks at intersections to increase pedestrian visibility to drivers
- Landscaping and street trees
- Creation of open spaces as development incentives

Views from Scenic Routes

Impacts to private views could be reduced through height, bulk, and setback controls as part of any future zoning.

No mitigation is required or proposed to address impacts to the designated scenic route.

Shadows

Seattle's SEPA policies outline shadow possible mitigation strategies including:

- Limiting the height of development
- Limiting the bulk of the development
- Redesigning the profile of the development
- Limiting or rearranging walls, fences or plant material
- Limiting or rearranging accessory structures, i.e., towers, railings, antennae
- Relocating the project on the site

In addition to the above, the following are recommended to alleviate the impacts from shadows:

- High-rise separation to reduce shadow
- Rearranging tower orientation
- Upper level setbacks in certain locations

Light and Glare

SMC 25.05.675 K2d authorizes the City to employ measures to mitigate adverse light and glare impacts, including the following:

- Limiting the reflective qualities of surface materials that can be used in the development
- Alternative building material and lighting techniques
- Limiting the area and intensity of illumination
- Limiting the location or angle of illumination
- Limiting the hours of illumination
- Providing landscaping

In addition to the above, additional measures that can be employed include:

- Install screening, overhangs, or shielding to minimize spillover lighting impacts, particularly near residential areas
- Shield exterior lighting fixtures away from nearby residential uses
- Include pedestrian-scaled and pedestrian-oriented lighting for safety along sidewalks, parking areas, street crossings and building access points

3.3.4 Significant Unavoidable Adverse Impacts

With the proposed mitigation, no significant unavoidable adverse impacts to aesthetics, scenic routes or light and glare are anticipated. Under all scenarios, the University Playground, Christie Park and the University Heights Open Space will experience increased shade and shadow from surrounding development. Among the alternatives, these impacts will be greater under Alternatives 1 and 2.

3.4 Historic Resources

This chapter characterizes existing historic resources in the U District study area. It identifies potential impacts of possible future development patterns under the proposed alternatives and identifies potential mitigating strategies to address identified impacts.

The methodology used in this analysis is to summarize previous historic property studies, relying on these studies to identify all known historic properties forty years or older within the study area. Due to the extent of forms prepared under previous studies, the City of Seattle directed no preparation of Historic Property Inventory (HPI) or City of Seattle Inventory forms as part of this technical report development.

For purpose of this study historic property refers to above grade, built environment resources. No assessment of archaeological or traditional cultural properties was undertaken.

3.4.1 Affected Environment

This section builds upon the previous historic property work documenting the University District. Key reports:

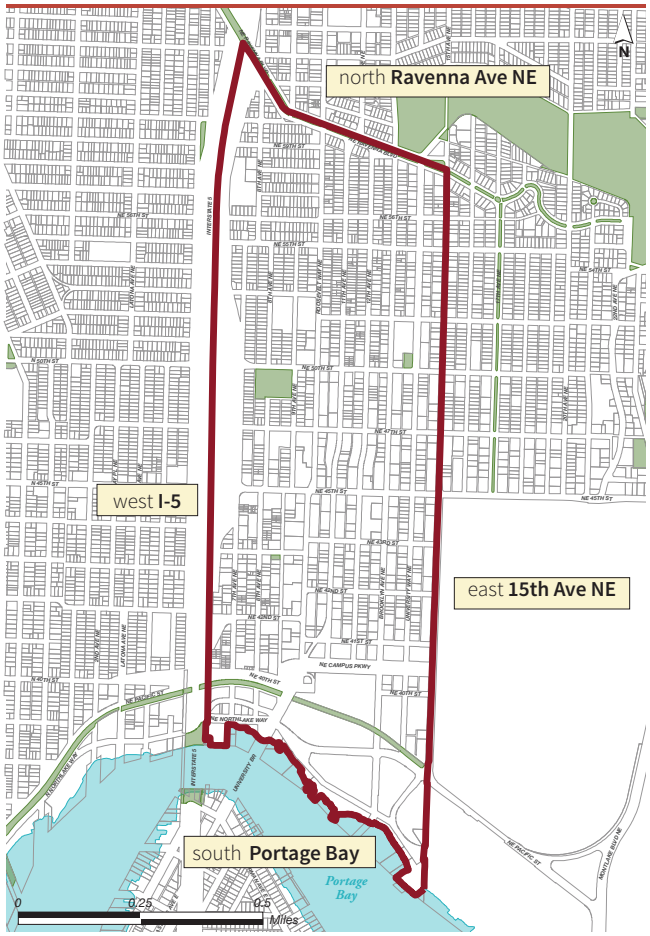
- University District Historic Survey Report (2002), prepared by Caroline Tobin and Sarah Sodt, Cultural Resource Consultants for the Seattle Department of Neighborhoods, Historic Preservation Program, and the University District Arts & Heritage Committee.
- Historic Property Survey Report: Seattle's Neighborhood Commercial Districts (2002), prepared by Mimi Sheridan, Cultural Resource Specialist for the Seattle Department of Neighborhoods.
- Early Neighborhood Historic Resources Survey Report and Context Statement (2005, rev. 2009), prepared by Greg Lange and Thomas Veith for the Seattle Department of Neighborhoods.

- Central Link Light Rail: Draft Environmental Impact Statement, Historic and Archaeological Technical Report (1998), prepared by Parametrix, CH2M Hill, Herrera and Courtois and Associates for the Sound Transit Central Puget Sound Regional Transit Authority.

Area of Potential Effect

This report addresses the potential for affecting historic properties within the Area of Potential Effect (APE) for the U District Urban Design project, consistent with the guidelines of the Department of Archaeology and Historic Preservation (DAHP). The APE boundaries coincide with the study area boundaries, as shown in Figure 3.4–1.

Fig. 3.4–1: **Area of Potential Effect (U District Study Area Boundaries)**



Review of Information

Archival research included the review of previous studies for the project area, review of historic photographs and maps, as well as inventoried properties. National Register of Historic Places (NRHP) and Washington Heritage Register (WHR) listed properties were identified using DAHP's online Washington Information System for Architectural and Archaeological Records Data (WISAARD). No review of previous archaeological studies or listed sites was conducted as part of this report.

The 2002 *University District Historic Survey Report* and 1998 *Central Link Light Rail: Draft Environmental Impact Statement, Historic and Archaeological Technical Report* contain the most detailed materials pertaining to properties within the project area. These documents are briefly summarized below.

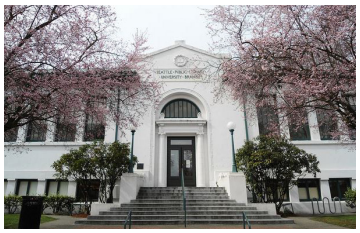
CENTRAL LINK DRAFT EIS (1998)

An historical survey was conducted of the potential Sound Transit Central Link routes by Courtois and Associates in 1998. The survey included several properties in the University District and identified

the following as eligible for the National Register of Historic Places and the State Heritage Register:

- College Inn (National Register), 4000 University Way NE
- Meany Hotel, 4507 Brooklyn Avenue NE
- University State Bank Building, 4500 University Way NE
- Annie Russell House, 5721 8th Avenue NE
- Homer Russell House, 5803 8th Avenue NE
- University Christian Church, 4731 15th Avenue NE
- University Friends Meetinghouse, 4001 9th Avenue NE
- Jensen Motor Boat Company, 1417 NE Boat Street

The College Inn and the University Branch Library are listed in the National Register of Historic Places.



University Library

UNIVERSITY DISTRICT HISTORIC SURVEY REPORT (2002)

This is the most recent and thorough examination of historic resources in the greater University District. Approximately 600 sites were surveyed, and 126 properties were selected for more in-depth analysis. Of these, twenty properties were suggested as eligible for designation as Seattle Landmarks or listing in the National Register of Historic Places. In addition to identifying potential historic properties, the report offers several recommendations, including:

- Properties recommended for designation as individual landmarks should be considered by the Seattle Landmarks Preservation Board.
- The areas recommended for historic or conservation districts should be given serious consideration.
- An oral history project building on the results of the survey should be considered.
- Additional walking tours of the University District should be developed based on the information found in the survey.
- Future developments projects, such as the Sound Transit project, could use the information gathered as part of a station design or interpretive display
- Information gathered could be useful in the revitalization of the Ave, including the rehabilitation of University Way storefronts and other design elements.

Planning & Policy Context

Any array of policies direct historic preservation activities in the University District. The following is a summary of historic preservation directives and planning policies:

DPD-DON INTERDEPARTMENTAL AGREEMENT (FEBRUARY 2014)

This agreement explains procedures that the Department of Planning and Development (DPD) and Department of Neighborhoods (DON) employ when reviewing proposed demolition, construction, and substantial alteration projects involving historic structures and potentially historic structures.

STATE ENVIRONMENTAL POLICY ACT (RCW 43.21C)

The City of Seattle has adopted State Environmental Policy Act (SEPA) policies (SMC 25.05.675.H) for protection of significant historic resources when new development may involve demolition or substantial alteration to structures more than 50 years old. Additional provisions exist for review of new construction which may impact potential archaeological sites in sensitive areas.

Policy Background

a. Historic buildings, special historic districts, and sites of archaeological significance are found within Seattle. The preservation of these buildings, districts and sites is important to the retention of a living sense and appreciation of the past.

b. Historic sites, structures, districts and archaeological sites may be directly or indirectly threatened by development or redevelopment projects.

c. Historic buildings are protected by the Landmarks Preservation Ordinance, as administered by the Landmarks Preservation Board. However, not all sites and structures meeting the criteria for historic landmark status have been designated yet.

d. Special districts have been established to protect certain areas, which are unique in their historical and cultural significance, including, for example, Pike Place Market, Pioneer Square, and the International District. These areas are subject to development controls and project review by special district review boards.

e. Archaeologically significant sites present a unique problem, because protection of their integrity may, in some cases, eliminate any economic opportunity on the site.

Policies

a. It is the City's policy to maintain and preserve significant historic sites and structures and to provide the opportunity for analysis of archaeological sites.

b. For projects involving structures or sites, which have been designated as historic landmarks, compliance with the Landmarks Preservation Ordinance shall constitute compliance with the policy set forth in subsection H2a above.

c. For projects involving structures or sites which are not yet designated as historical landmarks but which appear to meet the criteria for designation, the decision maker or any interested person may refer the site or structure to the Landmarks Preservation Board for consideration. If the Board approves the site or structure for nomination as an historic landmark, consideration of the site or structure for designation as an historic landmark and application of controls and incentives shall proceed as provided by the Landmarks Preservation Ordinance. If the project is rejected for nomination, the project shall not be conditioned or denied for historical preservation purposes, except pursuant to paragraphs 'd' or 'e' of this subsection.

d. When a project is proposed adjacent to or across the street from a designated site or structure, the decision-maker shall refer the proposal to the City's Historic Preservation Officer for an assessment of any adverse impacts on the designated landmark and comments on possible mitigating measures. Mitigation may be required to insure the compatibility of the proposed project with the color, material and architectural character of the designated landmark and to reduce impacts on the character of the landmark's site. Subject to the Overview Policy set forth in SMC Section 25.05.665, mitigating measures may be required.

e. On sites with potential archaeological significance, the decision-maker may require an assessment of the archaeological potential of the site. Subject to the criteria of the overview policy set forth in SMC Section 25.05.665, mitigating measures may be required to mitigate adverse impacts to an archaeological site.

CITY OF SEATTLE UNREINFORCED MASONRY (URM) POLICY—*proposed*

The City is considering a new policy toward unreinforced masonry buildings that would mandate seismic retrofitting over an extended time period. Public safety is the primary objective of this effort. Other objectives include:

- Preserving the City's historic and culturally significant landmarks and structures,
- Preventing the collapse of buildings deemed important to a neighborhood and the surrounding community to help preserve a neighborhood's historic character,
- Improving Seattle's resiliency to earthquake events, allowing for a quick recovery and cleanup and thereby benefiting both the City and community, and
- Minimizing an outcome that results in demolished or vacant buildings

Draft recommendations by a City-sponsored URM Policy Committee have been developed and are currently under review. A preliminary survey identified several buildings in the University District that could be impacted by the new policy. Buildings that were also noted in the 2002 University District Historic Survey Report include:

- Park Vista Apartments, 5810 Cowen Place, NE
- Varsity Arms, 4235 Brooklyn Avenue NE
- Masonic Building, 4340 University Way NE
- Gelb Building, 4534–36 University Way NE

Many URMs are designated historic structures or older buildings that contribute to their neighborhood's character. The City is considering requirement retrofits to make these buildings less vulnerable to damage.

CITY OF SEATTLE COMPREHENSIVE PLAN

The 2013 amendments to the City's comprehensive plan contain revised goals and policies for the University Community Urban Center. A few directly and indirectly address historic preservation issues:

Goals

UC-G6 A community that builds a unique physical identify on its historical and architectural resources, attractive streets, university campus, and special features.

UC-G12 A community where the historic resources, natural elements, and other elements that add to the community's sense of history and unique character are conserved.

Policies

UC-P3 Strengthen pedestrian-oriented retail on University Way through physical improvements to the street and sidewalk and encouraging private property owners to improve their properties.

UC-P12 Employ a variety of strategies to effectively provide for identified needs, including preservation of existing housing resources and code enforcement.

UC-P23 Seek to preserve and enhance the following design characteristics within the community: Pedestrian orientation and visual interest to the pedestrian, high quality, human-scaled design details in larger buildings, streetscape continuity on commercial corridors, integration between the UW campus and the surrounding community, buildings with attractive open space and low rise multi-family development that fits with the design character of adjacent single family houses.

U DISTRICT URBAN DESIGN FRAMEWORK (UDF)

Spurred by light rail and other changes in the neighborhood, the City embarked on additional planning work in 2012 as described in Chapter 2. The resulting U District Urban Design Framework provides guidance supporting preservation of historic character.

Guiding Principles

- Encourage quality and variety in the built environment, with a particular focus on good design where buildings meet the public realm.
- Build an environmentally sustainable neighborhood. In addition to the inherent environmental benefits of dense, mixed-use development served by transit, environmental performance can improve through green building, retrofits of existing buildings and green infrastructure.

Recommendations

3.5 – Urban Form

- Preserve character buildings. Pursue zoning tools to encourage preserving special buildings.

3.7 – Incentive Zoning

- Prioritize public benefits, including preservation of historic buildings.
- Study incentive zoning and alternatives, including:
- Design guidelines and development standards
- Required mitigation for environmental impacts.
- Transfer of development rights, to preserve character buildings and/or open space.

3.9 – Housing Choices – Increase Variety and Quantity of Housing

- Retain existing housing where preservation is a priority, including single family homes in single family-zoned areas, and character-defining historic structures.

Study Area History and Context

University of Washington in 1905

The University District neighborhood is located northeast of downtown Seattle along the north shore of Portage Bay and Lake Washington. Developed initially as the Brooklyn area, the arrival of the University of Washington (UW) in 1895, followed by the inclusion in the 1903 Olmsted Parks Plan, then the hosting of the 1909 Alaska-Yukon-Pacific (AYP) Exposition exerted a profound impact on the neighborhood's future.

The following outlines the six development periods for the neighborhood as established in the context statement of the 2002 University District Historic Survey Report. Development periods are distinct bursts of activity that shared a common theme or motivation. Their role is to help understand the neighborhood's transitions from establishment to the current form. Often these development periods shaped significantly localized areas within the neighborhood. Identifying these areas contributes to the overall understanding of the neighborhood and an understanding of differences within its make-up.

The development periods and their relation to the project area are shown on Figure 3.4–2, Periods of Development.

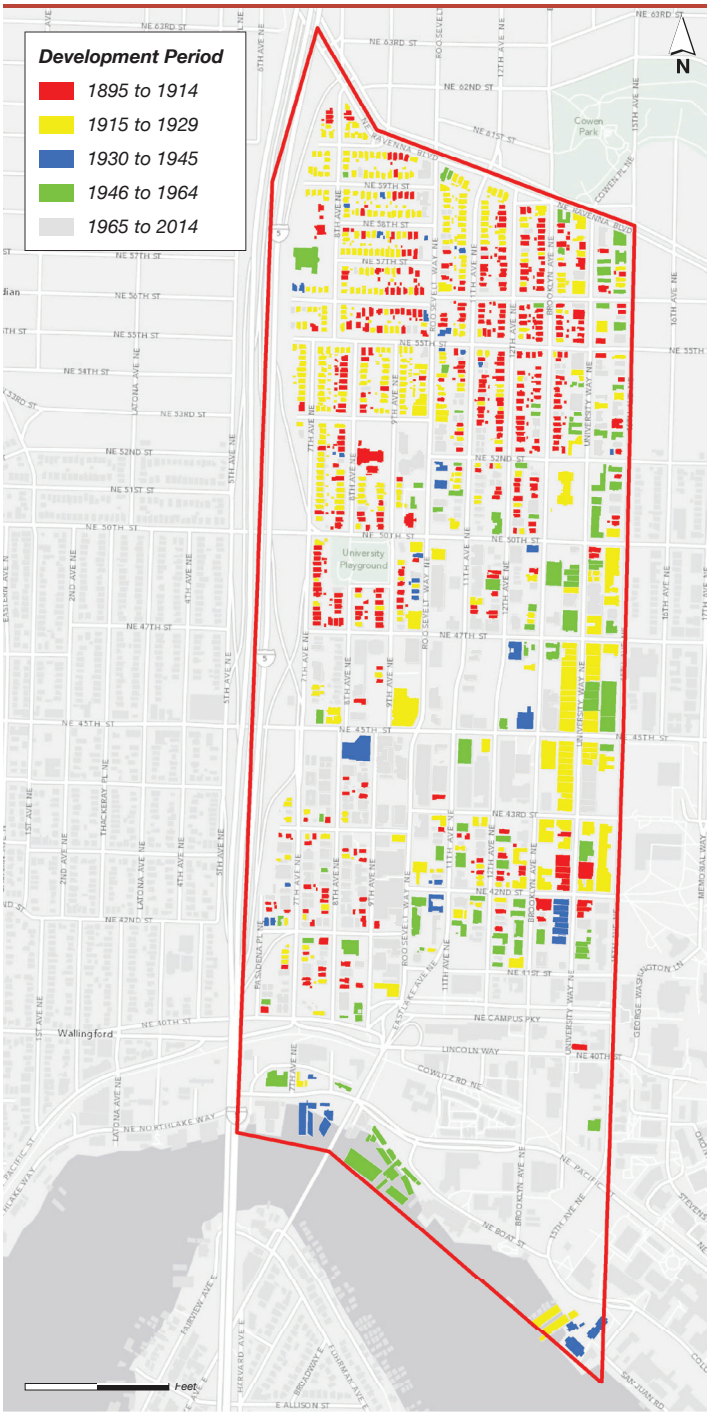
1851–1894

This pioneer development period defined the underlying street grid and established University Way as the main commercial corridor. In 1890 James Moore filed the Brooklyn Addition plat, laying out street grid with major streets oriented north-south. In 1892 the Rainier Power and Railway Company electric trolley line extended within project area to service 45th Avenue NE via University Way. No buildings remain within the project area from this period.

1895–1914

This development period marks the arrival of the UW, the influence of the AYP Exposition, and the project area's commercial and residential growth. This period spans nearly two decades and begins with the UW move to the neighborhood in 1895. Hotel and commercial development expanded in anticipation of the AYP Exposition, and by 1910 the project area contained the largest commercial buildings in the city outside of downtown. The commercial hub at the intersection of NE 45th Street and University Way was established by 1912. The city completed grading of and sidewalk construction along University Way, 15th Avenue, and Brooklyn Avenue from Portage Bay to NE 50th Street by city. NE 45th Street developed as a street car extension in 1907 from University Way to Wallingford. Fraternity and sorority development briefly took place along University Way north of NE 45th Street in 1906 prior to relocating to the University Park neighborhood by 1910. Neighborhood

Figure 3.4–2: **Periods of Development**



features including single family residences, churches, and schools began to emerge during this period.

1915–1929

Commercial and apartment development reached a peak in the project area during this period. University Bridge construction in 1919 established Roosevelt Way as main north/south arterial. University president Henry Suzzallo's 1920 recommendation that new commercial buildings in the project area reinforce the district identity by utilizing the Collegiate Gothic style of the UW campus architecture. Apartments became an established part of the project area for both faculty and students, with some of the largest apartment buildings in the city at the time. As automobile use increased, associated buildings develop along Roosevelt Way. Single family development north of 50th Street and west of Roosevelt Way expanded rapidly in the 1920s and was nearly entirely built out by 1930.

1930–1945

Little change occurred in the project area during the Depression and World War II.

1946–1964

Post World War II years included the university south campus expansion and 1953 campus parkway completion and associated high rise dormitory construction alongside the parkway. The Northlake Urban Renewal Project commenced in 1960. In 1962 the University District office Building, the first modern office building in the project area was built. Demolition, grading, and construction of Interstate 5 started in 1958 and was completed by 1965.

1965–2014

This period ushered in the growth of commercial and professional office development. In 1977 the community requested down-zoning of three residential areas, including part of University Park, but no changes to commercial zoning.

Historic Properties

The scope of this assessment addresses only above-grade historic properties. Inventory forms have been completed for many of these buildings as part of the following studies:

- University District Historic Survey Report (2002), prepared by Caroline Tobin and Sarah Sodt, Cultural Resource Consultants for

the Seattle Department of Neighborhoods, Historic Preservation Program, and the University District Arts & Heritage Committee.

- Central Link Light Rail: Draft Environmental Impact Statement, Historic and Archaeological Technical Report (1998), prepared by Parametrix, CH2M Hill, Herrera and Courtois and Associates for the Sound Transit Central Puget Sound Regional Transit Authority.

NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places (NRHP) was created by the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. 470 et seq). The Register is the official compilation of the nation's significant historic, archaeological, and cultural sites. Designated historic properties may be locally or nationally significant, and must meet the Criteria for Evaluation:
The quality of significance in American history, architecture, archeology, 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*

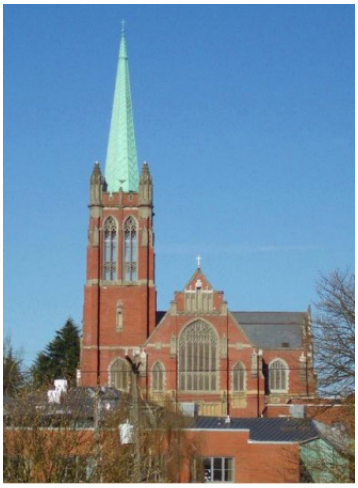
D. *That have yielded or may be likely to yield, information important in history or prehistory.*

The Register is administered the National Park Service (NPS) through Federal Regulation 36 CFR 60. Nominations to the Register are reviewed and submitted to the Keeper of the Register by State Historic Preservation Officers or Tribal Historic Preservation Officers (SHPO). Federal agencies may also submit nominations directly to NPS. The Department of Archaeology and Historic Preservation (DAHP) administer the National Register program in Washington State.

Once listed, income-producing properties are eligible for a federal historic preservation tax incentive for certified rehabilitations. In addition, listed

properties affected by federal actions or licenses are subject to Section 106 of the NHPA. Under this section (36 CFR 800), federal actions impacting listed properties are reviewed by the federal Advisory Council on Historic Preservation (ACHP) to determine if affects are adverse and if such actions may be avoided or mitigated. The NRHP does not prohibit demolition or alterations to listed properties.

University Library



Blessed Sacrament Church

Seattle Fire Station #17

Wilsonian Apartments

WASHINGTON HERITAGE REGISTER

The comparable listing of significant Washington State historic sites is maintained by DAHP (RCW 27.34.200). All NRHP sites are also listed on the Washington Heritage Register (WHR). Eligibility for the WHR may be based on local or statewide significance. Nominations are reviewed by the State Advisory Council on Historic Preservation. Listed properties must meet the following eligibility qualifications:

- A building, site, structure or object must be at least 50 years old. If newer, the resource should have documented exceptional significance.
- The resource should have a high to medium level of integrity, i.e. it should retain important character defining features from its historic period of construction.
- The resource should have documented historical significance at the local, state or federal level.
- Review and listing requires the consent of the owner.

Listing on the WHR provides some consideration for properties in the SEPA process. Local jurisdictions develop their own rules for compliance. Listed properties may also be subject to Executive Order 05–05. This provides for DAHP review of capital projects supported entirely or in part by state funds.

CITY OF SEATTLE LANDMARKS PROCESS

The City of Seattle's Landmarks Preservation Ordinance (SMC 25.12) creates the Seattle Landmarks Preservation Board and a register of locally significant properties (SMC 25.12.350). The Board reviews nominations for properties that must be at least 25 years old, retain physical integrity, and meet one or more of the following criteria:

a. *It is the location of, or is associated in a significant way with, a historic event with a significant effect upon the community, City, state, or nation; or*

b. It is associated in a significant way with the life of a person important in the history of the City, state, or nation; or

c. It is associated in a significant way with a significant aspect of the cultural, political, or economic heritage of the community, City, state or nation; or

d. It embodies the distinctive visible characteristics of an architectural style, or period, or a method of construction; or

e. It is an outstanding work of a designer or builder; or

f. Because of its prominence of spatial location, contrasts of siting, age, or scale, it is an easily identifiable visual feature of its neighborhood or the city and contributes to the distinctive quality or identity of such neighborhood or the City.

Following designation, controls and incentives agreements are negotiated with property owners, and a designating ordinance is prepared for City Council action. As a Certified Local Government (CLG), the Seattle Landmarks Preservation Board also participates in the national historic preservation program.

Findings

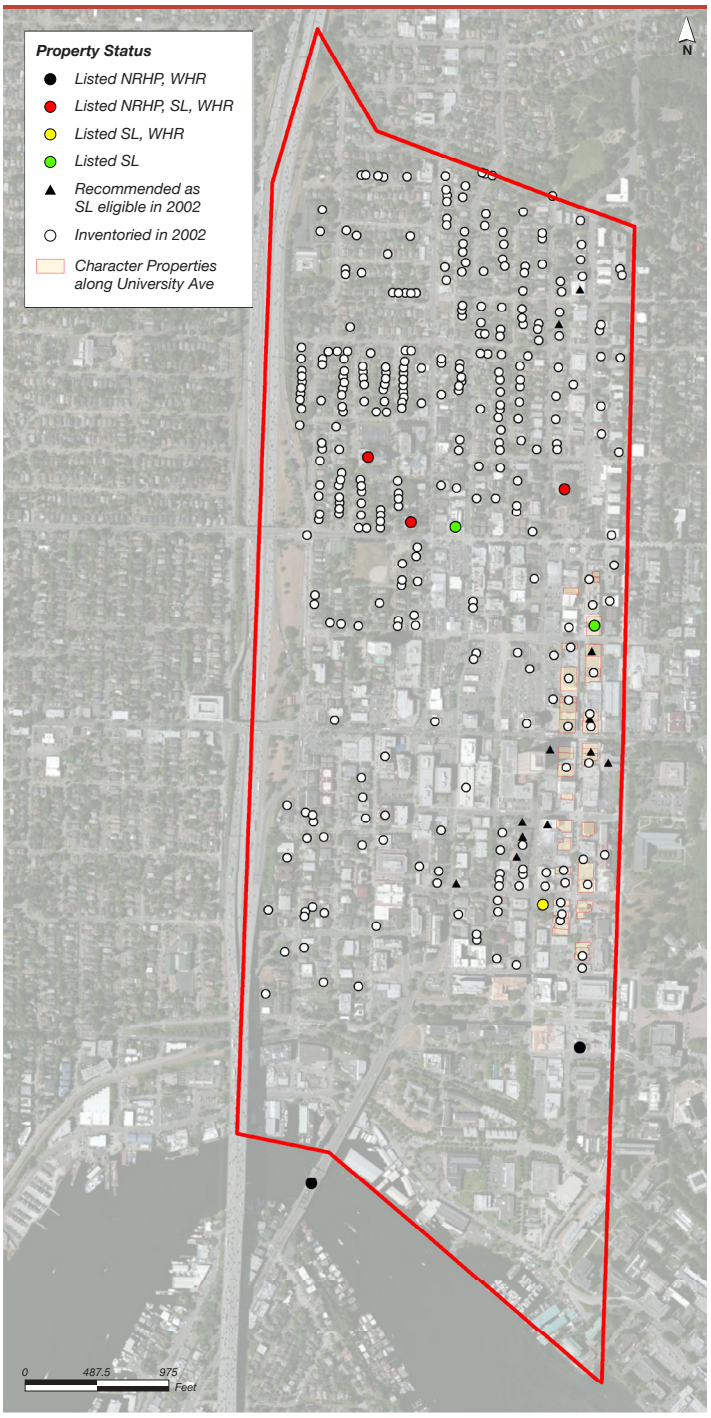
Property types within the project area include buildings, parks, and circulation networks. (In the list below, SL refers to City of Seattle Landmark eligible properties based on the 2002 University District Historic Survey Report.)

BUILDINGS

The project area includes over 1500 buildings. (Refer to Figure 3.4–3 and Table 3.4–1 for the status of key historic properties.) Of these:

- Two (2) are listed to the National Register of Historic Places (NRHP) and Washington Heritage Register (WHR):
  Ye College Inn, 4800 University Way NE
  University Bridge
- Three (3) are listed to the NRHP, WHR, and as a City of Seattle Landmark (SL):
  University Branch Library, 5009 Roosevelt Way NE
  University Heights School, 5031 University Way NE
  Church of the Blessed Sacrament, 5050 8th Avenue NE

Figure 3.4–3: **Property Status**



- One (1) is listed as an SL and to the WHR:
  University Methodist-Episcopal Church, 4142 Brooklyn Avenue NE
- Two (2) are listed as an SL:
  Fire Station No. 17, 1010 NE 50th Street
  Wilsonian Apartments, 4700 University Way NE
- Twelve (12) were recommended as eligible for SL listing through the 2002 survey
- 323 have been inventoried by the City of Seattle through digital form preparation.

The project area includes several notable character features that have not been evaluated for NRHP, WHR, or SL eligibility:

- Commercial hub established at NE 45th Street and University Way
- First concrete building built in the neighborhood: 1907, 14th Avenue NE (University Way NE) near NE 42nd Street
- Collegiate Gothic style utilized on the Commodore (1925) and Duchess (1927) apartments at the intersection of 15th Avenue NE and NE 40th Street, attributed to Henry Suzzallo's commercial core identity anchor through architectural style
- Apartment buildings from the 1920s within the commercial area
- Single family residential concentration north of NE 50th Street and west of Roosevelt Way NE
- Low-rise commercial buildings along University Avenue

Table 3.4–1: **Property Status**

Address	Historic Name	Common Name	Listing Status	DAHP Historic ID
4000 University Way NE	Ye College Inn		NRHP, WHR	409
	University Bridge		NRHP, WHR	1551
5009 Roosevelt Way NE	Seattle Public Library University Branch		NRHP, WHR, SL	1402
5031 University Way NE	University Heights School		NRHP, WHR, SL	2414
5050 8th Ave NE	Church of the Blessed Sacrament, Priory & School		NRHP, WHR, SL	482
1010 NE 50th St	Fire Station No. 17		SL	
4700 University Way NE	Wilsonian Apartments	Wilsonian	SL	
4142 Brooklyn Avenue NE	University Methodist–Episcopal Church		WHR, SL	425
1303 NE 45th St	Neptune Building	Neptune Theatre	Eligible 2002	
1305 NE 43rd St	Washington Manor Apartments	University Manor Apartments	Eligible 2002	
4200 11th Ave NE	El Monterey Apartments	El Monterey Apartments	Eligible 2002	
4225 Brooklyn Ave NE	Canterbury Court	Canterbury Court	Eligible 2002	
4235 Brooklyn Ave NE	Varsity Arms	Varsity Arms	Eligible 2002	
4245 Brooklyn Ave NE	Felch House	Felch House	Eligible 2002	
4337 15th Ave NE	Malloy Apartments	Malloy Apartments	Eligible 2002	
4340 University Way NE	Masonic Building		Eligible 2002	
4536 University Way NE	Gelb Building		Eligible 2002	
4560 University Way NE	College Center Building		Eligible 2002	
5514 Brooklyn Ave NE			Eligible 2002	
5601–07 University Way NE	Maxwell Building		Eligible 2002	

CIRCULATION NETWORKS

The project area includes a variety of streets, avenues, parkways, ways, alleys, and sidewalks. None have been listed to or identified as eligible for listing to the NRHP, WHR, or as City of Seattle Landmarks.

They provide the anchoring grid network that defines building placement, orientation, circulation and overall project area. Alleys provide important mid-block circulation corridors.

PARKS

The study area includes several parks, including Peace, Northlake, and Christie parks. The University Playground is the only historic park, established in 1911 as one of the City's first enclosed playfields. None have been listed to or identified as eligible for listing to the NRHP, WHR, or as City of Seattle Landmarks.

3.4.2 Significant Impacts

The following sections address potential impacts to listed, and potentially eligible historic property resources within the APE.

The University District is poised for significant population growth over the coming years. The opening of the Sound Transit station at NE 43rd Street and Brooklyn Avenue NE in 2021 and the ongoing need for student housing fuel that growth. In general, rapid population growth endangers low rise older buildings as land values begin to exceed building values, and economics work against retention. Rezoning could accelerate the real estate market pressures in the area and potentially impact the older character buildings as well as the recognized historic buildings. For reference in the following sections, see Figure 3.4–4, Alternative 1 Overlay Map, and Figure 3.4–5, Alternative 2 Overlay Map. These two maps overlay the proposed alternatives over the Property Status Map (Figure 3.4–3), to illustrate the relationship between the alternatives and listed properties.

Impacts Common to All Alternatives

The SF 5000 zoning is retained in two areas in the northern part of the study area—one roughly bounded by NE 50th Street north to NE Ravenna

Boulevard and 9th Avenue NE west to Interstate 5, and one bounded by NE 52nd Street north to NE Ravenna Boulevard and a half-block west of University Way NE west to a half-block east of Roosevelt Way NE. These older single-family residential areas may be affected over time by the projected increased development and density around them, resulting in mounting pressure to convert large homes into multi-family or congregate dwellings, or to demolish in favor of larger buildings.

All alternatives potentially affect designated historic buildings and those identified as eligible for historic status. Impacts could include demolition, inappropriate rehabilitation and re-use, or changes in the physical context (i.e. new construction adjacent or across the street) as a result of development pressure that could damage integrity of individual buildings and the character of the street. Conversely, a more economically vibrant community could spur investment in character and historic properties, particularly along University Way NE if they are protected, and could advance historic designations among the apartment buildings in the study area to take advantage of rehabilitation tax incentives.

Alternative 1

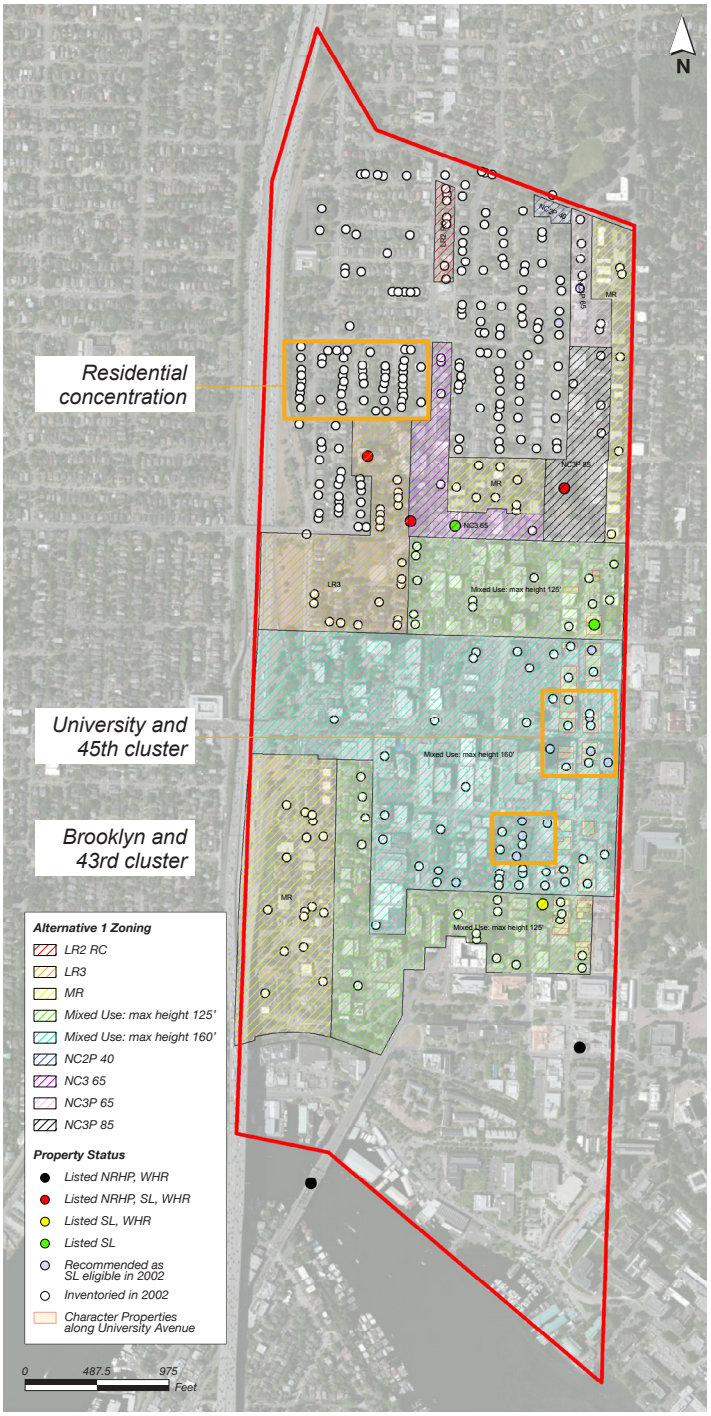
Alternative 1 provides for mid-rise heights across a large area of the district core—particularly north and southwest—affecting slightly more registered and eligible historic properties than Alternative 2. Overall, it is conceivable that lower allowable heights compared to Alternative 2 will moderate the inherent development pressure expected, but it could also spread to a wider area.

Both action alternatives would lead to rezones of the Core Area and adjacent areas of the study area for denser development. The highest densities in both alternatives center on the area roughly bounded by NE 41st Street north to NE 50th Street and between 15th Avenue NE on the east and Interstate- 5 on the west. The tallest building heights would be permitted in this Core Area, with lower allowable heights gradually radiating to the north and south.

Both action alternatives recognize existing commercial corridors and nodes and provide for additional maximum heights. Given the small lot nature of the commercial properties, developers could aggregate adjacent lots to build larger, taller buildings that will affect the existing character of the University Way commercial corridor, as well as the neighborhood commercial nodes along Roosevelt Way NE. Both alternatives call for setbacks at varying heights to reinforce the existing street character along University Way NE.

Two clusters of properties along University Way NE are identified as eligible for historic status. One area centers near Brooklyn Avenue NE and 43rd Street NE very close to the site of the new Sound Transit station. This cluster of eligible properties includes three low-rise apartment buildings—Canterbury Court, Washington Manor, and the Varsity Arms—which could face particular pressure. The other cluster lies roughly around University Way NE and NE 45th Street.

Figure 3.4–4: **Alternative 1 Overlay**



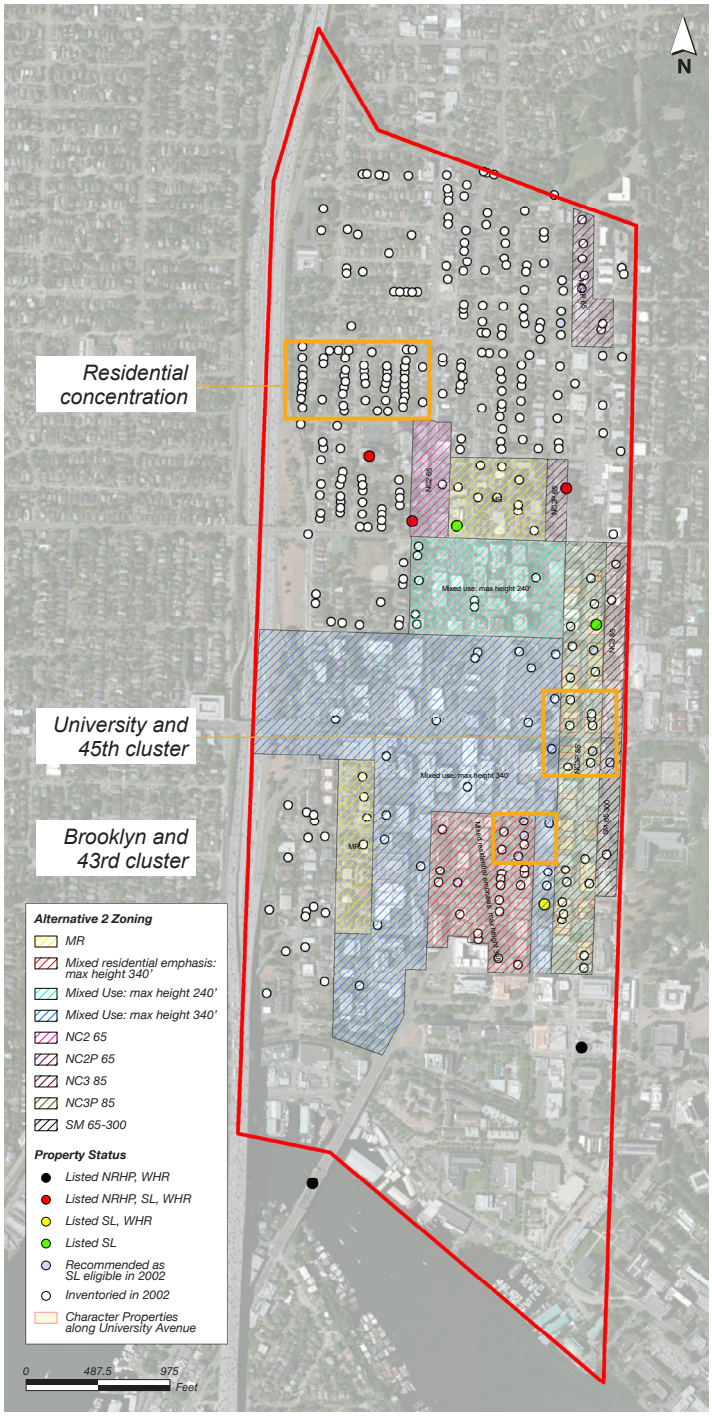
Compared to Alternatives 2 and 3, Alternative 1 proposes zoning that would allow slightly higher intensity development to adjacent to some portions of the existing SF 5000 area north of NE 50th Street. Over time, development of these higher intensity areas may create greater pressure for conversion of single family residential uses. However, because there is ample development capacity within the balance of the study area, this is unlikely to happen within the 20-year planning horizon considered in this EIS. Because development will occur on an incremental basis over time, the City will be able to monitor and address potential land use imbalances through the GMA comprehensive planning process.

In the northwest corner of the study area, numerous homes were surveyed during the 2002 University District Historic Survey project, indicating a high level of interest in the moderately scaled neighborhood north of the National Register-listed Church of the Blessed Sacrament.

Alternative 2

Alternative 2 is a more intense build-out in a smaller area of the district core, affecting slightly fewer listed and/or eligible historic properties than Alternative 1. Overall, impacts to historic properties will be similar to Alternative 1; however, the concentrated development core may exert less development pressure on the district as whole but greater pressure in the Core Area.

Figure 3.4–5: **Alternative 2 Overlay**



Alternative 3 (No Action)

Even without zoning changes, the pressure on historic resources is likely to continue and increase over time. However, compared to the action alternatives, there is likely to be less redevelopment pressure in the Core Area. Because future development is likely to be relatively more dispersed, there may be greater pressure outside of the Core Area, north of NE 50th Street.

3.4.3 Mitigating Measures

Mitigating strategies for all alternatives address the same issues. Historic buildings are often cited as contributing to the essential sense of place for the U District study area. The low-rise streetscape along University Way NE, the collection of distinguished masonry apartment buildings, the impressive civic, community, and religious properties, and the intact neighborhoods all work together to create a distinct neighborhood within the city. These properties are referenced in all the planning documents and will be used to inform the nature of new and infill development.

Survey and Inventory

A good deal is known about the historic and potential historic structures that exist in the University District, but much remains to be discovered. In 2002, 337 properties were of sufficient interest to include in the University District Historic Survey Report. Budget issues restricted in-depth analysis to 126 or these properties. Preliminary analysis indicates that apartment houses from the 1910s through the 1930s may be eligible NRHP, WHR, or Seattle Landmark listing as a group. Mid-century properties, including both apartments and commercial buildings, should be surveyed to determine eligibility for NRHP, WHR, or Seattle Landmark listing. Groupings of intact single family residences should be evaluated for potential NRHP, WHR, or Seattle Landmark eligibility as a historic district. (See Figure 3.4–6, Property Analysis.)

Figure 3.4–6: **Property Analysis**

Funding for the Department of Neighborhoods Historic Preservation Office could be considered to support additional survey and nomination work.

- Revisit the 2002 survey to expand the number of researched inventoried properties. Expand the survey range to include mid-century buildings and those built post-1962.
- Conduct a new survey to determine whether the collection of apartment buildings from the 1910s through 1930s might be eligible for nomination to the National Register of Historic Places and as Seattle Landmarks.

Historic Registers

At least a dozen properties in the project area that were identified in 2002 as eligible for the National Register of Historic Places and/or as Seattle Landmarks have not as yet been added to the registers. (See Figure 3.4–3, Property Status.) New survey efforts are likely to yield additional eligible properties and perhaps districts. Funding should be provided to allow identified eligible properties to progress through the Seattle landmarks nomination process. In addition assistance could be provided to owners interested in nominating properties to the National Register of Historic Places. Both the national and Seattle landmark processes provide important incentives for rehabilitation. The Seattle Landmarks designation also provides protections against demolition and/or inappropriate alterations.

Design Guidelines

Revised design guidelines for the University District are anticipated after the new zoning is determined. New guidelines should take design cues from the character and historic buildings, particularly along the Ave, in the vicinity of the new Sound Transit facility at NE 43rd Street and Brooklyn Avenue NE, and within the multi-family zones. Besides guidelines on scale, height, mass and materials of new and infill buildings, attention should be given to signage, accessibility issues, and appropriate seismic and energy retrofits in older buildings.

Incentives for Retention and Rehabilitation

Market-driven forces will likely increase development pressure on registered and/or eligible buildings in the coming years. The arrival of Link Light Rail, continuing regional growth, increased allowable density, and the potential for a new City unreinforced masonry (URM) policy all create a potentially precarious environment for historic buildings in the district. (See Figure 3.4–3, Property Status.) Incentives can be used to help counter those forces is necessary. Consideration should be given to incentives, including:

- Historic rehabilitation tax incentives consisting of the 20% federal tax credit for National Register properties and the locally-based special property tax valuation for Seattle Landmark properties.
- Transferable development rights, which should be analyzed for their potential in the University District.

- Financial incentives in the form of design assistance and grants or low-interest loans for building and storefront improvements could be considered. Specific programs could be developed in coordination with the URM Policy Committee to address seismic concerns. A block-level approach to shared engineering studies could help property owners address seismic issues in a more cost-effective way.
- Support for a Main Street-style program along the Ave to assist small businesses, develop a viable business mix, activate vacant space, coordinate promotional activities, and provide design assistance to building and shop owners.

Single-family Areas

Monitor development trends and capacity in the areas surrounding the SF 5000 zone. Address potential pressure for conversion of single family residential areas through policy and regulatory measures. In addition, help to maintain a strong residential character through regular inspections for code violations.

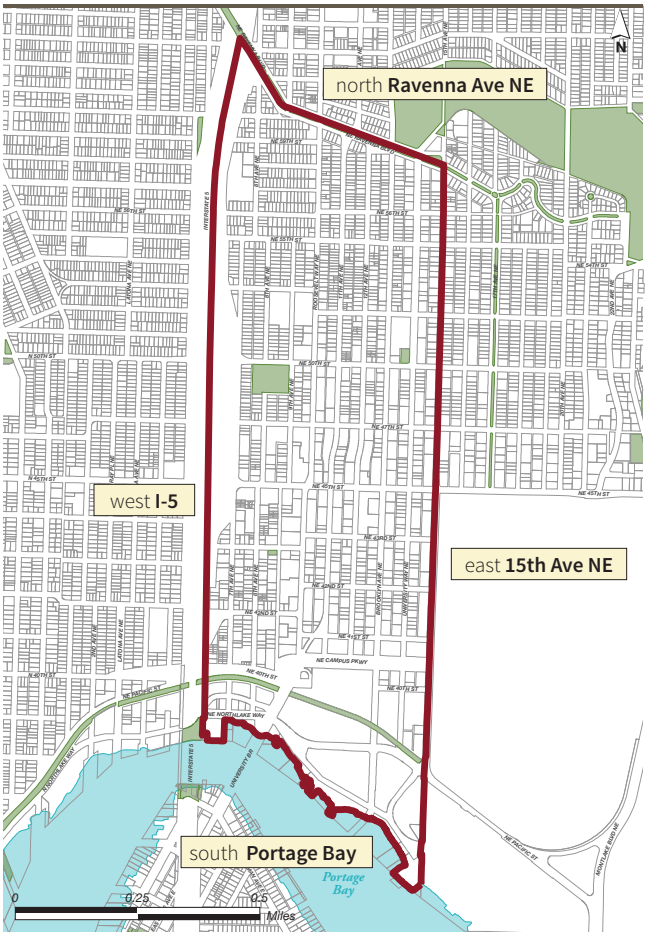
3.4.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to historic resources are anticipated under any of the proposed alternatives.

3.5 Transportation

This section presents a multimodal transportation analysis prepared to evaluate the potential impacts from enacting proposed zoning changes in the U District study area. The section presents existing transportation conditions in the U District, as well as future transportation conditions under three alternatives—one "No Action" alternative representing the condition if zoning remains the same and two "action" alternatives with new zoning provisions. Significant transportation impacts and potential mitigation measures are identified for each future action alternative based on the policies and recommendations established in state and local plans.

Fig. 3.5–1
U District Study Area Boundaries



3.5.1 Affected Environment

This section describes the existing conditions of the area that would be affected by the proposed action alternatives.

The U District study area is located just north of Portage Bay in Seattle. The study area is adjacent to the Wallingford, Roosevelt, and Ravenna neighborhoods, as well as the University of Washington (UW) campus. As shown in Figure 3.5–1, the study area is bounded by Interstate 5 (I–5) to the west, 15th Avenue NE to the east, NE Ravenna Boulevard to the north, and Portage Bay to the south.

Existing Transportation Network

This section describes the existing transportation network in the U District for all modes, including pedestrians, bicycles, transit, autos, and freight.

PEDESTRIAN NETWORK

Pedestrian access to the study area is limited on the west side by I–5. Pedestrians can access the U District from the west at NE Ravenna Boulevard, NE 50th Street, NE 45th Street, NE 40th Street, the Burke-Gilman Trail, and NE Northlake Way. Several of these crossings are in close proximity to each other at the south end of the study area. However, the distance between the NE 40th Street, NE 45th Street, NE 50th Street, and NE Ravenna Boulevard crossings range from approximately a quarter of a mile to three-quarters of a mile, limiting pedestrian accessibility to the U District from the west.

Pedestrian access from the north and east is excellent. Given that the south end of the study area is bounded by Portage Bay, there are limited connections. The most direct route into the study area is along the University Bridge. Pedestrians may also use the Montlake Bridge, which is located to the east of the study area.

Cracked and narrow sidewalk

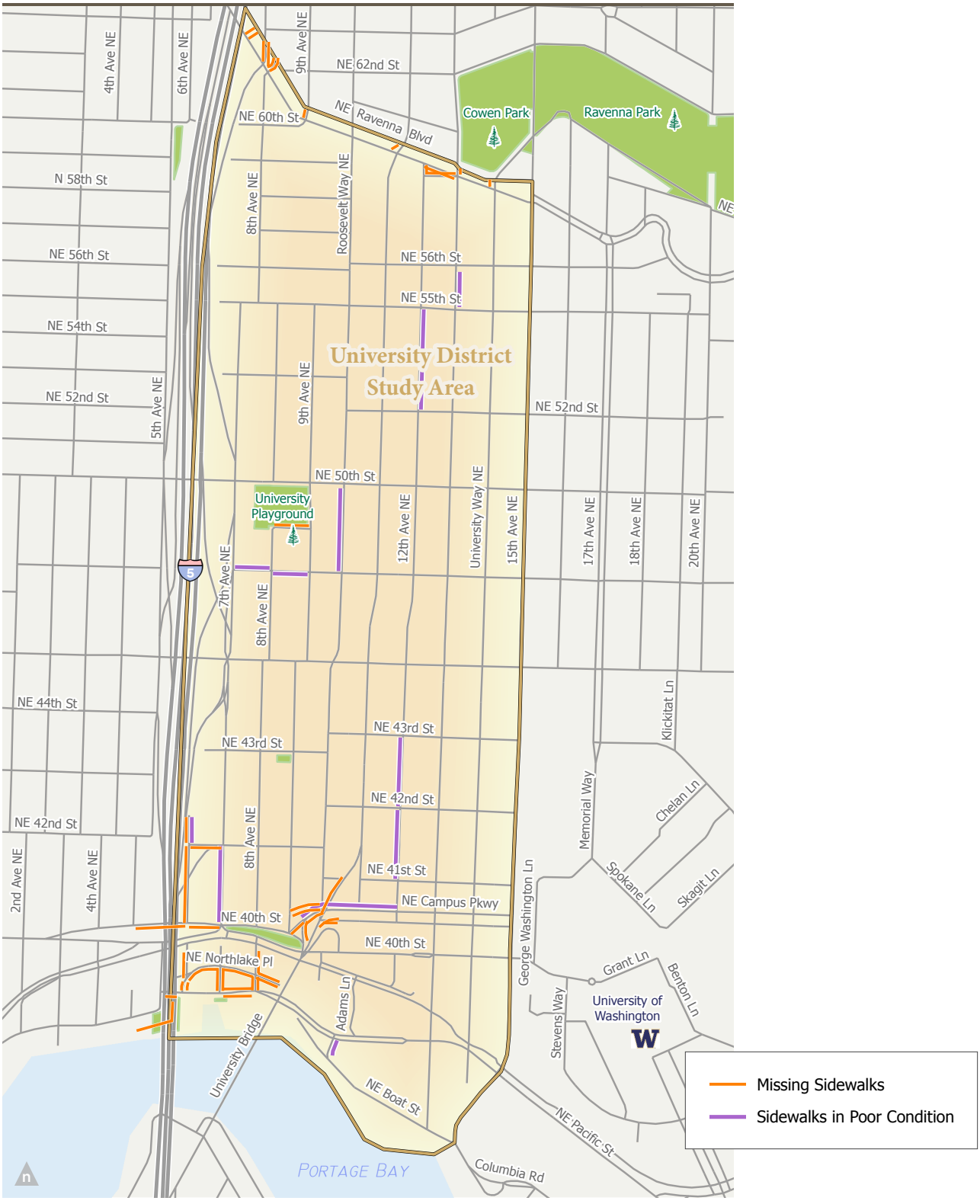
Sidewalks are provided along almost all roadways in the study area. Figure 3.5–2 shows missing sidewalk segments, which are generally near the freeway, freeway off-ramps, and cul-de-sacs, as well as sidewalks that the Seattle Department of Transportation (SDOT) has categorized as being in poor condition. Sidewalk condition within the study area varies from new, wide sidewalks at recent developments to narrower, cracked sidewalks in older areas.

Pedestrian Crossings

North end of University Bridge

Blocks are generally much longer in the north-south direction than in the east-west direction. This facilitates better connectivity for north-south travel since there are many more available routes. The north end of the University Bridge and I–5 have both been identified as locations that are difficult to cross in various City planning documents. Frequent signals along major roadways such as NE 45th Street, NE 50th Street, and 15th Avenue NE allow pedestrians to cross at convenient intervals.

Figure 3.5–2: **Existing Pedestrian Facilities**



Source: City of Seattle, 2012

Marked mid-block pedestrian crossings are provided at:

- 15th Avenue NE, north of NE Pacific Street
- University Way NE, north of NE 43rd Street
- University Way NE, north of NE 45th Street
- University Way NE, north of NE 50th Street
- Brooklyn Avenue NE, north of NE 43rd Street

A pedestrian bridge over 15th Avenue NE connects NE Campus Parkway to the UW campus.

Burke-Gilman Trail

Multi-Use Paths

The U District has one multi-use path, the Burke-Gilman Trail, through the southern portion of the study area. This trail connects to the west to Fremont and to the east to the UW and beyond towards Magnuson Park. The trail continues north along Lake Washington to the City of Kenmore, where it connects to the East Lake Sammamish Trail.

The portion of the Burke-Gilman Trail through the study area is owned by UW. The University is planning improvements to the trail immediately east of the study area (between 15th Avenue NE and Rainier Vista) during 2014 and 2015. The trail will be widened and separate pedestrians and bicycles along that segment. UW will continue pursuing additional funding for other segments.

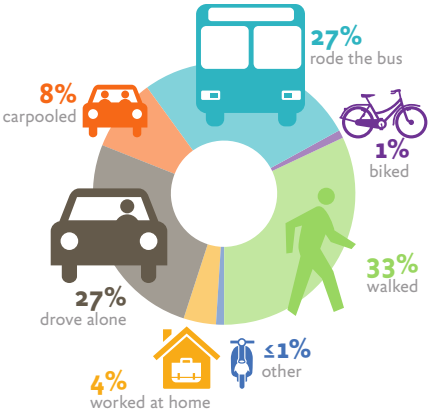
Pedestrian Volumes

American Community Survey (ACS) estimates indicate that 74% of workers 16 years and older in the U District used a non-single occupant vehicle (SOV) mode for work/school trips (33% walked, 27% used public transportation, 9% carpooled, 1% biked, and 4% telecommuted or used other modes). This non-SOV percentage is much higher than the average Seattle non-SOV mode share of 41%. Additionally, the estimated walk mode split of 33% indicates that walking constitutes nearly half of all non-SOV trips made in the U District.[1] Roughly one-quarter of all auto trips are carpool trips.

Pedestrian activity is highest in the core of the U District, particularly in the vicinity of University Way NE. The south end of the study area also has substantial pedestrian activity due to the presence of academic buildings and residence halls. Pedestrian activity is lower in the northern portion of the study area where the land use is dominated by residential uses.

U District Commute/ School Trip Mode Share

33%	Walk
27%	Transit
27%	Single Occupant Vehicle
8%	Carpool
1%	Bike
4%	Tlecommuted or used other modes



Source: ACS, 2006-2010

1 *Data from the 2006 to 2010 American Community Survey Estimates, US Census Bureau. Aggregated information collected from the Urban Design Framework – Existing Conditions, City of Seattle, 2012*

BICYCLE NETWORK

The bicycle network includes a variety of facilities, including bike lanes, sharrows, and a multi-use trail. As shown in Figure 3.5–3 on the following page, bicycle lanes are provided on the Roosevelt Way NE/11th Avenue NE couplet and continue across the University Bridge to the south. Bicycle lanes are also provided on portions of NE 40th Street, NE Pacific Street, and NE Ravenna Boulevard. In addition, there are climbing lanes in the uphill direction and sharrows in the downhill direction on University Way NE from NE Pacific Street to NE Campus Parkway, and on University Way NE from NE 50th Street to Ravenna Boulevard NE. Sharrows are provided on NE 45th Street (and continue west across the I–5 overpass), 7th Avenue NE from NE 45th Street to NE 50th Street, and University Way from NE Campus Parkway to NE 50th Street. The NE 50th Street overpass does not include any bicycle facilities. As mentioned previously, the Burke-Gilman Trail runs through the southern portion of the U District and is heavily used by commuters and recreational bicyclists.

Bicycles outside Trader Joe's

Bicycle Volumes

Bicycle counts for select locations have been collected by the City of Seattle on a quarterly basis during the off-peak (10 AM–12 PM), PM peak (5–7 PM), and Saturday midday (12–2 PM). These include two intersections within or near the study area: NE 45th Street and Brooklyn Avenue NE, and Eastlake Avenue E and Furhman Avenue E (University Bridge). Table 3.5–1 summarizes the bicycle counts at these two locations for three days in September 2012. Bicycle activity is higher on the University Bridge than in the core of the U District, reflecting the fact that the University Bridge is a key bicycle commuter thoroughfare.

A "sharrow" is a marking painted on the travel lane indicating that vehicles must share the lane with bicycles.

Sharrow lane marking

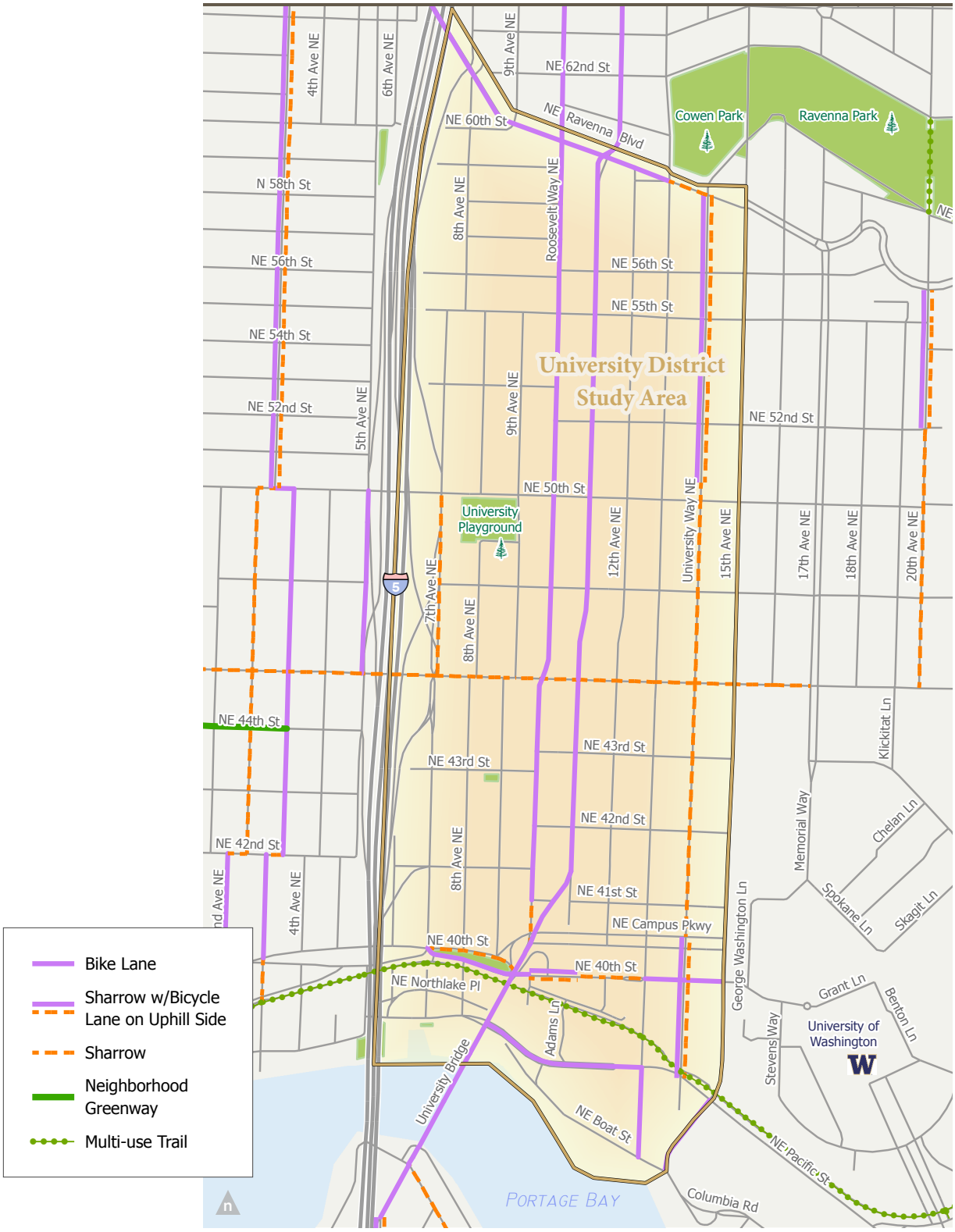
Table 3.5–1: **September 2012 Bicycle Counts**

Location	Off Peak 10AM–12PM	PM Peak 5–7PM	Saturday 12–2PM
NE 45th Street & Brooklyn Avenue NE	68	100	40
Eastlake Ave. E & Furhman Ave. E (University Bridge)	139	433	168

*Total may differ from sum due to rounding during calculation.

Source: Seattle Department of Transportation, 2012

Figure 3.5–3: **Existing Bicycle Facilities**



Source: City of Seattle, 2012

TRANSIT SERVICES

As stated previously, ACS data indicates a 27% transit mode share in the U District. The U District attracts many transit trips because of the UW campus and related employment centers in the area, as well as the transfer opportunities to other transit routes. Transit is heavily utilized in the area, and during the peak hour commutes, buses are often full with standing room only. The 2012 Transit Master Plan identified bus stops with over 100 boardings per day.[2] These include the following locations: along NE Campus Parkway, Brooklyn Avenue NE, 15th Avenue NE south of NE 45th Street, NE Pacific Street between 15th Avenue NE and Montlake Boulevard NE, Roosevelt Way NE, NE 45th Street and NE 42nd Street.

Table 3.5–2 on the following page outlines the King County Metro, Sound Transit, and Community Transit operated routes through the study area. Routes are divided into five categories: service throughout the day, service during the peak hours only, service in the peak direction only, service in the peak direction with some outbound off-peak trips, and night owl service routes. Some routes operate with reduced service when the University of Washington is not in session.

Peak hour only and peak direction only routes are generally transit routes that travel long distances such as to and from Marysville, Mukilteo, Lynnwood, Edmonds, Shoreline, Redmond, Issaquah, Kirkland, Renton, and Tacoma.

U-PASS

The U-PASS is a public transit pass that allows unlimited rides on King County Metro, Community Transit, Pierce Transit, Kitsap Transit, Everett Transit, and Sound Transit to eligible UW students, faculty, and staff. This pass can also be used for the Sounder commuter train, Link Light Rail, paratransit services, King County Water Taxi, and the Seattle Streetcar. When the program began in 1992, the U-Pass was an optional purchase, which allowed students who did not need public transit on a daily basis to opt out. Starting in fall 2011, the policy changed to a universal U-PASS which required every full time student to purchase the bus pass. Between 2010 and 2012, the transit mode share by UW students has increased by 2%.[3]

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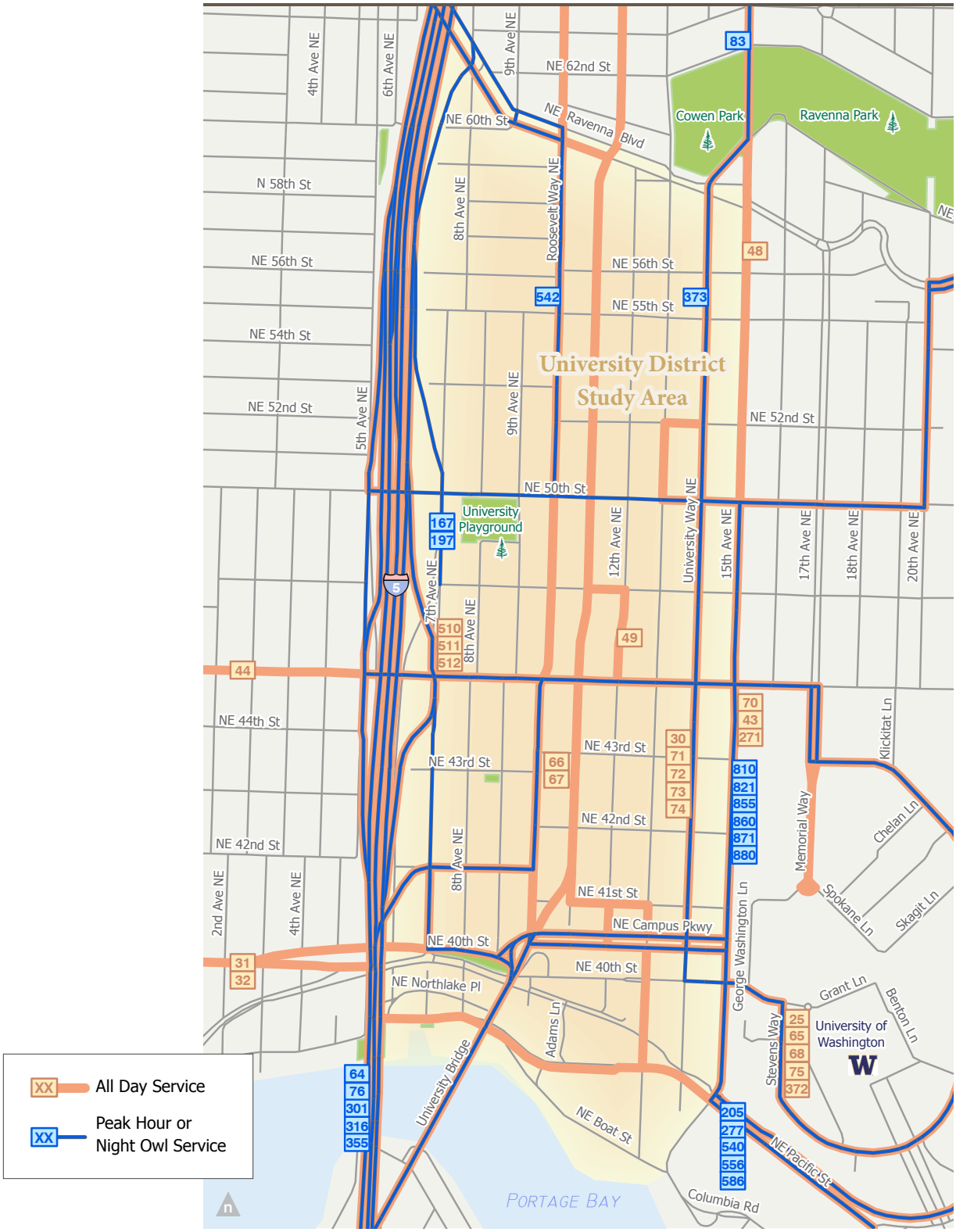
2 Data was collected in Fall 2009

3 2011 and 2013 University of Washington Master Plan Annual Reports.

Figure 3.5–4: **Existing Transit Routes**



Source: King County Metro, Sound Transit, Community Transit, 2013

Table 3.5–2: **Transit Routes In The U District**

Route	Route description	AM Peak Headway 6–9AM	PM Peak Headway 3–6PM	Off-Peak Headway
Service throughout the day				
25	Downtown Seattle/ Laurelhurst	60	60	60
43	Downtown Seattle/ Capitol Hill	10-15	10-15	15
44	Ballard, Montlake Station	10-15	10-15	10-15
48, 48X	Mt Baker TC/Loyal Heights	5-10	10	15
31, 32	Queen Anne, U District	8-16	8-16	15
30	Sandpoint, U District	30	30	30
71, 71X	Wedgewood, Downtown Seattle	30	30	30
72, 72X	Lake City, Downtown Seattle	30	30	30
73, 73X	Jackson Park, Downtown Seattle	7-15	30	7-30
49	U District, Broadway	7-15	7-15	15
66, 67	Northgate, U District	5-15	10-15	15
68[1]	Northgate, University Village	15-30	20-30	30
70	U District, Fairview	15	10	15
65[1]	Lake City, Wedgewood	15-30	15-30	30
75	Northgate, Lake City	15	15	30
372[1]	Woodinville P&R, Kenmore P&R, U District[3]	7-15	10-15	30
271[1]	Issaquah, Eastgate P&R, U District[3]	8-10	8-10	15
510	Everett, Seattle	10-15	10-15	30
511	Ash Way, Seattle	10-15	10-15	15
512	Everett, Seattle	30	30	30
Service during peak hours only				
540	Kirkland, U District	15-25	15-25	-
542	Redmond, Green Lake	15	15	-
556	Issaquah, Northgate	30	30	-
Service in peak direction only				
167[1]	S Renton P&R, U District	30	30	-
197[1]	Twin Lakes P&R, U District	25-30	30	-
205	Mercer Island, U District	40-75	110	-
277	Juanita, Houghton P&R	30	30	-
586	Tacoma, University	15-30	30	-
880	Mukilteo, U District	12-20	15-30	-
821	Cedar & Grove P&R, U District	20-30	30-60	-
355	Shoreline, Downtown Seattle	15	15-30	-
301	Aurora Village, Downtown Seattle	30	30	-
74X	Sandpoint, Downtown Seattle	30	20-30	-
Service in peak direction with some off-peak outbound trips				
373[1]	Aurora Village, U District	15-30	15-30	60
855	Lynnwood TC, U District	15-30	25-40	55-60
860	McCollum Park P&R, U District	15-20	15-25	60
871	Edmonds P&R, U District	15-25	15-25	60
810	McCollum Park P&R, U District	30	-	30
Night owl service only				
83	Downtown Seattle, Maple Leaf[4]	-	-	75

Headway

The number of minutes between bus arrivals.

Notes

1. Reduced service when University of Washington is not in session
2. Limited trips from Woodinville
3. Limited trips from Issaquah
4. Two trips only

Sources: King County Metro, 2013, Sound Transit, 2013 & Community Transit, 2013

Shuttle Services

In addition to public transit routes, UW and several medical research centers in South Lake Union operate shuttle services. These shuttles generally stop near NE Campus Parkway and Brooklyn Avenue NE. Hospital and medical research shuttles are utilized by patients and their families, employees, and staff. UW operated shuttles also allow UW faculty, staff, and students on board. The shuttle services are described below:

- The UW Health Science Express operates on weekdays between UW Medical Center and Harborview Medical Center via I–5. Shuttles operate approximately every 15 minutes from 6:00 AM to 6:15 PM.
- The UW South Lake Union Shuttle operates on weekdays between UW Medical Center to Fred Hutchinson Cancer Research Center and South Lake Union via Eastlake Avenue N. Shuttles operates on weekdays every 20 minutes from 6:40 AM to 7:00 PM.
- Dial-A-Ride is a UW operated shuttle for UW faculty, staff, and students with mobility limitations to access various stops on the UW Campus. Rides are reserved in advance and are available on weekdays every 20 minutes between 7:30 AM to 4:00 PM.
- NightRide is a UW operated shuttle service for U-PASS members that operate on weeknights from 8:00 PM to 1:30 AM. Shuttles pick up passengers from six stops on campus, and drop passengers off at requested locations within the designated zones approximately one mile from campus.

Rideshare Programs

Car2Go

Additional transportation services include rideshare programs like ZimRide. ZimRide allows UW students to connect with other UW affiliated travelers with the same destination and can share the cost of gas. Zipcar and Car2Go are also available in the U District. These services provide members with short and long-term rental vehicles that can be picked up and returned at various locations within the study area. By providing access to a vehicle on an as-needed basis, these programs allow some travelers to forego owning a personal vehicle.

EXISTING ROADWAY NETWORK

The study area is bounded by I–5 to the west, by the UW campus to the east, and by Portage Bay to the south. The local street network is made up of a combination of one-way and two-way streets that serve all travel modes.

Arterial streets have speed limits of 30 miles per hour (MPH), and local residential streets have speed limits of 25 MPH unless otherwise posted.[4]

Regional Access

I–5 is a north/south freeway that serves both local and regional traffic. I–5 experiences congestion during a substantial portion of the day since it links key activity centers and is one of only six crossings of the Ship Canal. The study area can be accessed from mainline I–5 at NE Ravenna Blvd, NE 50th Street, and NE 45th Street. Reversible lanes on I–5 also have ramps at NE Ravenna Boulevard and NE 42nd Street.

SR 520 is an east-west highway located south of the study area. The highway connects communities on the east side of Lake Washington to the U District. Travelers from SR 520 generally use the Montlake Bridge to reach the U District from the southeast.

Arterial and Local Access

The study area is accessible from the west side of I–5 at NE Ravenna Boulevard, NE 50th Street, NE 45th Street, NE 40th Street, and NE Pacific Street. To the east, the UW campus limits auto access south of NE 45th Street to NE Pacific Street and Grant Lane (which passes through the UW Campus). However, pedestrian and bicycle access is provided along numerous campus paths. North of the UW campus, auto traffic accesses the study area primarily via the principal arterials of NE 45th Street and NE Ravenna Boulevard, with smaller collector connections at NE 50th Street, and local roads at NE 47th, NE 52nd, NE 55th, and NE 56th Streets. From the north, access is primarily provided by the principal arterial couplet of Roosevelt Way NE and 11th Avenue NE, and the minor arterial 15th Avenue NE. From the south, direct access into the study area is available only by crossing the University Bridge, which continues as Eastlake Avenue NE to the south and the Roosevelt Way NE and 11th Avenue NE couplet to the north. The I–5 Ship Canal Bridge to the west of the study area and the Montlake Bridge to the east of the study area also provide connections to the south.

Functional Classification of Streets

The City of Seattle's street functional classification, including roadways designated as major truck streets, is shown in Figure 3.5–5. Descriptions of

4 *Frequently Asked Questions-Traffic Operations, SDOT, 2013. www.seattle.gov/transportation/sdotfaqs.htm#nto*

principal arterials, minor arterials, and collector arterials in the study area are provided below. Figure 3.5–7 illustrates the existing on-street parking facilities. Refer to Appendix D for a tabulated summary of the parking facilities.

Arterial Classification Defintions

Principal Arterials: roadways that are intended to serve as the primary routes for moving traffic through the city connecting urban centers and urban villages to one another, or to the regional transportation network.

Minor Arterials: roadways that distribute traffic from principal arterials to collector arterials and access streets.

Collector Arterials: roadways that distribute traffic from principal arterials to collector arterials and access streets.

Source: Seattle Comprehensive Plan – Transportation Element, City of Seattle, 2005

NORTH-SOUTH CORRIDORS The following corridors run north-south in the study area and have been listed from the west side to the east side of the study area.

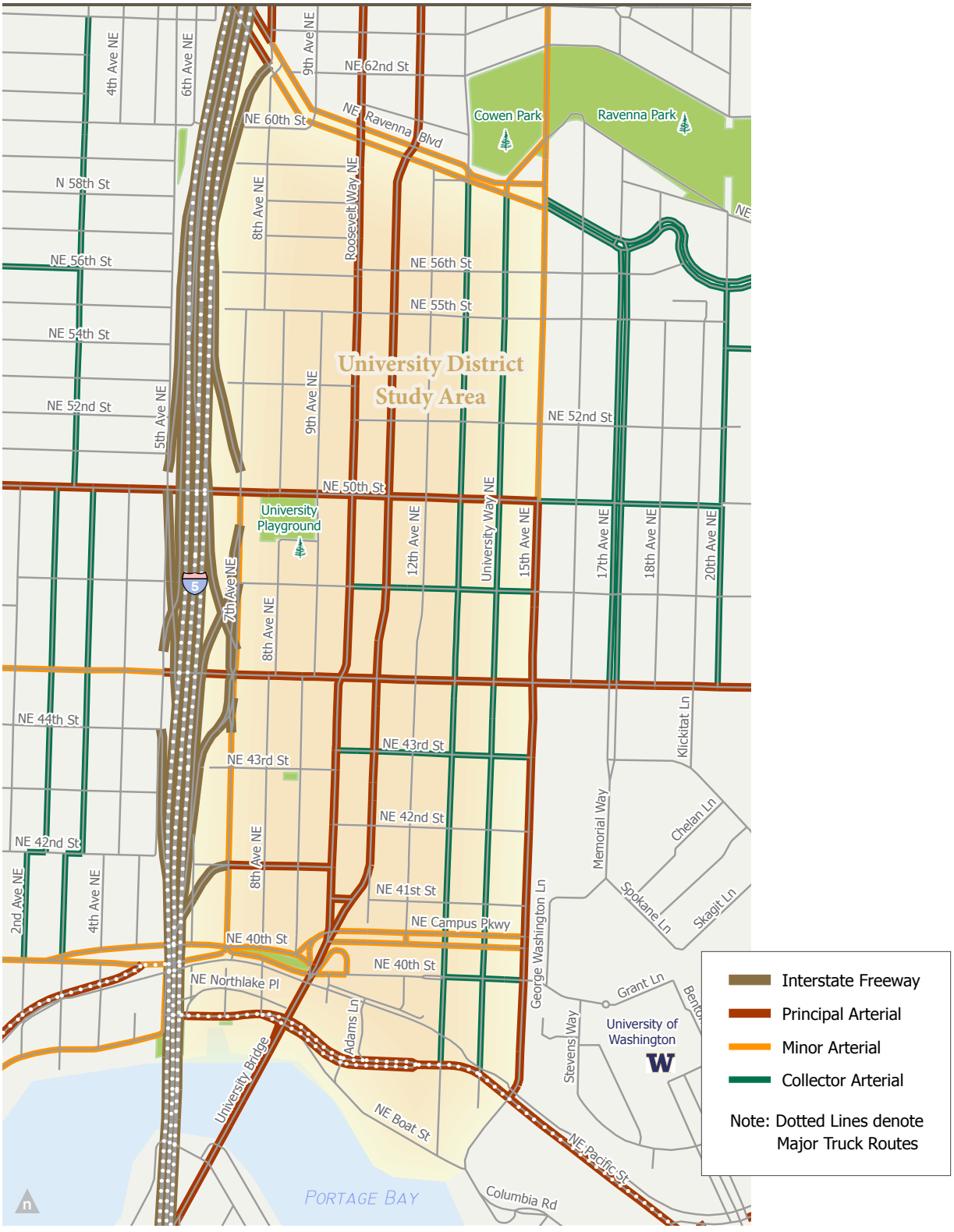
Roosevelt Way NE is a principal arterial. It is a one-way street with two southbound travel lanes and a bicycle lane. Together with 11th Avenue NE, Roosevelt Way NE forms a one-way couplet. Approaching NE 45th Street, the parking lane ends to accommodate a right turn lane. Signalized intersections include NE 42nd Street, NE 45th Street, NE 47th Street, NE 50th Street and Ravenna Boulevard. Local street intersections are side-street stop controlled. Curb parking is available on both sides of the street for most of the corridor. South of NE 50th Street paid parking is $1.50 per hour with a 4-hour maximum from 8 AM to 8 PM. There is unpaid two-hour time limited parking between NE 50th Street and NE 55th Street, and unpaid one-hour time limited parking near NE Ravenna Boulevard between 7 AM to 6 PM.

Mixed use buildings with retail on the bottom floor and apartments above are found south of NE 42nd Street on both sides of the road. North of NE 53rd Street, the land use is primarily small businesses with a mix of single family homes that line both sides of the street towards Ravenna Boulevard.

11th Avenue NE is a one-way principal arterial with two northbound lanes and a bicycle lane. Signalized intersections are located at NE 42nd Street, NE 43rd Street, NE 45th Street, NE 47th Street, NE 50th Street, and NE Ravenna Boulevard. Intersections with local streets are side-street stop controlled. Parking is available on both sides of street and there are generally no restrictions from the south end of the study area to NE 43rd Street. Paid parking is provided at an hourly rate of $1.50 for up to four hours maximum from NE 43rd Street to NE 50th Street. North of NE 50th Street, there is unpaid two-hour time restricted parking from 7 AM to 6 PM except for Residential Zone Permit parking on both sides of the street. Left and right turn lanes are provided at NE 45th Street.

From the south, the corridor is mostly comprised of apartment buildings or mixed use buildings with retail on the ground floor and apartments above. North of NE 50th Street, the street becomes mostly residential.

Figure 3.5–5:
Existing Roadway Functional Classification and Major Truck Streets



Source: City of Seattle, 2003

The Ave

University Way NE, also known as "The Ave," is a collector arterial with one lane in each direction, with paid parking generally on both sides of the road. There is a bicycle climbing lane from NE Pacific Street to NE 41st Street and NE 50th Street to Ravenna Boulevard. Sharrows are provided between these two segments in the downhill direction. University Way NE is signalized at all intersections except NE 41st Street, 52nd Street, 55th Street and NE Ravenna Boulevard. Paid parking is available on both sides of the street south of NE 50th Street for an hourly rate of $2.00 for up to two hours between 8 AM to 8 PM—unpaid parking is available with a two-hour time limit north of NE 50th Street. This corridor is heavily travelled by pedestrians and transit and includes small-scale restaurants and retail.

15th Avenue NE is a principal arterial south of NE 50th Street and a minor arterial north of NE 50th Street. Left turn pockets are provided at the signalized intersections of NE 40th Street, NE Campus Parkway, NE 41st Street, NE 42nd Street and NE 45th Street. Signals are also present at NE 43rd Street, NE 47th Street and NE 50th Street. All other local street intersections are side-street stop controlled. North of NE 45th Street during peak hours, 15th Avenue NE is two lanes of traffic in the peak direction and one traffic lane and one parking lane in the off-peak direction. During off-peak hours, there is one lane of traffic and one lane of parking in each direction. North of NE 50th Street, unpaid parking is available in the off-peak direction during peak hours, and on both sides of the street during off-peak hours. Between NE 45th Street and NE 50th Street, paid parking is available at an hourly rate of $1.50 for up to four hours in the off-peak direction only. South of NE 45th Street, 15th Avenue NE has two travel lanes in each direction. Paid parking is available south of NE 40th Street on the west side of the street at an hourly rate of $2.00 for two hours (or three hours after 5 PM) from 8 AM to 8 PM. Similar parking is available at limited locations between NE 42nd Street and NE 45th Street with the restriction of no parking during peak hours. Businesses and UW facilities line the roadway south of NE 50th Street, while the roadway transitions to a residential character north of NE 50th Street.

EAST-WEST CORRIDORS The following corridors run east-west in the study area and are listed from the north side to south side of the study area.

NE Ravenna Boulevard is a minor arterial at the north end of the study area. It is one lane in each direction with a parking lane on each side. There is a wide landscaped median with bike lanes between the median and travel lanes in both directions from I-5 to 11th Avenue NE. NE Ravenna Boulevard is signalized at Roosevelt Way NE and 12th Avenue NE, with an all-way stop

at 15th Avenue NE. Parking is either unrestricted or has a two hour time limit from 7 AM to 6 PM except for Restricted Zone Parking Permits. The land use is generally single family homes or apartments.

NE 50th Street is a principal arterial with access to I–5 at the western edge of the study area. It has two through lanes in each direction with signalized intersections at 7th Avenue NE, 9th Avenue NE, Roosevelt Way NE, 11th Avenue NE, Brooklyn Avenue NE, University Way NE, and 15th Avenue NE. There are no left turn pockets along this street within the study area. There is no parking along this corridor within the study area. Generally the corridor has residential homes and parks from west of 9th Avenue NE and transitions to restaurants, stores, movie theaters, and apartment buildings east of 9th Avenue NE.

NE 45th Street is a principal arterial with access to I–5. It is two lanes in each direction, with a two-way center turn lane from I–5 to Roosevelt Way NE. From Roosevelt Way NE to NE 15th Street, left turn pockets are provided. There are sharrows from I–5 to 15th Avenue NE. Signalized intersections include 7th Avenue NE, Roosevelt Way NE, 11th Avenue NE, 12th Avenue NE, Brooklyn Avenue NE, University Way NE, and 15th Avenue NE. There is no on street parking on this corridor. This commercial thoroughfare includes retail, restaurants, and mixed use buildings for the length of the corridor.

NE Campus Parkway is a minor arterial with two travel lanes in each direction paid on street parking on both sides of the roadway, and a wide landscaped median. Campus Parkway NE is signalized at Brooklyn Avenue NE, University Way NE, and 15th Avenue NE. UW housing and facilities line the roadway which is a key transit route, linking buses from I–5 and the University Bridge to the UW campus and University Way NE. On-street paid parking is available west of 12th Avenue NE at an hourly rate of $1.50 for up to four hours and east of University Way NE at an hourly rate of $2.00 for two hours (or three hours after 5 PM) from 8 AM to 8 PM.

NE Pacific Street is a principal arterial running east-west along the southern end of the study area. From the University Bridge to Brooklyn Avenue NE, NE Pacific Street has one travel lane and one bicycle lane in each direction with a center landscaped median. Approaching Brooklyn Avenue NE, NE Pacific Street widens to two lanes in each direction, with left turn pockets. It is signalized at 11th Avenue NE, Brooklyn Avenue NE, University Way NE, and 15th Avenue NE. NE Pacific Street provides a key connection from the study area to the Montlake Bridge to the east. Unpaid one or two hour time limited parking is available west of 8th Avenue NE. Land uses along the

corridor include businesses, restaurants, boat storage, and UW housing. The University of Washington Medical Center is located on NE Pacific Street east of the study area.

Major Truck Streets

Designated major truck streets are primary routes for goods movement throughout the city and between major freight trip producers such as the Ballard Interbay Northend Manufacturing & Industrial Center to the west of the U District. Designation as a major truck street helps the SDOT determine street design, traffic management plans, and pavement improvement projects that allow and facilitate the movement and more frequent use of larger vehicles along the designated street. Within the study area, I–5 and NE Pacific Street are identified as major truck streets.

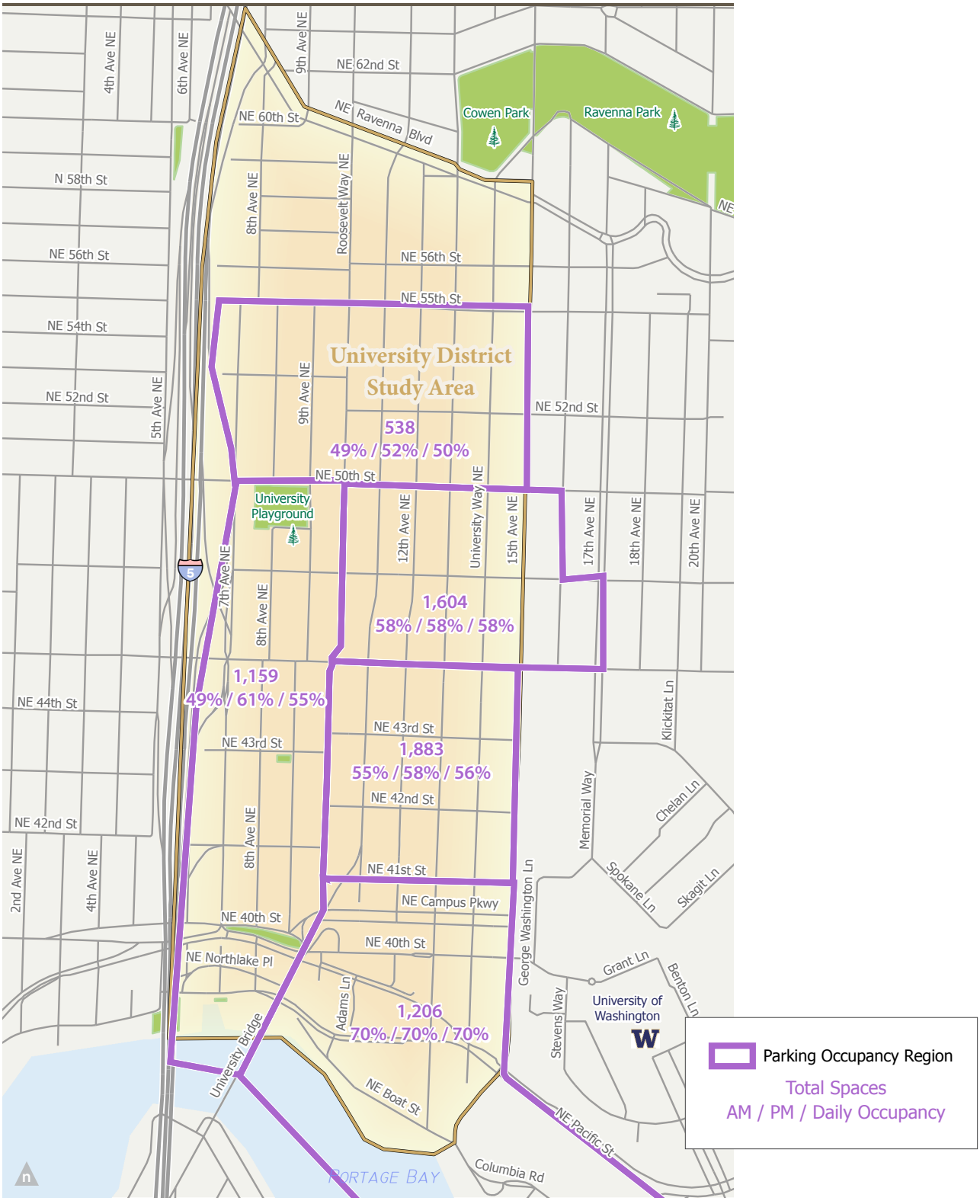
PARKING

UW parking garage

Off-street parking data was collected for the 2010 Puget Sound Regional Council (PSRC) Parking Survey. The Parking Survey covered the portion of the study area south of NE 55th Street and surveyed 212 public and private pay lots. The AM occupancy rate is based on parking data collected from 8:30 AM to 11:30 AM, and the PM occupancy rate is based on parking data collected from 1:30 PM to 3:30 PM. The average occupancy rate is the average of the AM and PM parking occupancy, respectively, for each peak period. Daily occupancy is the average of the AM and PM parking occupancy. The total number of parking stalls and the average AM, PM and daily occupancy rates are provided in Figure 3.5–6. Parking utilization tends to be highest in the southern portion of the study area where UW academic buildings and parking garages are concentrated. Off-street parking utilization (as well as supply) is lower in the more residential areas north of NE 50th Street.

Figure 3.5–7 summarizes the on-street parking within the study area, which was collected by SDOT in 2013. On-street parking provisions vary widely within the study area: facilities include paid parking from 8 AM to 8 PM, one or two hour time limited parking during business hours (7 AM to 6 PM), time limited street parking where Restricted Parking Zone (RPZ) permits are exempt, peak hour and peak direction restricted parking, unrestricted parking, and no parking areas. RPZ permits can be purchased by eligible residents who live within a restricted parking zone. Permit holders may park for time lengths longer than the signed limits for non-RPZ vehicles, or are able to park during specified hours of the day when public parking is

Figure 3.5–6:
Existing Off-Street Parking Supply and Occupancy



Source: PSRC Parking Inventory, 2010

Figure 3.5–7: **Existing On-Street Parking Facilities**

Source: SDOT, 2013

restricted. Much of the study area north of NE 50th Street is an RPZ, as well as the area between NE 45th Street and NE 50th Street west of Roosevelt Way.

The City of Seattle Paid Parking Report (2013) summarizes parking rates within the U District south of NE 50th Street between Roosevelt Way NE and 15th Avenue NE. The study area is split into two areas: the U District Core (south of NE 50th Street and generally within two blocks of University Way NE and on NE Boat Street), and the U District Periphery (south of NE 50th Street and generally comprised of the area west of the U District Core to Roosevelt Way NE). The U District Core has rates of $2.00 per hour with a two hour time limit (or three hours after 5 PM). The Periphery has rates of $1.50 per hour with four hour time limits. Paid parking is required from 8 AM to 8 PM Monday through Saturday except for government holidays

The parking utilization measured in this report is the three-hour Daytime Peak Occupancy (weighted average of the three highest parking occupancies between 8 AM and 3 PM), and the occupancy at 7 PM when some time limited parking restrictions have ended. SDOT's target range is parking occupancies between 70 and 85%. Results show that in 2013 the U District Core had a three-hour Daytime Peak Occupancy of 76% and 107% at 7 PM. In the District Periphery, the three-hour Daytime Peak Occupancy was 57% and 52% at 7 PM. This shows on-street paid parking in the U District Core during the daytime is within SDOT's target range of 70 to 85%; however, demand exceeds the target range, as well as the supply during the evening hours. On-street paid parking is available in the Periphery where both the daytime and the evening occupancy are below the target range.

Pay parking station

SDOT commissioned a study in October 2010 to evaluate the current parking facilities and parking demand in the U District, south of NE 55th Street between Roosevelt Way NE and 15th Avenue NE. Evaluation was based on hourly data collection of the percent utilization of each block face, parking duration, and parking compliance to restrictions such as time limits or no parking zones.

The study found that compliance was 75% or greater for time limited parking, except for the Boat Street Triangle which has two hour time limited parking and had a compliance rate of 62%. Approximately one-third of unrestricted parking spaces had vehicles that parked for 10 or more hours, and utilization over 100% was found on streets with unrestricted parking segments south of NE 55th Street on 11th Avenue NE, 12th Avenue NE, Roosevelt Way NE, Brooklyn Avenue NE and NE 42nd Street.

Relevant Studies

SEATTLE COMPREHENSIVE PLAN (2005)

The Seattle Comprehensive Plan provides guidance on the City's development to support future growth. The Plan identifies four core values: Community, Environmental Stewardship, Economic Opportunity and Security, and Social Equity.

Urban Village Element

See Section 3.1.5 for additional discussion of the Comprehensive Plan.

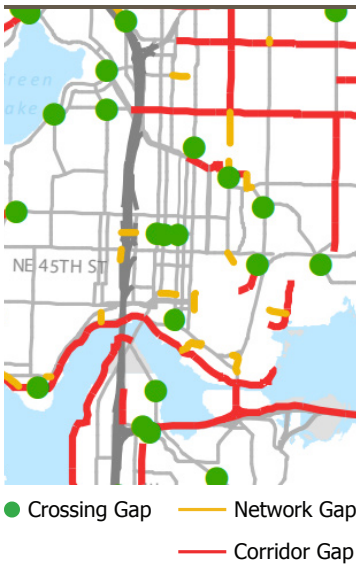
The urban village element of the Comprehensive Plan provides guidance on locations to direct future population growth to create sustainable neighborhoods in Seattle. The U District is categorized as an Urban Center with mixed residential and employment and contains the University District Northwest urban village. Goals include development of diverse housing and employment, pedestrian/transit-oriented communities, providing services and infrastructure to support growth, and promoting the natural environment.

Transportation Element

The transportation element of the Comprehensive Plan provides guidance for transportation planning and development to support future growth. Goals include making transportation decisions that support land use and the urban village strategy, increasing transportation options such as transit, bicycling, and walking, moving people and goods efficiently, and improving the environment by encouraging transportation modes other than single-occupant vehicles (SOV). A 2020 non-SOV mode split goal was set for Seattle's Urban Centers; the U-District has a goal of 70% non-SOV trips for both work trips and all types of trips.

Additionally, the Complete Streets Ordinance passed in 2007 directs arterial street design to consider the safety of all mode users including pedestrians, bicyclists, and transit riders, while efficiently moving people and goods.

Figure 3.5–8:
Gaps in the Bicycle Network



Source: Seattle Bicycle Master Plan, City of Seattle, 2013

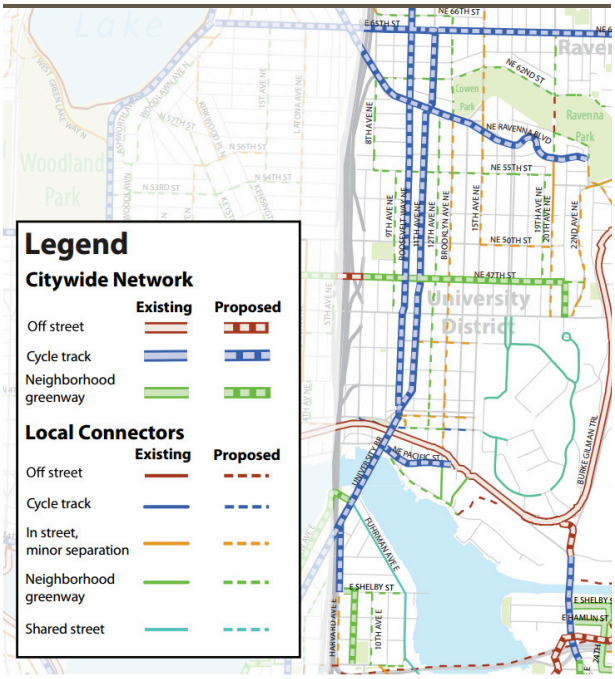
SEATTLE BICYCLE MASTER PLAN (DRAFT, JUNE 2013)

This document provides guidance on the future investments in bicycle facilities in Seattle, with a vision for bicycling as a safe and convenient mode for people of all ages and abilities on a daily basis. Goals include increase bicycle ridership, safety, connectivity, equity, and livability.

Specific gaps in the bicycle network within the study area identified in this document include crossing gaps at several intersections with NE 47th Street, and at the intersection of Brooklyn Avenue NE and NE Pacific Street. Network gaps less than one quarter of a mile are identified at NE 47th Street over I-5, NE 41st Street between Brooklyn Avenue NE and 12th Avenue NE, and 15th Avenue NE near NE Campus Parkway. Corridor Gaps are gaps longer than one quarter of a mile; the Bicycle Master Plan identifies a corridor gap along the waterfront south of the Burke-Gilman Trail on NE Columbia Road, NE Boat Street, and NE Northlake Way from the UW to west of Gasworks Park. (See Figure 3.5–8.)

Proposed projects in the area include cycle tracks on Roosevelt Way NE, 11th Avenue NE, NE Ravenna Boulevard, NE 40th Street, and NE Pacific Street. In-street separated bicycle facilities are proposed along Brooklyn Avenue NE, 15th Avenue NE north of NE 50th Street, NE 43rd Street, and NE Campus Parkway. Neighborhood greenways are proposed on 8th Avenue NE north of NE 55th Street, 9th Avenue NE from NE 47th Street to NE 55th Street, 12th Avenue NE, NE Boat Street, NE 47th Street and NE 55th Street. The BMP includes a map of these improvements as shown in Figure 3.5–9.

Figure 3.5–9:
Proposed Bicycle Improvements in the U District



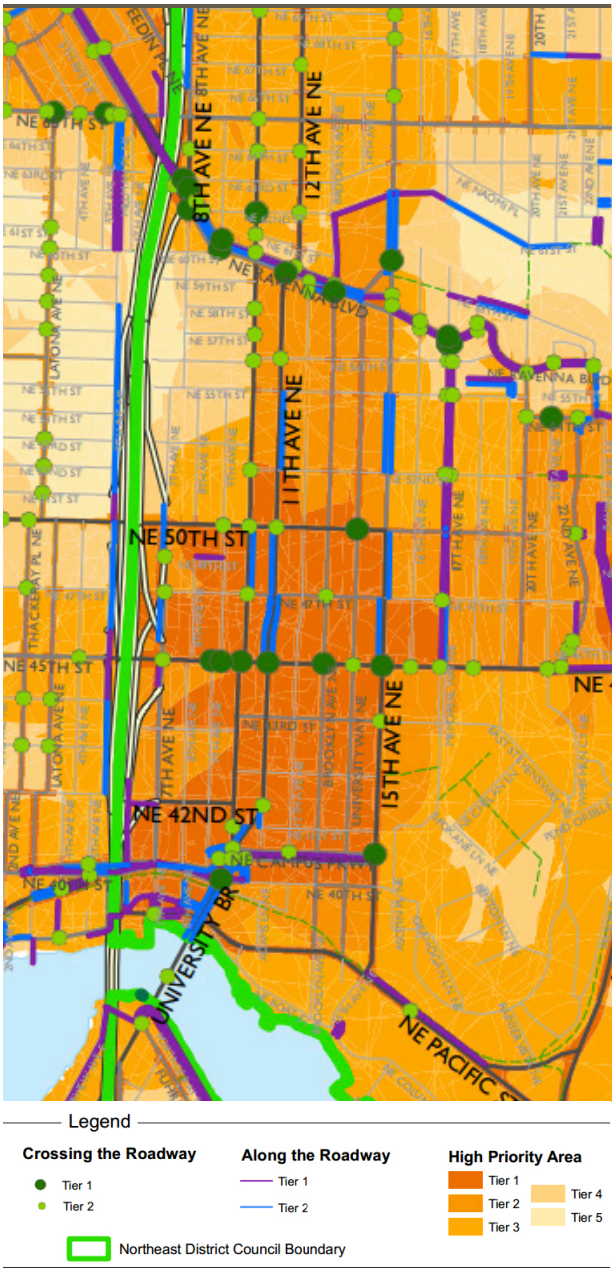
Source: Seattle Bicycle Master Plan, City of Seattle, 2013

SEATTLE PEDESTRIAN MASTER PLAN (2009)

The Pedestrian Master Plan has a mission to "make Seattle the most walkable city in the nation." Goals include reducing the number of crashes involving pedestrians, providing services equitably, cultivating vibrant environments, and improving health in communities. Figure 3.5–10 is a map from the Pedestrian Master Plan that identifies pedestrian comfort level as they travel within the network, and where improvements are needed. The darker purple segments are Tier 1 locations with the highest discomfort for pedestrian travel. Criteria for evaluation include presence of sidewalks, sidewalk buffers (such as parked cars or landscaping), traffic volumes, and traffic speeds. Tier 1 segments within the study area include NE Campus Parkway, NE 40th Street near the University Bridge, and NE Northlake Way. Other locations are closer to I-5 and freeway ramps such as Pasadena Place NE and NE 42nd Street.

Figure 3.5–10 also identifies areas that need crossing improvements. The dark green dots are Tier 1 locations where improvements are most needed. Criteria for evaluation include presence of ADA ramps, presence of traffic signals, roadway width, and traffic volumes. Within the study area crossing improvements are needed near the north end of the University Bridge, east-west along NE 45th Street and NE Ravenna Boulevard, and at the intersections of NE Campus Parkway/15th Avenue NE and NE 50th Street/University Way NE.

Figure 3.5–10: **Pedestrian High Priority Areas**



Note: The Northeast District Council is one of the City's 13 Neighborhood Councils (citizen-led advisory groups).

Source: Northeast District Council High Priority Projects, SDOT, 2008

CITY OF SEATTLE RIGHT-OF-WAY IMPROVEMENTS MANUAL—GREEN STREETS

Green streets are local roads that prioritize pedestrians and open space over through vehicle traffic. This includes installing facilities such as wider sidewalks, inviting landscaping to attract pedestrians, and traffic calming for reduced vehicle volumes and slower speeds.[5] Typical characteristics of green streets include connections to major transit facilities and light rail stations. In the study area, Brooklyn Avenue NE, NE 43rd Street and NE 42nd Street are designated as Green Streets.

FREIGHT MOBILITY STRATEGIC ACTION PLAN (2005)

This document was created by the Seattle Department of Transportation to protect and promote industrial jobs in Seattle. The two manufacturing and industrial centers in Seattle are the Greater Duwamish Manufacturing and Industrial Center and the Ballard/Interbay/Northend Manufacturing and Industrial Center. Relevant points related to the project area include the designation of NE Pacific Street as a major truck route in an effort to reduce conflicts between modes. In addition retail and businesses in the area are to work together to consolidate and designate truck and commercial loading zones, as well as encourage smaller trucks if necessary.

5 *Seattle ROW Improvements Manual, Chapter 6—Streetscape Design Guidelines. City of Seattle. www.seattle.gov/transportation/rowmanual/manual/6_2.asp*

SEATTLE TRANSIT MASTER PLAN (2012)

This document provides guidance for future transit investments. The City of Seattle has designated 15th Avenue NE and NE 45th Street as priority bus corridors, which means that the City prioritizes transit investments for increased speed and reliability along these corridors.

The TMP updates the U-Line streetcar concept presented in the Seattle Streetcar Network Development Report (2008), which envisioned an extension of the South Lake Union streetcar along Eastlake Avenue E to the U District. The TMP recommends high capacity transit (e.g., rapid streetcar or BRT) from South Lake Union to the U District that runs along the Roosevelt Way NE/11th–12th Avenue NE couplet. The TMP states that funding is needed for detailed study of right-of-way evaluations as well as to confirm the preferred mode of transit.

AGREEMENT BETWEEN KING COUNTY AND THE CITY OF SEATTLE (1999)

King County Metro and the City of Seattle agreed that it was beneficial to have layover and bus parking in the U District as King County Metro operates regular and special public transportation to, from, and within the University of Washington and the U District area. This document describes the 15 bus layover zones within the U District. The zones include locations along Brooklyn Avenue NE, 12th Avenue NE, 47th Avenue NE, 7th Avenue NE, NE Campus Parkway, University Way NE, NE Pacific Place, NE 47th Street, 15th Avenue NE, and NE Pacific Street. All zones are within public street right-of-way. The zone on 7th Avenue NE between NE 45th Street and NE 47th Street is limited during the PM commute, and will no longer be used once light rail reaches the U District.

NW MARKET STREET/NE 45TH STREET TRANSIT PRIORITY CORRIDOR IMPROVEMENT PROJECT (2010)

This document evaluated projects to increase the speed and reliability of King County Metro Route 44 through the Ballard, Phinney, Wallingford, U District, and Montlake neighborhoods. Corridors within the study area included NE 45th Street, 15th Avenue NE, and NE Pacific Street. Proposed improvement projects within the study area include restriping NE 45th Street between 7th Avenue NE and University Way NE to four lanes with

left turns prohibited, bus stop consolidation, bus bulbs, and transit signal priority treatment at key intersections.

UNIVERSITY DISTRICT STRATEGIC PLAN (2013)

The University District Strategic Plan document was created by the U District Livability Partnership (a coalition of stakeholders such as local business owners, volunteers, residents and sponsors), in collaboration with City departments, to help direct development of the U District. The vision is for a "vibrant and innovative district of entrepreneurs, major employers, talented workers and diverse residents." Principles include encouraging community involvement, and attracting and encouraging a diverse retail mix on University Way NE that is also supportive of small businesses. Goals include creating a clean and safe environment while marketing the U District as an arts and entertainment center that is also a 24/7 major transportation hub.

U DISTRICT URBAN DESIGN FRAMEWORK (2013)

The U District Urban Design Framework (UDF) was developed through a collaboration between the UDLP, other community groups, the Seattle Department of Planning and Development, the Office of Economic Development and the Department of Transportation. The UDF is intended to guide development in the area as changes are expected with the new Sound Transit Link light rail station at Brooklyn Avenue NE and NE 43rd Street. Guiding principles related to transportation include having new development around the Sound Transit station, having a street network with public spaces, and improving non-motorized transportation facilities while supporting transit and autos.

It was also noted that there are complaints about the poor east-west street network connectivity as well as the pedestrian and bicycle facilities north of the University Bridge. In addition, Brooklyn Avenue NE, NE 42nd Street, and NE 43rd Street are designated as Green Streets. There is a proposed Neighborhood Greenway on 12th Avenue NE as well, which would prioritize pedestrians and bicyclists over vehicle traffic.

UNIVERSITY OF WASHINGTON CAMPUS MASTER PLAN (2003)

The University of Washington Campus Master Plan (CMP) was created in 2003 to guide the development of approximately three million gross square feet of projected growth while maintaining the values of the University.

The transportation management section of the plan limits the number of vehicle trips to and from the U District and the Campus during peak hours. Estimates of travel patterns are determined from surveys of UW faculty, staff, and students. The 2012 vehicle trip estimates are summarized in Table 3.5–3; the 2012 vehicle trips are below the set caps.

Table 3.5–3: **2012 Vehicle Trips to and from the University of Washington**

	AM Peak Inbound to U District	AM Peak Inbound to Campus	PM Peak Outbound from U District	PM Peak Outbound from Campus
CMP Cap	10,020	7,877	10,481	8,488
2012 Vehicle Trip Estimates	8,168	5,790	8,774	6,263
Percentage Under CMP Cap	-18%	-26%	-16%	-26%

Source: University of Washington Campus Master Plan—Annual Report, 2013

From 2001 to 2012, the campus has experienced a 13% total population growth, but vehicle trips have decreased by 32%. The mode split estimates for UW faculty, staff, and students were also provided for 2012, as shown in Table 3.5–4. Transit and walking trips make up 45% and 35% of student trips, respectively, while driving alone accounts for 8%. Faculty and staff have higher drive alone trips at 45% and 35%, respectively, while transit is the second most popular mode at 23% and 42%, respectively.

Table 3.5–4: **2012 Mode Share Split for University of Washington Faculty, Staff, and Students**

Mode	Faculty	Staff	Students
Transit	23%	42%	45%
Drive Alone	45%	35%	8%
Carpool/Vanpool	7%	11%	4%
Bicycle	16%	7%	8%
Walk	7%	4%	35%
Other	1%	1%	1%

Source: University of Washington Campus Master Plan —Annual Report, 2013

UNIVERSITY AREA TRANSPORTATION ACTION STRATEGY—EXISTING CONDITIONS SUMMARY (2008)

This document is an update to the University Area Transportation Study completed in 2002. Expected changes to the area such as the three Sound Transit Stations at Husky Stadium, Brooklyn Avenue NE and NE 43rd St, and Roosevelt Way NE and NE 65th Street required a review and update to the 2002 study. The existing conditions section found for the last 16 years the traffic volumes had remained relatively steady or decreased in the area. In general, sidewalks met the minimum six feet width standard in the City's Right-of-Way Improvement Manual. Many pedestrian facilities however did

not meet the total minimum distance standards between moving traffic and pedestrians, (includes sidewalk, parking lane, planter strips and bicycle lane), which varies by arterial classification. It was noted that there are locations with conflicts between the high number of turning vehicles and crossing pedestrians, and that pedestrians experience long delays due to cycle lengths at certain intersections.

The bicycling facilities were evaluated based on traffic conditions (such as daily volumes, speed limits, heavy truck percentages and on-street parking), as well as roadway design (number of lanes, presences of roadway shoulders, and width of outside lanes). More than half of the bicycle facilities did not meet the level of service thresholds set for bicycle facilities. Locations most in need of improvements within the study area were identified as NE 45th Street from I-5 to NE 17th Avenue, and NE 50th Street across I-5.

SOUND TRANSIT DOCUMENTS

The North Link Extension consists of the planned light rail route from the University of Washington Station near Husky Stadium to Northgate. Three stations will be constructed: the U District Station at Brooklyn Avenue NE and NE 43rd St, Roosevelt Station at Roosevelt Way NE and NE 65th St, and the Northgate Station near the Northgate Transit Center. This light rail extension will be entirely underground until just north of NE 95th Street. The expected completion date for this segment is 2021.

The U District Station is the only station within the study area, and will be approximately 80 feet below ground with a north entrance near Neptune Theater and a south end entrance on NE 43rd Street. Plans for the redesign of Brooklyn Avenue NE as a Green Street near the station will include curb parking on the southbound direction, one lane of traffic in each direction, and a bike lane in the northbound direction. Sharrows will be painted in the southbound lane.[6]

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6 *North Link—Brooklyn Station 50% Design Open House, Sound Transit (5/23/2012). www.soundtransit.org/Documents/pdf/projects/link/north/brooklyn/20120523Brooklyn60DesignPresentation.pdf*

Analysis Methodology—Affected Environment

This section describes the methodology used to analyze the existing transportation conditions within the study area.

AUTO, FREIGHT, AND TRANSIT

The proposed actions being evaluated in this document are area-wide and programmatic in nature, rather than location specific. Therefore, the methodology used to evaluate the transportation network is broad-based as is typical for the analysis of larger scale zoning or comprehensive planning efforts, rather than an intersection-level analysis that may be more appropriate for assessing the effects of development on individual parcels or blocks.

This study evaluates the transportation system on a corridor-wide basis to present a holistic view of the network. Specifically, auto and transit travel time along the study corridors is assessed. Travel time was selected as the performance measure because it is easily relatable and addresses the fundamental concern of most travelers—how long does it take to move within and through the study area?

To assess existing conditions, PM peak period travel times were collected in October 2013. The change in travel time predicted by the City of Seattle travel demand forecasting model was used to factor the 2013 data to represent the base year of 2015. For the purposes of this study, the quality of freight mobility within the U District is also assessed using travel time. However, it is acknowledged that traffic congestion is more difficult for freight to navigate, and trucks typically travel at slower speeds than general auto traffic.

Level of Service

A concept used to describe traffic operations. Facilities are assigned a letter grade with A representing free-flow conditions and F representing severe congestion.

Level of Service (LOS) is a concept used to describe traffic operations by assigning a letter grade of A through F, where A represents free-flow conditions and F represents highly congested conditions. This study uses concepts from the 2010 Highway Capacity Manual (HCM) to define thresholds for each LOS threshold, which are shown in Table 3.5–5. Additional details may be found in Appendix D.

Table 3.5–5: **LOS Thresholds for Travel Speeds and Travel Time**

	LOS	A	B	C	D	E	F
Travel Time Thresholds — Ratio between PM Peak Hour Travel Time and Travel Time at Free-Flow Speed		<1.18	1.18 to <1.49	1.49 to <2.0	2.0 to <2.5	2.5 to <3.33	≥3.33

Source: Highway Capacity Manual 2010, Transportation Research Board

To assess the level of vehicle congestion in the vicinity of the U District, a set of study corridors were selected for auto, freight, and transit. These include nearly all of the principal arterials within the study area, as well as some of the key minor arterials. Most corridors were selected as both auto/freight and transit study corridors although some are included for only one.

Figures showing the 2015 LOS on each corridor are included in the following section. Note that the exact extents of some of the auto and transit corridors vary from each other. Auto corridor extents break at intersections, while transit corridors were chosen to mirror the auto corridors, but must break at the nearest bus stop to facilitate data collection.

PEDESTRIAN AND BICYCLE NETWORK

The pedestrian and bicycle network is assessed based on the mode share in the study area. The City's 2009 Pedestrian Master Plan and 2013 Bicycle Master Plan identified high priority areas for improvement, as shown in Figure 3.5–11.

SAFETY

High Accident Location

A signalized intersection with an average of ten or more collisions per year or an unsignalized intersection with an average of five or more collisions per year.

Previous studies for the City have evaluated intersection safety by measuring the average number of collisions per year. A High Accident Location is identified if there is:

- An average of 10 or more collisions per year at a signalized intersection; or
- An average of 5 or more collisions per year at an unsignalized intersection.

This study will also use the criteria put forth in the South Lake Union Height & Density Rezone EIS for pedestrian/bicycle intersections of interest. A pedestrian/bicycle intersection of interest is identified if either of the following criteria are met:

- Any intersection with an average of 1.7 or more pedestrian or bicycle collisions per year (which equates to five or more collisions in a three-year period),
- Or any intersection with an average of 2.3 or more pedestrian and bicycle collisions per year (which equates to seven or more collisions in a three-year period).

A Bike Share program is slated to launch in the U Distict in 2014, making bicycling a more feasible option for residents, employees, and visitors.

The first criteria treats pedestrian and bicycle collisions separately, while the second combines the two measures.

Figure 3.5–11: **High Priority Pedestrian & Bicycle Improvement Needs**

Source: Seattle BMP, 2013 / Seattle PMP, 2009

Analysis Results—Affected Environment

This section presents the results of the 2015 transportation conditions analysis. Since the analysis base year for this study is 2015, the project team forecasted 2015 conditions when possible. These forecasts take into account the development that is expected to occur between Fall 2013 and 2015.

Congestion along NE 45th Street

AUTO AND FREIGHT

Auto travel times were collected in October 2013. Modeling was completed to determine how the projects that will be developed by the 2015 base year would affect these travel times. The 2015 travel times and LOS are shown in Table 3.5–6. The LOS of the more congested direction is shown in Figure 3.5–12.[7]

Two corridors would operate at LOS F in 2015: Roosevelt Way NE and 11th Avenue NE between NE 45th Street and NE 50th Street. The poor LOS is due mainly to delay experienced at the intersections with NE 45th Street and NE 50th Street.

The travel time results indicate that traffic is most congested in the center of the U District, with more moderate conditions in the periphery. Traffic is also congested on the arterials providing access to and across I–5. While a typical PM peak hour tends to operate acceptably overall, it should be noted that events such as street closures, congestion from I–5 ramps, or closure of the University Bridge can cause substantial traffic congestion within the study area.

NE Pacific Street is the only roadway classified as a major truck street in the study area (excluding I-5, which is not part of this analysis). In the PM peak hour, eastbound travel time (i.e. leaving the study area) is longer than westbound travel time, which reflects the congestion approaching the Montlake Bridge. Congestion on this roadway segment presents a challenge for freight mobility through the area.

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7 *Segments operating at LOS A, B, and C are grouped into one color on this figure since they all represent relatively uncongested conditions*

Figure 3.5–12: **Auto and Freight Study Corridors—2015 Level of Service**

Note: LOS is shown for the direction with the longer travel time.

Table 3.5–6: **2015 PM Peak Hour Auto Travel Times**

			North + Eastbound		south + Westbound	
ID	Road	Segment	LOS	Travel Time	LOS	Travel Time
1	NE Ravenna Blvd	8th Ave NE to 15th Ave NE	E	3:13	E	3:00
2	NE 50th St	Latona Ave NE to 5th Ave NE	C	0:26	E	0:51
3	NE 50th St	5th Ave NE to Roosevelt Way NE	B	0:59	C	1:24
4	NE 50th St	Roosevelt Way NE to 15th Ave NE	D	1:50	A	0:59
5	NE 45th St	Latona Ave NE to 5th Ave NE	E	0:31	D	0:27
6	NE 45th St	5th Ave NE to Roosevelt Way NE	E	2:01	D	1:22
7	NE 45th St	Roosevelt Way NE to 15th Ave NE	D	2:09	D	2:16
8	NE 45th St	15th Ave NE to Montlake Blvd NE	B	2:15	B	2:26
9	NE 40th St	2nd Ave NE to 9th Ave NE	D	1:43	E	2:28
10	NE Campus Pkwy	Roosevelt Way NE to 15th Ave NE	Transit Corridor Only			
11	NE Pacific St/NE Northlake Way	6th Ave NE to 15th Ave NE	D	2:56	B	1:40
12	NE Pacific St	15th Ave NE to Montlake Blvd NE	D	2:37	B	1:46
13	7th Ave NE	NE 42nd St to NE 45th St	Transit Corridor Only			
14	Roosevelt Way NE	NE Ravenna Blvd to NE 50th St	–	–	D	2:00
15	Roosevelt Way NE	NE 50th St to NE 45th St	–	–	F	2:20
16	Roosevelt Way NE	NE 45th St to NE Campus Pkwy	–	–	B	1:20
17	University Bridge	NE Campus Pkwy to Fuhrman Ave E	A	0:42	D	1:31
18	11th Ave NE	NE Ravenna Blvd to NE 50th St	C	1:36	–	–
19	11th Ave NE	NE 50th St to NE 45th St	F	2:09	–	–
20	11th Ave NE	NE 45th St to NE Campus Pkwy	E	2:38	–	–
21	University Way NE	NE Ravenna Blvd to NE 50th St	Transit Corridor Only			
22	University Way NE	NE 50th St to NE 45th St	Transit Corridor Only			
23	University Way NE	NE 45th St to NE Pacific St	Transit Corridor Only			
24	15th Ave NE	NE Ravenna Blvd to NE 50th St	C	1:21	C	1:21
25	15th Ave NE	NE 50th St to NE 45th St	D	1:19	E	1:36
26	15th Ave NE	NE 45th St to NE Pacific St	C	3:19	C	2:58

Source: Fehr & Peers, 2013

TRANSIT

Current PM peak hour transit travel times are shown in Table 3.5–7 and LOS by direction is shown in Figure 3.5–13. The travel times were collected using data from the OneBusAway Application Programming Interface (API) which collects transit arrival times to bus stops every 90 seconds. Free-flow travel times for transit were calculated separately from autos to account for the fact that transit generally operates at slower speeds, as well as the frequent stops to load and unload passengers. The transit travel times are

Figure 3.5–13: **Transit Study Corridors – 2015 Level of Service**

Table 3.5–7: **2015 PM Peak Hour Transit Travel Times**

ID	Road	Segment	North + Eastbound LOS	North + Eastbound Travel Time	south + Westbound LOS	south + Westbound Travel Time
1	NE Ravenna Blvd	8th Ave NE to 15th Ave NE	Auto Corridor Only			
2	NE 50th St	Latona Ave NE to 5th Ave NE	Auto Corridor Only			
3	NE 50th St	5th Ave NE to Roosevelt Way NE	Auto Corridor Only			
4	NE 50th St	Roosevelt Way NE to 15th Ave NE	Auto Corridor Only			
5	NE 45th St	Latona Ave NE to 5th Ave NE	B	1:41	C	1:59
6	NE 45th St	5th Ave NE to Roosevelt Way NE	E	1:45	**F**	**2:10**
7	NE 45th St	Roosevelt Way NE to 15th Ave NE	A	1:41	C	2:49
8	NE 45th St	15th Ave NE to Montlake Blvd NE	Auto Corridor Only			
9	NE 40th St	2nd Ave NE to 9th Ave NE	A	1:24	D	4:01
10	NE Campus Pkwy	Roosevelt Way NE to 15th Ave NE	A	1:00	A	1:27
11	NE Pacific St/NE Northlake Wy	6th Ave NE to 15th Ave NE	D	2:06	–	–
12	NE Pacific St	15th Ave NE to Montlake Blvd NE	C	2:12	C	1:37
13	7th Ave NE	NE 42nd St to NE 45th St	B	1:05	–	–
14	Roosevelt Way NE	NE Ravenna Blvd to NE 50th St	–	–	C	2:58
15	Roosevelt Way NE	NE 50th St to NE 45th St	–	–	D	2:20
16	Roosevelt Way NE	NE 45th St to NE Campus Pkwy	–	–	D	3:33
17	University Bridge	NE Campus Pkwy to Fuhrman Ave E	E	4:45	C	2:52
18	11th Ave NE	NE Ravenna Blvd to NE 50th St	E	4:29	–	–
19	11th Ave NE	NE 50th St to NE 45th St	E	2:35	–	–
20	11th Ave NE	NE 45th St to NE Campus Pkwy	C	2:45	–	–
21	University Wy NE	NE Ravenna Blvd to NE 50th St	E	3:32	C	2:11
22	University Way NE	NE 50th St to NE 45th St	D	2:09	B	1:02
23	University Way NE	NE 45th St to NE Pacific St	**F**	**6:05**	E	4:17
24	15th Ave NE	NE Ravenna Blvd to NE 50th St	D	3:37	B	2:28
25	15th Ave NE	NE 50th St to NE 45th St	E	2:46	B	1:34
26	15th Ave NE	NE 45th St to NE Pacific St	C	5:25	C	6:03

Source: OneBusAway API, 2013

not directly comparable to the auto transit times since the extents of the corridors vary somewhat. Details are provided in Appendix D.

Some of the transit trends are similar to the auto findings, in that congestion tends to be higher in the core of the U District. Segments of University Way NE and NE 45th Street operate at LOS F. Travel times to the north of the study area show the most directionality, with northbound roadways experiencing heavier congestion.

PEDESTRIAN AND BICYCLE NETWORK

As shown in Table 3.5–8, the share of trips made by pedestrians and bicycles in 2015 is estimated to be 29%. Note that this is an estimate for the 2015 base year, as predicted by the MXD tool which takes into account new projects that will be developed by 2015. These predicted mode shares vary from the ACS data cited in the Affected Environment section because MXD includes all trips (resident and commute trips) into/out of the study area as opposed to just trips made by study area residents. The underlying land uses and analysis years are also different from the ACS data.

Table 3.5–8: **PM Peak Hour Trip Generation — 2015**

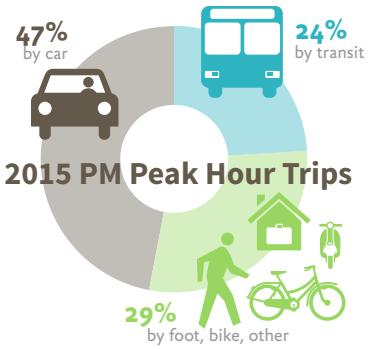
		Non-Auto	
2015 Conditions	**Auto**	Internal, Bicycle & Pedestrian	Transit
Trips	6,270	4,370	3,570
Mode Share	47%	29%	24%

Note: See Appendix D for details on the mode split calculation. Auto trips include both SOV and HOV trips, so the number reported is not equivalent to person-trips. The Internal, Bicycle, & Pedestrian and Transit categories are person-trips.

Source: Fehr & Peers, 2013

MXD Tool

The MXD tool estimates trip generation by mode based on the unique characteristics of the area, such as demographics, transit service, density, mix of land uses, and the built environment. This tool is described in more detail in the following section.



SAFETY

SDOT provided collision data for the period from January 2010 to September 2013. These results are expected to be representative of 2015 conditions. There were a total of 1,256 collisions between January 2010 and September 2013, 60 of which involved at least one pedestrian, and 70 of which involved a bicyclist. There have been two fatal collisions since 2010: one at Brooklyn Ave NE and NE 43rd Street involving a pedestrian, and the other at University Way NE and westbound NE Campus Parkway involving a bicyclist.

Based on the January 2010-September 2013 data, there are no High Accident Locations in the study area. The corridors with the highest average collision rates (between 5.3 and 6.1) are:

- NE 45th Street between 7th and 8th Avenue
- Roosevelt Way between NE 45th Street and NE 47th Street
- University Way NE between NE 45th Street and NE 47th Street

Of the 70 bicycle-involved collisions, the location with the highest frequency (a total of five) was the intersection of 15th Avenue NE and NE Pacific Street, which includes a Burke-Gilman Trail crossing. The majority of the collisions

were right turning vehicles colliding with cyclists. Of the 60 pedestrian-involved incidents, the location with the most collisions (a total of seven) was the intersection of Brooklyn Ave NE and NE 45th Street. The most common type of incident involved a turning vehicle colliding with a pedestrian; these collisions accounted for slightly less than half of all reported incidents at this intersection.

There is one pedestrian/bicycle intersection of interest, where there were approximately 1.9 pedestrian collisions per year:

- Brooklyn Avenue NE and NE 45th Street

Figure 3.5–14 maps the average number of collisions per year within the study area. Total bicycle and pedestrian collisions from January 2010 to September 2013 are mapped in Figure 3.5–15.

Analysis Methodology—Planning Scenarios Evaluated

Zoning Alternatives

All three alternatives assume essentially the same growth in households and employment.

The No Action Alternative maintains the current low-rise dispersed growth, while Alternatives 1 and 2 allow increased building height and intensity in the core of the U District.

This section describes the planning scenarios that will be evaluated and presents the methodology and assumptions used to analyze the alternatives.

Three alternatives are evaluated under future year 2035 conditions. These include a No Action scenario that maintains the U District's current zoning and two action alternatives, which would vary the neighborhood's zoning. All three alternatives assume essentially the same growth in new households and employment; the alternatives vary in how this growth would be accommodated. Alternative 3, the No Action Alternative, would continue the low-rise dispersed pattern of growth while Alternatives 1 and 2 would allow for varying degrees of increased building height and intensity, with growth more focused around the core of the U District.

TRANSPORTATION NETWORK AND LAND USE ASSUMPTIONS

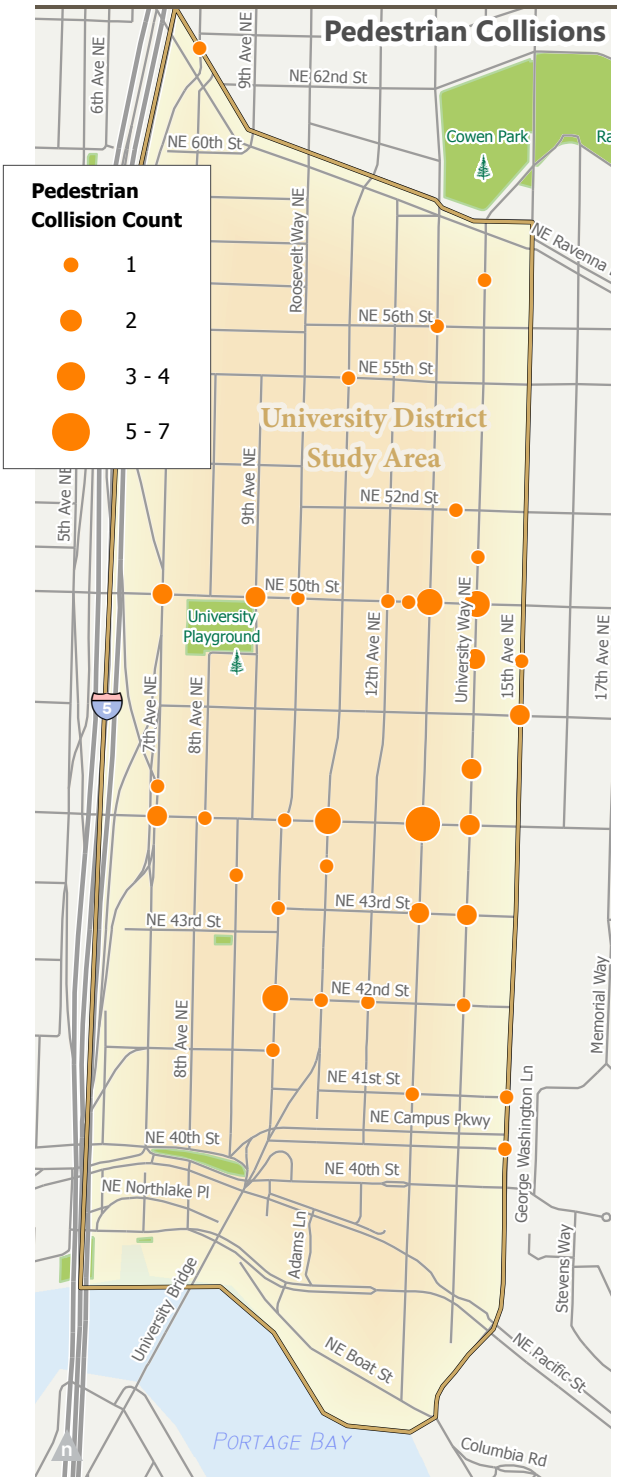
Background traffic refers to traffic generated by land uses outside of the U District. U District generated traffic is added to this regional traffic to evaluate the 2035 transportation conditions.

This section assesses transportation system operations under 2035 for the three future year scenarios. The analysis used two tools to forecast traffic volumes and travel times: a citywide travel demand forecasting model to distribute and assign background vehicle traffic to area roadways and a more refined tool called MXD to project traffic volumes within the U District. These tools are discussed in more detail below.

Figure 3.5–14: **Annual Collision Rates**

Source: SDOT, 2013

Figure 3.5–15: **Pedestrian and Bicycle Collisions**



Source: SDOT, 2013

Source: SDOT, 2013

Citywide Travel Demand Forecasting Model

Beginning with the Seattle travel demand forecasting model, the transportation network assumptions within the study area and beyond were refined to create appropriate 2015 and 2035 networks. The following is a description of some of the travel demand model's key features.

- **Analysis Years.** This version of the model has a base year of 2015 and a horizon year of 2035. Travel forecasts were developed by updating the land use inputs and trip generation rates within the study area.
- **Land Use.** The City of Seattle developed estimates of study area land use forecasts for 2015 as well as for the three 2035 scenarios. These study area forecasts were used in combination with citywide land use forecasts (called Local Targets Representation) recently released by the Puget Sound Regional Council (PSRC).
- **Network Representation.** The highway and major street systems (including all study corridors) within the U District are fully represented in the model.
- **Transit.** The travel model has a full representation of the study area transit system under base year conditions. The horizon year transit system is based on assumptions of service from Sound Transit's 2035 travel demand model which was released in September 2013.
- **Travel Costs.** The model accounts for the effects of auto operating costs, parking, transit fares, and tolls (on SR 520) on travel demand.
- **Travel Demand.** The model predicts travel demand for seven modes of travel: drive alone, carpool (2 person), carpool (3 plus), transit, trucks, walking, and bicycling. Travel demand is estimated for five time periods. This analysis will focus on the PM peak hour.

Trip Generation Methodology

The project team used an innovative trip generation analysis technique known as the mixed-use development (MXD) model to analyze the base and future year scenarios. The MXD model is based on a growing body of research, which focuses on the relationship between travel and the built environment. This method supplements conventional trip generation methods to capture effects related to built environment variables (known as the Ds) like density, diversity of land uses, destinations (accessibility), development scale, pedestrian and bicycle design, distance to transit services, and demographics. The proposed action alternatives in the U District incorporate changes in a number of these variables that, in turn, would

influence the neighborhood's travel characteristics. In short, projects with higher densities, a rich variety of land uses close to one another, and high quality pedestrian, bicycle, and transit environments have a lower vehicle trip generation rate. Travelers have more choices in terms of both the travel mode they choose and the distance they must travel to reach various destinations. When these projects are located in urban areas such as the U District, this effect intensifies. The MXD method avoids overestimating the number of vehicle trips that infill projects generate and provides a more reasonable picture of how travel characteristics change over time.

The U District is already a mixed-use neighborhood with a high non-auto mode share. Therefore, the MXD was applied for both the 2015 and 2035 analyses.

The U District is already a mixed-use neighborhood with a high non-auto mode share. Therefore, the MXD was applied for both the 2015 and 2035 analyses.

The MXD model was applied to four subareas within the study area, as shown in Figure 3.5–16. The neighborhood boundaries were determined based on a number of factors, including the amount and character of land uses.

Transportation Network Assumptions

In revising the models to represent 2035 conditions, only "reasonably foreseeable" transportation improvement projects were included. Reasonably foreseeable projects are those that either have full funding commitments, or have partial funding commitments, but with a well-defined strategy in place to raise the remaining funds.

The assumptions were determined in conjunction with City staff using the best knowledge available at the time. Key assumptions are listed below. Note that some of these projects are reflected in the citywide travel demand model while others factor into the study-area specific MXD model:

Reasonably foreseeable projects

Projects with full funding commitments

Projects with partial funding commitments, but with a well-defined strategy in place to raise the remaining funds

- SR 520 improvements east of the Montlake interchange are assumed to be in place by 2035, but project elements to the west (connecting to I–5) and to the north (increased capacity on the Montlake Bridge) are not assumed.
- Link light rail—north-south between Lynnwood and Federal Way, and east to Overlake. Transit route modifications to connect to the Link light rail extension are also assumed, based on information from Sound Transit's travel demand forecasting model.
- Some level of pedestrian and bicycle improvements (as outlined in the Pedestrian Master Plan and Bicycle Master Plan) are assumed to occur over the 20-year planning period. Other projects that will be implemented in the near term include a neighborhood greenway on 12th Avenue NE and bicycle facility improvements on NE 40th Street.

Figure 3.5–16: **Neighborhoods Boundaries used for Trip Generation**

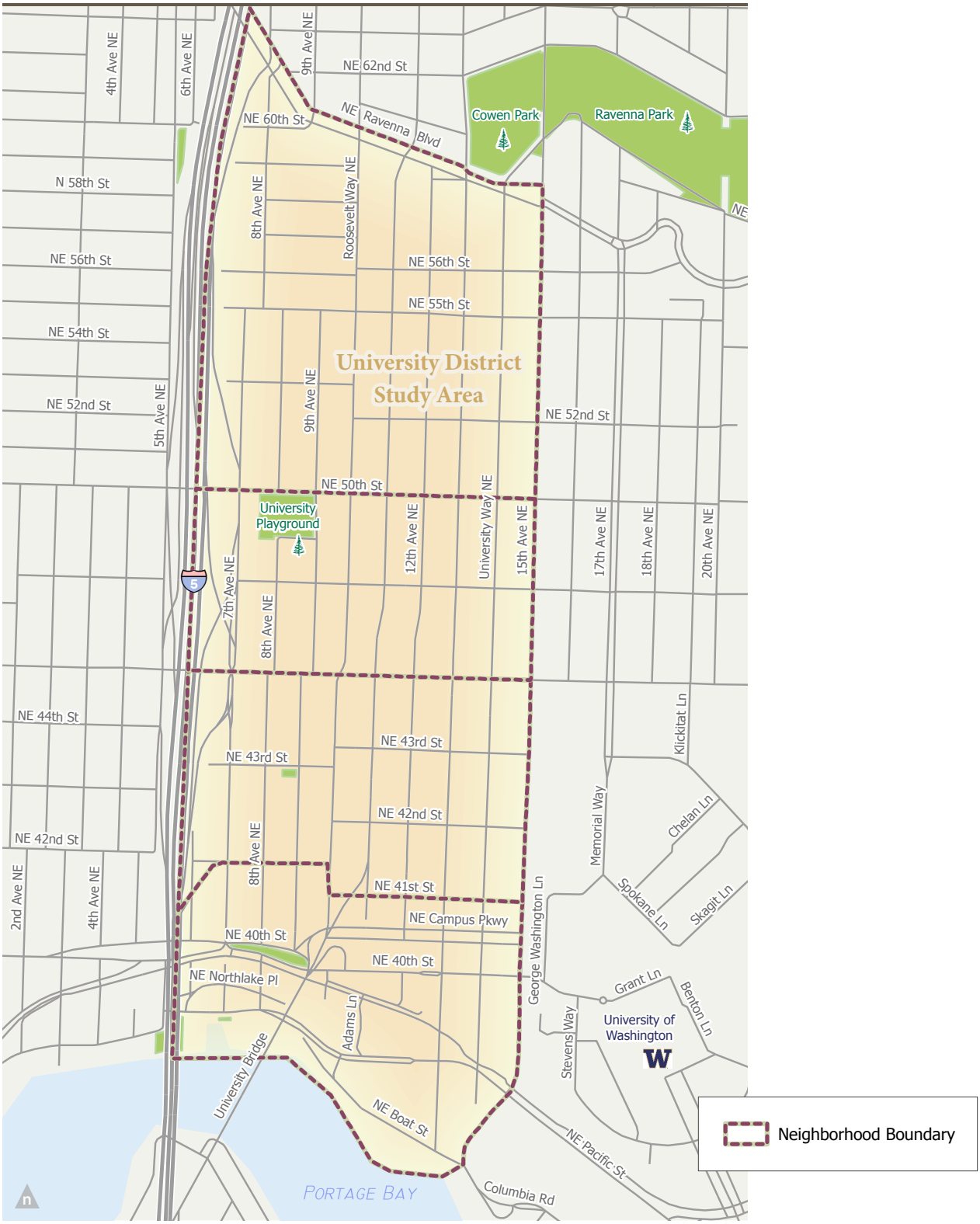
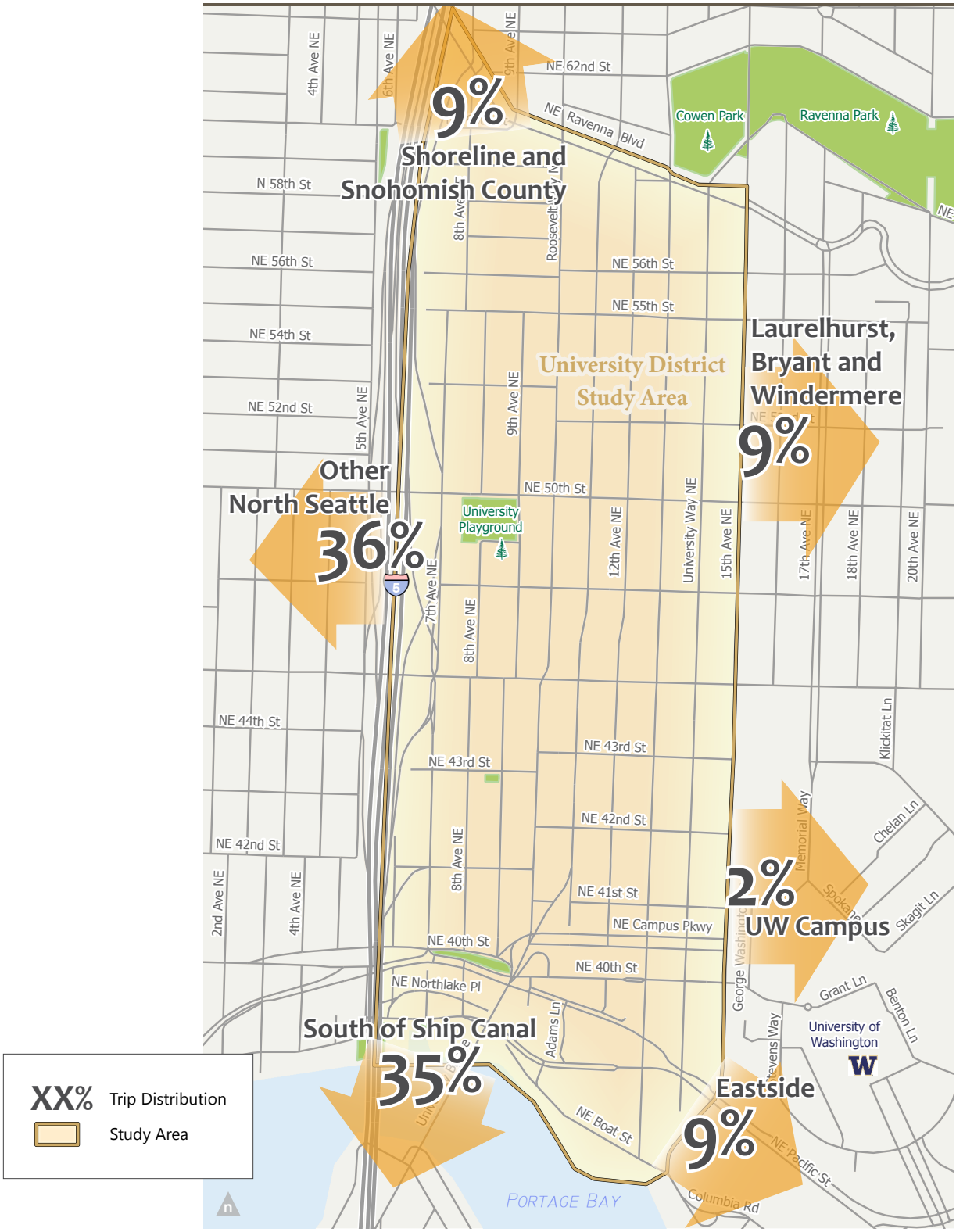


Figure 3.5–17: **External Vehicle Trip Distribution**



- Mid-block cut-throughs for non-motorized travel are assumed to be in place for all new developments of at least 20,000 SF in size (required as part of proposed incentive zoning regulations).

TRIP DISTRIBUTION

The project travel demand model distributed the vehicle trips projected in the MXD model as well as background traffic from other areas of the City. The travel model indicated the following general distribution pattern for vehicle trips to and from the U District during the PM peak period in 2035 (also shown in Figure 3.13-17).

- 2% to the University of Washington campus
- 9% to Laurelhurst, Bryant, and Windermere
- 36% to other North Seattle locations
- 9% north to Shoreline and Snohomish County
- 35% south of the Ship Canal (e.g. Downtown, Capitol Hill, and Queen Anne)
- 9% to the Eastside (e.g. Bellevue, Kirkland, and Redmond)

3.5.2 Significant Impacts

DEFICIENCIES OF THE NO ACTION ALTERNATIVE

Analysis results and environmental deficiencies of the No Action Alternative are summarized in this section. Deficiencies are defined if the No Action Alternative would:

- Cause the non-SOV mode share for the U District to fall below 70%.
- Cause the ratio between PM peak hour travel time and free-flow travel time to be greater than or equal to 3.33 (LOS F) for more than 20% of the total PM peak hour study segment Vehicle Miles Traveled (VMT). This threshold will be used for both auto and freight travel.
- Cause a transit segment to operate at LOS F.
- Cause an increase in vehicle, pedestrian, or bicycle volumes at a High Accident Location, as defined for existing conditions.

Vehicle Miles Traveled

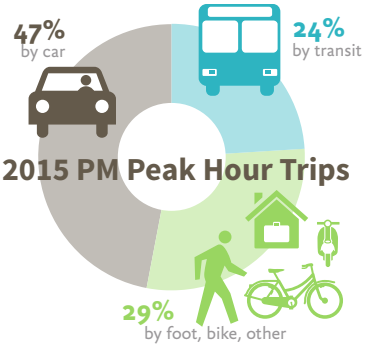
This metric is calculated as the product of the length of the roadway segment and the number of vehicle which travel upon it.

As defined above, deficiencies are future transportation operations are not expected to meet existing service standards. Future development, both within and outside of the study area, may contribute to these deficiencies. Individual project-level mitigation could reduce the magnitude of the deficiency; however, this level of detail is not known and cannot be considered in this programmatic EIS. In this case, the term deficiency does not refer to an existing transportation system issue that is the responsibility of the City to address.

The No Action Alternative serves as the baseline for the impact analysis of the action alternatives (Alternatives 1 and 2). It represents the operations of the transportation system if no actions were taken by the City Council and no zoning changes were made in the U District. The same transportation network (included all reasonably foreseeable transportation improvements) is assumed for the No Action Alternative and the two action alternatives.

PM peak period auto and transit travel time estimates were generated using the MXD model and the project travel demand model. This method accounts for background growth in traffic and transit ridership associated with increases in City and regional land uses over the next 20 years, as well as the varying patterns of land use growth within the U District.

Table 3.5–9 shows the trip generation estimate predicted by the MXD model for PM peak hour conditions. The pedestrian, bicycle, and transit mode share under the No Action Alternative is projected to increase substantially compared to the 2015 condition. Although the auto mode share percentage would decrease compared to 2015, the absolute number of auto trips would increase by roughly 12%.



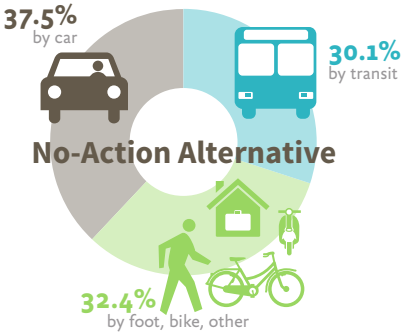


Table 3.5–9: **PM Peak Hour Trip Generation — No Action Alternative**

	Auto	Non-Auto: Internal, Bicycle & Pedestrian	Non-Auto: Transit
2015 Conditions			
Trips	6,270	4,370	3,570
Mode Share	47%	29%	24%
No Action Alternative — Current Zoning			
Trips	7,010	6,660	6,810
Mode Share	37.5%	32.4%	30.1%

Note: See Appendix D for details on the mode split calculation. Auto trips include both SOV and HOV trips, so the number reported is not equivalent to person-trips. The Internal, Bicycle, & Pedestrian and Transit categories are person-trips.

Source: Fehr & Peers, 2013

The ACS commute trip data cited in the Affected Environment section indicates that roughly a quarter of all auto trips are non-SOV (a conservative estimate for this application given that work trips tend to be weighted more heavily toward SOV). Therefore, the non-SOV mode share under the No Action Alternative is estimated to be 71.9%, meeting the City's mode split goal of 70% non-SOV.

Analysis Results

The following section describes the results of the evaluation of transportation conditions under the 2035 No Action Alternative.

AUTO & FREIGHT Table 3.5–10 and Figure 3.5–18 (on following pages) summarize the travel times along the auto/freight study corridors under the No Action Alternative. One of the U District's main connections to the south—the University Bridge—is projected to operate at LOS F in both directions by 2035. In addition, the following study corridors would operate at LOS F in 2035:

- Westbound NE 50th Street from 5th Avenue E to Latona Avenue E
- Westbound NE 40th Street from 9th Avenue NE to 2nd Avenue NE
- Southbound Roosevelt Way NE from NE 50th Street to NE 45th Street (also LOS F in 2015)
- Northbound 11th Avenue NE from NE 45th Street to NE 50th Street (also LOS F in 2015)

Many corridors internal to the study area are not expected to see substantial changes in travel times. The largest increases would be on roadways leading into and out of the study area, such as the University Bridge, NE Pacific Street and NE 40th Street. Traffic patterns may readjust to use alternate routes if some corridors become too congested.

These conditions are functions of growth in the study area, as well as growth in regional traffic that may only be passing through the U District. The congested operations on the study corridors identified above can also be assumed to translate to congested operations at key intersections along these corridors. The VMT on the LOS F corridors represent 18.9% of the total study segment VMT (calculations may be found in Appendix D).[8] Since less than 20% of VMT is expected to travel at LOS F conditions, no travel time deficiencies for auto or freight are identified under the No Action Alternative.

8 *The number of vehicles on each study segment was projected using the travel demand model. The product of the number of vehicles and the length of the segment yields the study segment Vehicle Miles Traveled (VMT). Finally, a ratio of the VMT on segments with deficiencies to the total VMT of study segments was calculated. See Appendix D for more details.*

Table 3.5–10: **2035 No Action Alternative — PM Peak Hour Auto Travel Times**

			2015				2035 No Action Alternative			
			North + Eastbound		south + Westbound		North + Eastbound		south + Westbound	
ID	Road	Segment	LOS	Travel Time	LOS	Travel Time	LOS	Travel Time	LOS	Travel Time
1	NE Ravenna Blvd	8th Ave NE to 15th Ave NE	E	3:13	E	3:00	E	3:16	E	3:03
2	NE 50th St	Latona Ave NE to 5th Ave NE	C	0:26	E	0:51	C	0:27	**F**	**0:53**
3	NE 50th St	5th Ave NE to Roosevelt Way NE	B	0:59	C	1:24	B	0:59	C	1:24
4	NE 50th St	Roosevelt Way NE to 15th Ave NE	D	1:50	A	0:59	D	1:51	A	0:59
5	NE 45th St	Latona Ave NE to 5th Ave NE	E	0:31	D	0:27	E	0:32	D	0:28
6	NE 45th St	5th Ave NE to Roosevelt Way NE	E	2:01	D	1:22	E	2:02	D	1:25
7	NE 45th St	Roosevelt Way NE to 15th Ave NE	D	2:09	D	2:16	D	2:09	D	2:17
8	NE 45th St	15th Ave NE to Montlake Blvd NE	B	2:15	B	2:26	B	2:34	B	2:26
9	NE 40th St	2nd Ave NE to 9th Ave NE	D	1:43	E	2:28	D	1:52	**F**	**2:41**
10	NE Campus Pkwy	Roosevelt Way NE to 15th Ave NE	Transit Corridor Only							
11	NE Pacific St/NE Northlake Wy	6th Ave NE to 15th Ave NE	D	2:56	B	1:40	D	2:57	B	1:44
12	NE Pacific St	15th Ave NE to Montlake Blvd NE	D	2:37	B	1:46	D	2:57	B	1:53
13	7th Ave NE	NE 42nd St to NE 45th St	Transit Corridor Only							
14	Roosevelt Way NE	NE Ravenna Blvd to NE 50th St	-	-	D	2:00	-	-	D	2:02
15	Roosevelt Way NE	NE 50th St to NE 45th St	-	-	**F**	**2:20**	-	-	**F**	**2:21**
16	Roosevelt Way NE	NE 45th St to NE Campus Pkwy	-	-	B	1:20	-	-	C	1:28
17	University Bridge	NE Campus Pkwy to Fuhrman Ave E	A	0:42	D	1:31	**F**	**3:12**	**F**	**3:17**
18	11th Ave NE	NE Ravenna Blvd to NE 50th St	C	1:36	-	-	C	1:45	-	-
19	11th Ave NE	NE 50th St to NE 45th St	**F**	**2:09**	-	-	**F**	**2:12**	-	-
20	11th Ave NE	NE 45th St to NE Campus Pkwy	E	2:38	-	-	E	2:52	-	-
21	University Way NE	NE Ravenna Blvd to NE 50th St	Transit Corridor Only							
22	University Way NE	NE 50th St to NE 45th St	Transit Corridor Only							
23	University Way NE	NE 45th St to NE Pacific St	Transit Corridor Only							
24	15th Ave NE	NE Ravenna Blvd to NE 50th St	C	1:21	C	1:21	C	1:22	C	1:25
25	15th Ave NE	NE 50th St to NE 45th St	D	1:19	E	1:36	D	1:20	E	1:39
26	15th Ave NE	NE 45th St to NE Pacific St	C	3:19	C	2:58	C	3:22	C	3:10

Source: Fehr & Peers, 2013

Figure 3.5–18:
2035 No Action Alternative—Auto Travel Time Level of Service

Note: LOS is shown for the direction with the longer travel time.

Although there are no travel time related impacts to freight, there may be potential issues with changes to loading zones or access needs as the area develops. At this programmatic level of analysis, it is not possible to evaluate these effects; these issues would need to be analyzed and mitigated at the project level.

TRANSIT As was the case under 2015 conditions, transit operations are assessed using travel time. The 2035 No Action Alternative transit travel times and LOS are shown in Table 3.5–11 and Figure 3.5–19 (on following pages). The following study corridors would operate at LOS F:

- Westbound NE 45th Street from Roosevelt Way NE to 5th Avenue NE (also LOS F in 2015)
- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway
- Northbound University Way NE from NE Pacific Street to NE 45th Street (also LOS F in 2015)

Since buses would be traveling in general purpose lanes, the travel time trends discussed for autos also hold true for transit. However, since buses travel at slower speeds and stop frequently, the magnitude of the travel times changes are higher. This is particularly true on the University Bridge where travel times are expected to increase substantially.

Bus layover facilities (and potentially trolley infrastructure during construction) may be affected by future development. However, at this programmatic level of analysis, it is not possible to know how these transit facilities may be affected. Effects would need to be analyzed at the project level.

PEDESTRIAN & BICYCLE SYSTEM As shown in the trip generation table (Table 3.5–9), the land use development anticipated to occur under the No Action Alternative will result in a substantial number of pedestrian and bicycle trips within the study area. This level of pedestrian and bicycle activity will serve as the baseline against which impacts of the action alternatives will be assessed.

SAFETY As described earlier, the City of Seattle evaluates traffic safety concerns based on the definition of High Accident Locations. Since High Accident Locations calculate the average rate of collisions per year at intersections without any regard to the traffic flow through the intersection, the increased traffic volumes anticipated under the No Action Alternative could lead to the identification of additional High Accident Locations. While there may be more

High Accident Locations under future conditions with the No Action Alternative, there is no data available to suggest that a volume-based collision rate (e.g., collisions per million vehicles entering the intersection) will increase with buildout of the No Action Alternative.

One pedestrian intersection of interest was identified in the Affected Environment section: Brooklyn Avenue NE & NE 45th Street. This location is already signalized, but may experience an increase in the total number of collisions due to future growth in vehicle and pedestrian volumes through the intersection. This intersection was identified in the Pedestrian Master Plan (PMP) as a Tier 1 Improvement location, and should be prioritized for improvement as traffic volumes increase.

PARKING The Affected Environment section includes studies that show demand already exceeds supply during the evening hours in some areas of the U District. Additional land use within the study area would likely exacerbate this on-street parking supply issue, as well as potentially cause spillover into Roosevelt to the north and University Park to the east. Where parking supply is available, utilization rates would likely increase proportional to the growth in population. The duration of time that demand nears or exceeds supply would likely be longer than is currently the case. Since the No Action Alternative assumes more evenly distributed growth throughout the study area, effects would likely be spread over a larger area than the action alternatives. However, the City of Seattle has already established RPZs immediately north and east of the study area in University Park and Roosevelt. These RPZs are separate from the U District RPZ, reducing spillover from the study area. Additional RPZs could be established west of the study area if necessary.

IMPACTS OF THE ACTION ALTERNATIVES

The 2035 No Action Alternative serves as the baseline for identifying impacts to transportation facilities in 2035 caused by the action alternatives. A significant transportation impact is identified if an action alternative would:

- Cause the ratio between PM peak hour travel time and free-flow travel time to be greater than or equal to 3.33 (LOS F) for more than 20% of the total PM peak hour study segment VMT. This threshold will be used for both auto and freight travel.[9]

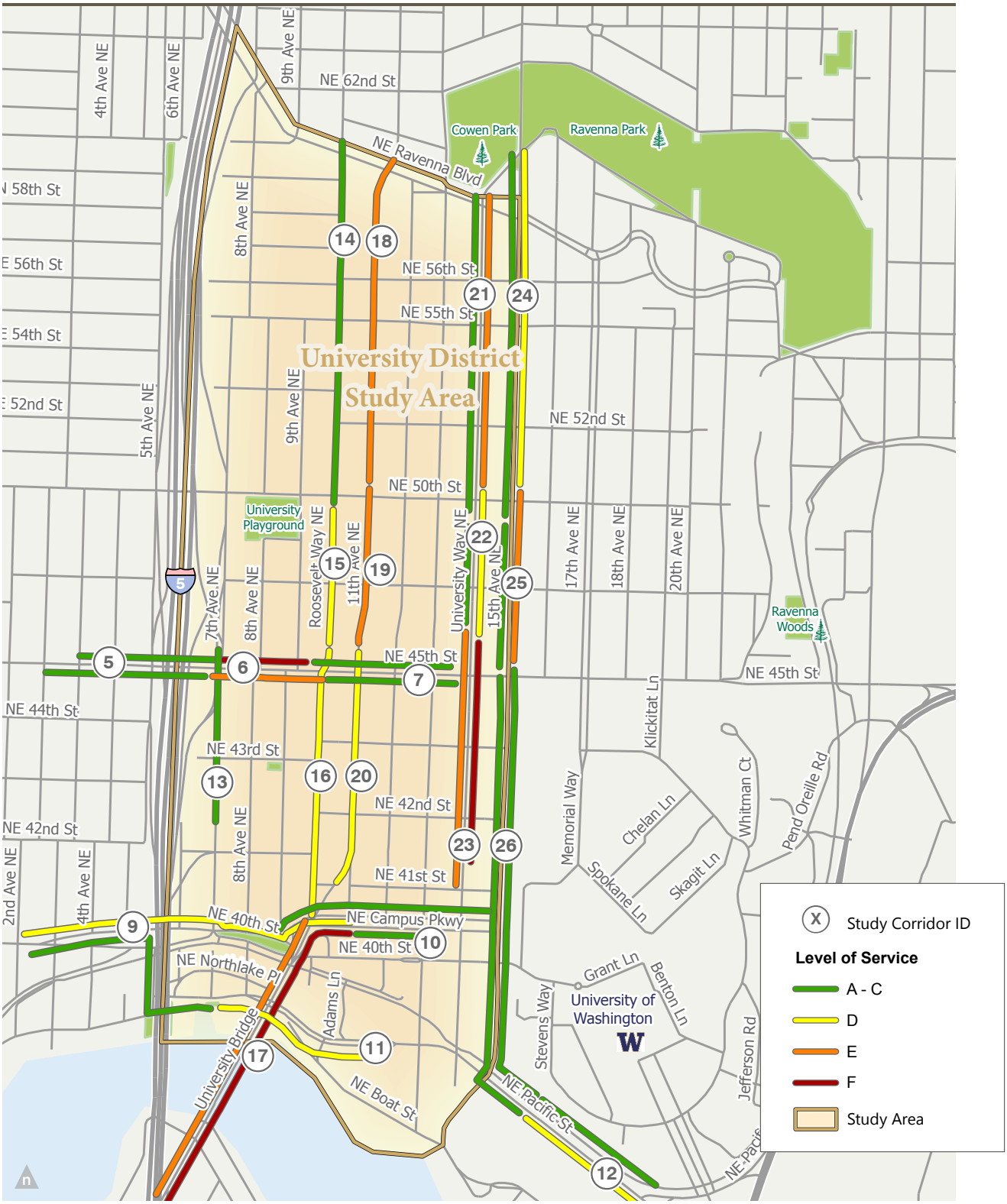
9 *This threshold is meant to achieve a point of balance between two ends of the spectrum: not so low as to allow very minor changes to trigger an impact, and also not so high as to dilute the meaning of the performance measure.*

Table 3.5–11: **2035 No Action Alternative — PM Peak Hour Transit Travel Times**

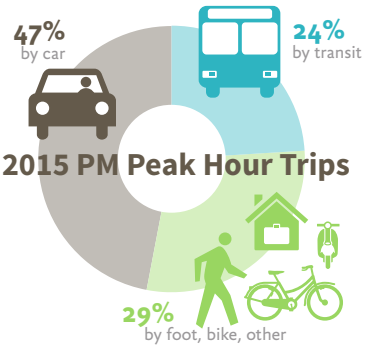
			2015				2035 No Action Alternative			
			North + Eastbound		south + Westbound		North + Eastbound		south + Westbound	
ID	Road	Segment	LOS	Travel Time	LOS	Travel Time	LOS	Travel Time	LOS	Travel Time
1	NE Ravenna Blvd	8th Ave NE to 15th Ave NE	Auto Corridor Only							
2	NE 50th St	Latona Ave NE to 5th Ave NE	Auto Corridor Only							
3	NE 50th St	5th Ave NE to Roosevelt Way NE	Auto Corridor Only							
4	NE 50th St	Roosevelt Way NE to 15th Ave NE	Auto Corridor Only							
5	NE 45th St	Latona Ave NE to 5th Ave NE	B	1:41	C	1:59	B	1:42	C	2:01
6	NE 45th St	5th Ave NE to Roosevelt Way NE	E	1:45	**F**	**2:10**	E	1:46	**F**	**2:11**
7	NE 45th St	Roosevelt Way NE to 15th Ave NE	A	1:41	C	2:49	A	1:41	C	2:49
8	NE 45th St	15th Ave NE to Montlake Blvd NE	Auto Corridor Only							
9	NE 40th St	2nd Ave NE to 9th Ave NE	A	1:24	D	4:01	A	1:27	D	4:22
10	NE Campus Pkwy	Roosevelt Way NE to 15th Ave NE	A	1:00	A	1:27	A	1:00	A	1:28
11	NE Pacific St/NE Northlake Wy	6th Ave NE to 15th Ave NE	D	2:06	-	-	D	2:07		-
12	NE Pacific St	15th Ave NE to Montlake Blvd NE	C	2:12	C	1:37	D	2:34	C	1:44
13	7th Ave NE	NE 42nd St to NE 45th St	B	1:05	-	-	C	1:27		
14	Roosevelt Way NE	NE Ravenna Blvd to NE 50th St	-	-	C	2:58	-	-	C	3:02
15	Roosevelt Way NE	NE 50th St to NE 45th St	-	-	D	2:20	-	-	D	2:22
16	Roosevelt Way NE	NE 45th St to NE Campus Pkwy	-	-	D	3:33	-	-	D	3:46
17	University Bridge	NE Campus Pkwy to Fuhrman Ave E	E	4:45	C	2:52	**F**	**7:15**	E	4:37
18	11th Ave NE	NE Ravenna Blvd to NE 50th St	E	4:29	-	-	E	4:43		-
19	11th Ave NE	NE 50th St to NE 45th St	E	2:35	-	-	E	2:40		-
20	11th Ave NE	NE 45th St to NE Campus Pkwy	C	2:45	-	-	D	3:09		-
21	University Way NE	NE Ravenna Blvd to NE 50th St	E	3:32	C	2:11	E	3:34	C	2:17
22	University Way NE	NE 50th St to NE 45th St	D	2:09	B	1:02	D	2:10	B	1:05
23	University Way NE	NE 45th St to NE Pacific St	**F**	**6:05**	E	4:17	**F**	**6:07**	E	4:38
24	15th Ave NE	NE Ravenna Blvd to NE 50th St	D	3:37	B	2:28	D	3:39	C	2:36
25	15th Ave NE	NE 50th St to NE 45th St	E	2:46	B	1:34	E	2:47	C	1:39
26	15th Ave NE	NE 45th St to NE Pacific St	C	5:25	C	6:03	C	5:30	C	6:23

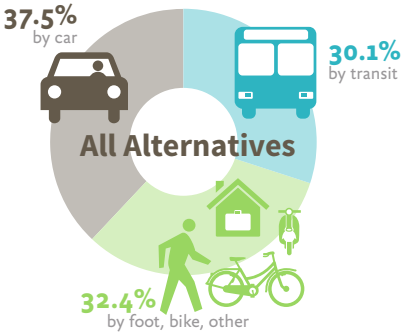
Source: Fehr & Peers, 2013

Figure 3.5–19:
2035 No Action Alternative—Transit Travel Time Level of Service



- Cause travel time on a transit analysis corridor to increase by more than 10% compared to the No Action Alternative or cause any increase on a transit analysis corridor already operating at LOS F under the No Action Alternative.
- Cause an increase in the proportion of pedestrian travel in an area with high priority pedestrian improvement needs, compared to the No Action Alternative.
- Cause an increase in the proportion of bicycle travel in an area with high priority bicycle improvement needs, compared to the No Action Alternative.
- Cause on-street parking demand to exceed on-street parking supply.
- Cause an increase in vehicle, pedestrian, or bicycle volumes at a High Accident Location compared to the No Action Alternative.





Analysis Results

This section provides the evaluation of each of the action alternatives in 2035. Due to the similarities of the action alternatives, they are both addressed in the same section to minimize redundancy. The alternatives are so similar because the total growth assumed in the study area is very similar. Although there are small variations on a segment level, the rezone alternatives are very similar from an area-wide transportation perspective. The impacts and potential mitigation measures for all alternatives are described in the following section.

Table 3.5–12: **2035 PM Peak Hour Trip Generation — All Alternatives**

		Non-Auto	
	Auto	Internal, Bicycle & Pedestrian	Transit
No Action Alternative — Current Zoning			
Trips	7,010	6,660	6,180
Mode Share	37.5%	32.4%	30.1%
Alternative 1 — Moderate Increases to Height and Density			
Trips	6,840	6,760	6,250
Mode Share	36.7%	32.9%	30.4%
Alternative 2 — Highest Increases to Height and Density			
Trips	6,880	6,740	6,240
Mode Share	36.8%	32.8%	30.4%

Note: See Appendix D for details on the mode split calculation. Auto trips include both SOV and HOV trips, so the number reported is not equivalent to person-trips. The Internal, Bicycle, & Pedestrian and Transit categories are person-trips.

Source: Fehr & Peers, 2013

Travel time estimates for each of the action alternatives use the same methodology as described for the No Action Alternative. Table 3.5–12 shows the trip generation estimate predicted by the MXD model for PM peak hour conditions.

Mode share percentages among the three alternatives are generally similar. However, both action alternatives have slightly lower auto mode shares

and slightly higher pedestrian, bicycle, and transit mode shares than the No Action Alternative.

Using the same HOV/SOV mode split assumptions as discussed in the No Action Alternative section, the non-SOV mode share under Alternatives 1 and 2 are estimated to be approximately 72.4 and 72.3%, respectively. Therefore, both action alternatives meet the City's 70% non-SOV mode split goal, so no mode share impacts are expected.

The following section describes the results of the evaluation of transportation conditions under each of the action alternatives in 2035.

AUTO AND FREIGHT Table 3.5–13 and Figure 3.5–20 (on following pages) summarize the travel times along the study corridors under Alternatives 1 and 2. The following study corridors would operate at LOS F under both action alternatives:

- Westbound NE 50th Street from 5th Avenue NE to Latona Avenue NE
- Westbound NE 40th Street from 9th Avenue NE to 2nd Avenue NE
- Southbound Roosevelt Way NE from NE 50th Street to NE 45th Street
- University Bridge between Fuhrman Avenue E and NE Campus Parkway in both directions
- Northbound 11th Avenue NE from NE 45th Street to NE 50th Street

The poor operations on the study corridors identified above can also be assumed to translate to poor operations at key intersections along these corridors. The LOS F corridors represent 19.0% of the total study segment VMT operating at LOS F for both Alternatives 1 and 2. Although a slightly higher percentage of the study segment VMT would operate at LOS F conditions (compared to the No Action Alternative), the difference does not meet the threshold defined for a significant auto impact. Therefore, no significant auto impacts are expected.

The corridors listed above would also operate at LOS F under the No Action Alternative. The scenarios would operate so similarly because the overall level of growth in the study area is the essentially the same among all three alternatives. Although the concentration of buildings within the U District would vary, a very similar number of travelers would be moving in and out of the area.

Table 3.5–13: **2035 Alternatives — PM Peak Hour Auto Travel Times**

			No Action Alternative		Alternative 1		Alternative 2	
ID	**Road**	**Segment**	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
1	NE Ravenna Blvd	8th Ave NE to 15th Ave NE	E / 3:16	E / 3:03	E / 3:16	E / 3:03	E / 3:16	E / 3:03
2	NE 50th St	Latona Ave NE to 5th Ave NE	C / 0:27	**F / 0:53**	C / 0:27	**F / 0:53**	C / 0:27	**F / 0:53**
3	NE 50th St	5th Ave NE to Roosevelt Way NE	B / 0:59	C / 1:24	B / 0:59	C / 1:24	B / 0:59	C / 1:24
4	NE 50th St	Roosevelt Way NE to 15th Ave NE	D / 1:51	A / 0:59	D / 1:51	A / 0:59	D / 1:51	A / 0:59
5	NE 45th St	Latona Ave NE to 5th Ave NE	E / 0:32	D / 0:28	E / 0:32	D / 0:28	E / 0:32	D / 0:28
6	NE 45th St	5th Ave NE to Roosevelt Way NE	E / 2:02	D / 1:25	E / 2:01	D / 1:25	E / 2:01	D / 1:25
7	NE 45th St	Roosevelt Way NE to 15th Ave NE	D / 2:09	D / 2:17	D / 2:09	D / 2:17	D / 2:09	D / 2:16
8	NE 45th St	15th Ave NE to Montlake Blvd NE	B / 2:34	B / 2:26	B / 2:34	B / 2:26	B / 2:34	B / 2:26
9	NE 40th St	2nd Ave NE to 9th Ave NE	D / 1:52	**F / 2:41**	D / 1:53	**F / 2:41**	D / 1:52	**F / 2:41**
10	NE Campus Pkwy	Roosevelt Way NE to 15th Ave NE	Transit Corridor Only					
11	NE Pacific St/NE Northlake Wy	6th Ave NE to 15th Ave NE	D / 2:57	B / 1:44	D / 2:57	B / 1:44	D / 2:57	B / 1:44
12	NE Pacific St	15th Ave NE to Montlake Blvd NE	D / 2:57	B / 1:53	D / 2:58	C / 1:54	D / 2:58	C / 1:54
13	7th Ave NE	NE 42nd St to NE 45th St	Transit Corridor Only					
14	Roosevelt Way NE	NE Ravenna Blvd to NE 50th St	--	D / 2:02	--	D / 2:02	--	D / 2:03
15	Roosevelt Way NE	NE 50th St to NE 45th St	--	**F / 2:21**	--	**F / 2:21**	--	**F / 2:21**
16	Roosevelt Way NE	NE 45th St to NE Campus Pkwy	--	C / 1:28	--	C / 1:29	--	C / 1:29
17	University Bridge	NE Campus Pkwy to Fuhrman Ave E	**F / 3:12**	**F / 3:17**	**F / 3:22**	**F / 3:24**	**F / 3:26**	**F / 3:23**
18	11th Ave NE	NE Ravenna Blvd to NE 50th St	C / 1:45	--	C / 1:45	--	C / 1:45	--
19	11th Ave NE	NE 50th St to NE 45th St	**F / 2:12**	--	**F / 2:12**	--	**F / 2:12**	--
20	11th Ave NE	NE 45th St to NE Campus Pkwy	E / 2:52	--	E / 2:53	--	E / 2:53	--
21	University Way NE	NE Ravenna Blvd to NE 50th St	Transit Corridor Only					
22	University Way NE	NE 50th St to NE 45th St	Transit Corridor Only					
23	University Way NE	NE 45th St to NE Pacific St	Transit Corridor Only					
24	15th Ave NE	NE Ravenna Blvd to NE 50th St	C / 1:22	C / 1:25	C / 1:22	C / 1:26	C / 1:22	C / 1:26
25	15th Ave NE	NE 50th St to NE 45th St	D / 1:20	E / 1:39	D / 1:20	E / 1:39	D / 1:20	E / 1:39
26	15th Ave NE	NE 45th St to NE Pacific St	C / 3:22	C / 3:10	C / 3:22	C / 3:10	C / 3:22	C / 3:09

Source: Fehr & Peers, 2013

Figure 3.5–20: **2035 Alternatives 1 and 2—Auto Travel Time Level of Service**

Note: LOS is shown for the direction with the longer travel time.

Since freight operates on the same corridors as autos, there are no travel time related impacts expected for freight. At this programmatic level of analysis, it is not possible to know how freight may be impacted by changes to loading zones or access needs. These are potentially significant impacts that will need to be analyzed and mitigated at the project level.

TRANSIT Transit travel times and LOS are shown in Table 3.5–14 and Figures 3.5–21 (on following pages). The following study corridors would operate at LOS F under Alternatives 1 and 2:

- Westbound NE 45th Street from Roosevelt Way NE to NE 5th Avenue
- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway
- Northbound University Way NE from NE Pacific Street to NE 45th Street

Criteria for a transit impact

Travel time at least 10% longer than the No Action Alternative

Travel time any longer than the No Action Alternative if the corridor was already operation at LOS F

All three of the preceding LOS F corridors are also forecast to operate at LOS F under the No Action Alternative. Three corridors meet the impact criteria under Alternative 1:

- Northbound 7th Avenue NE from NE 42nd Street to NE 45th Street
- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway
- Northbound University Way NE from NE Pacific Street to NE 45th Street

One corridor meets the impact criteria under Alternative 2:

- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway

While the travel time along northbound 7th Avenue NE is expected to grow by more than 10% compared to the No Action Alternative, that corridor would still operate at LOS C. Moreover, with University Link light rail open in the future, it is likely that fewer buses would be using that route.

Bus layover facilities (and potentially trolley infrastructure during construction) may be affected by future development. However, at this programmatic level of analysis, it is not possible to know how these transit facilities may be affected. Effects would need to be analyzed at the project level.

Criteria for a pedestrian or bicycle impact

Increase in the proportion of pedestrian or bicycle travel in the study area compared to the No Action Alternative

PEDESTRIAN & BICYCLE SYSTEM As shown in the trip generation table (Table 3.5–12), the land use development anticipated to occur under both of the action alternatives would result in an increase in the pedestrian and bicycle trip mode share within the study area, compared to the No Action Alternative. Based on the proposed change to zoning, the area that may see the largest increase in pedestrian and bicycle travel is between NE 50th

Street and NE 42nd Street. In particular, the Link light rail station at Brooklyn Avenue NE and NE 45th Street will be a major pedestrian and bicycle trip destination. Since the City's Pedestrian Master Plan and Bicycle Master Plan have identified high priority improvement needs within the study area, this increase in facility users results in a significant impact.

SAFETY Since no High Accident Locations were identified in the study area, no safety impacts are anticipated. As described under the No Action Alternative analysis, while it is likely that the total number of vehicle collisions would increase proportionally with the increase in traffic, there is nothing to suggest that the volume-based rate of vehicle-to-vehicle collisions would increase with the implementation of the action alternatives. It should also be noted that overall vehicle traffic under the action alternatives is expected to be lower than under the No Action Alternative.

Criteria for a safety impact

Increase in vehicle, pedestrian or bicycle volumes at a High Accicdent Location compared to the No Action Alternative

As noted under the No Action Alternative, the intersection of Brooklyn Avenue NE and NE 45th Street was identified in the Affected Environment section as a pedestrian intersection of interest. This location may experience an increase in the total number of collisions due to future growth in vehicle and pedestrian volumes through the intersection; however, this does not constitute an impact. This intersection was identified in the PMP as a Tier 1 Improvement location, and should be prioritized for improvement as traffic volumes increase.

PARKING The Affected Environment section includes studies that show demand already exceeds supply during the evening hours in some areas of the U District. As with the No Action Alternative, additional land use within the study area would likely exacerbate this on-street parking supply issue. Demand for parking would likely be more concentrated around the core of the U District, since the land use patterns of the action alternatives is less dispersed than the No Action Alternative. Therefore, potential impacts to on-street parking supply within the U District are expected, as well as potential spillover impacts into Roosevelt to the north and University Park to the east.

Criteria for a parking impact

On-site parking demand in excess of on-street parking suppy

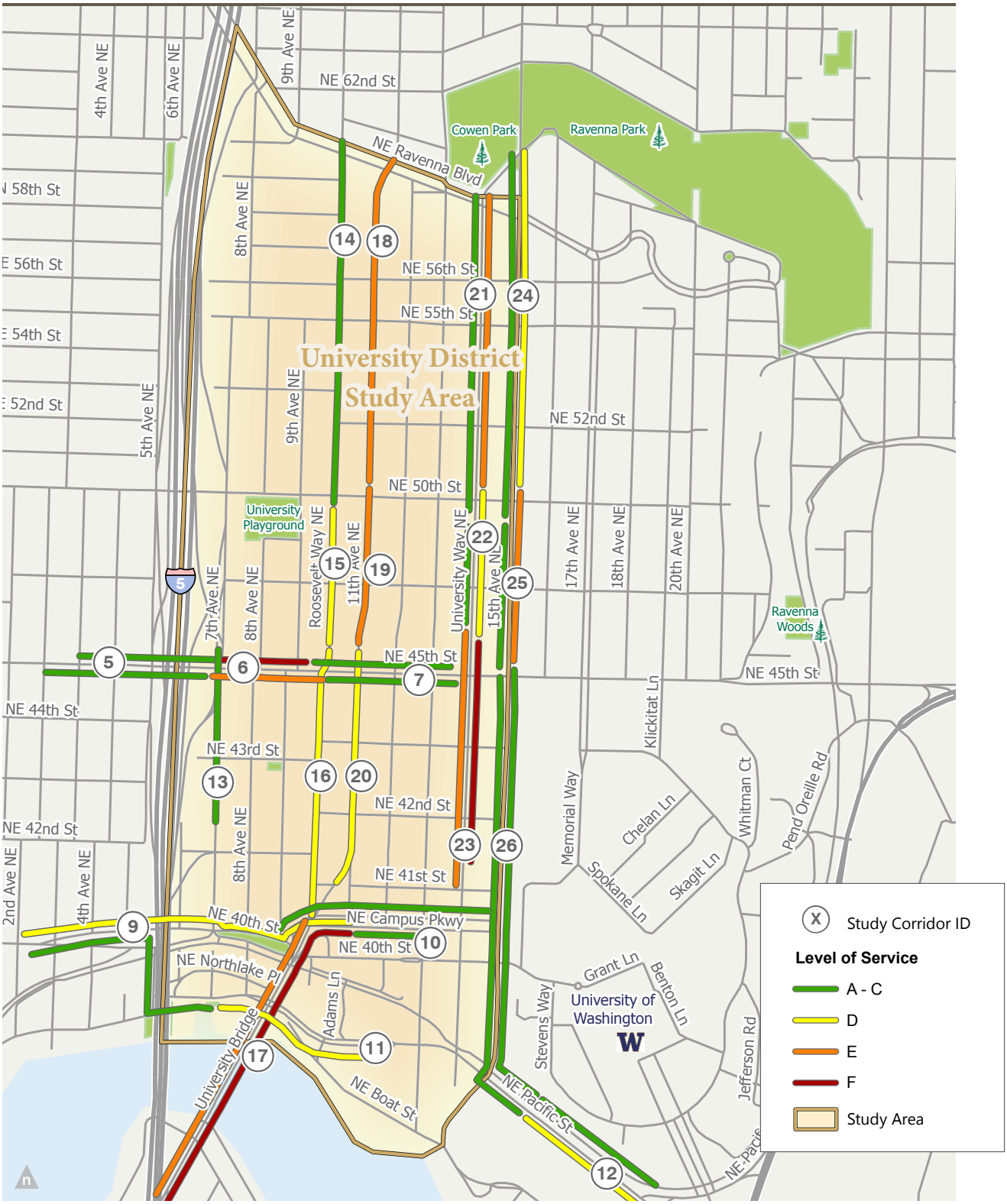
However, the City of Seattle has already established RPZs immediately north and east of the study area. These RPZs are separate from the U District RPZ, reducing spillover from the study area. SDOT actively manages paid parking rates, time limits and hours of operation in the business district through the Performance-Based Parking Pricing Program. As demand increases for the on-street parking, SDOT can make rate, time limit or hours of operation adjustments to maintain availability and turnover for business customers and visitors.

Table 3.5–14: **2035 Alternatives — PM Peak Hour Transit Travel Times**

			No Action Alternative		Alternative 1		Alternative 2	
ID	**Road**	**Segment**	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
1	NE Ravenna Blvd	8th Ave NE to 15th Ave NE	Auto Corridor Only					
2	NE 50th St	Latona Ave NE to 5th Ave NE	Auto Corridor Only					
3	NE 50th St	5th Ave NE to Roosevelt Way NE	Auto Corridor Only					
4	NE 50th St	Roosevelt Way NE to 15th Ave NE	Auto Corridor Only					
5	NE 45th St	Latona Ave NE to 5th Ave NE	B / 1:42	C / 2:01	B / 1:42	C / 2:01	B / 1:42	C / 2:01
6	NE 45th St	5th Ave NE to Roosevelt Way NE	E / 1:46	**F / 2:11**	E / 1:46	**F / 2:11**	E / 1:46	**F / 2:11**
7	NE 45th St	Roosevelt Way NE to 15th Ave NE	A / 1:41	C / 2:49	A / 1:41	C / 2:49	A / 1:41	C / 2:48
8	NE 45th St	15th Ave NE to Montlake Blvd NE	Auto Corridor Only					
9	NE 40th St	2nd Ave NE to 9th Ave NE	A / 1:27	D / 4:22	A / 1:27	D / 4:22	A / 1:27	D / 4:22
10	NE Campus Pkwy	Roosevelt Way NE to 15th Ave NE	A / 1:00	A / 1:28	A / 1:01	A / 1:28	A / 1:01	A / 1:28
11	NE Pacific St/NE Northlake Wy	6th Ave NE to 15th Ave NE	D / 2:07	--	D / 2:07	--	D / 2:07	--
12	NE Pacific St	15th Ave NE to Montlake Blvd NE	D / 2:34	C / 1:44	D / 2:35	C / 1:45	D / 2:35	C / 1:45
13	7th Ave NE	NE 42nd St to NE 45th St	C / 1:27	--	C / 1:36	--	C / 1:29	--
14	Roosevelt Way NE	NE Ravenna Blvd to NE 50th St	--	C / 3:02	--	C / 3:02	--	C / 3:03
15	Roosevelt Way NE	NE 50th St to NE 45th St	--	D / 2:22	--	D / 2:22	--	D / 2:22
16	Roosevelt Way NE	NE 45th St to NE Campus Pkwy	--	D / 3:46	--	D / 3:47	--	D / 3:48
17	University Bridge	NE Campus Pkwy to Fuhrman Ave E	**F / 7:15**	E / 4:37	**F / 7:25**	E / 4:45	**F / 7:29**	E / 4:44
18	11th Ave NE	NE Ravenna Blvd to NE 50th St	E / 4:43	--	E / 4:43	--	E / 4:43	--
19	11th Ave NE	NE 50th St to NE 45th St	E / 2:40	--	E / 2:41	--	E / 2:40	--
20	11th Ave NE	NE 45th St to NE Campus Pkwy	D / 3:09	--	D / 3:10	--	D / 3:11	--
21	University Way NE	NE Ravenna Blvd to NE 50th St	E / 3:34	C / 2:17	E / 3:34	C / 2:17	E / 3:34	C / 2:17
22	University Way NE	NE 50th St to NE 45th St	D / 2:10	B / 1:05	D / 2:10	B / 1:05	D / 2:10	B / 1:05
23	University Way NE	NE 45th St to NE Pacific St	**F / 6:07**	E / 4:38	**F / 6:08**	E / 4:39	**F / 6:07**	E / 4:40
24	15th Ave NE	NE Ravenna Blvd to NE 50th St	D / 3:39	C / 2:36	D / 3:40	C / 2:36	D / 3:40	C / 2:36
25	15th Ave NE	NE 50th St to NE 45th St	E / 2:47	C / 1:39	E / 2:47	C / 1:39	E / 2:47	C / 1:38
26	15th Ave NE	NE 45th St to NE Pacific St	C / 5:30	C / 6:23	C / 5:30	C / 6:23	C / 5:30	C / 6:22

Source: Fehr & Peers, 2013

Figure 3.5–21: **2035 Alternatives 1 and 2—Transit Travel Time Level of Service**



3.5.3 Mitigating Measures

This section identifies potential mitigation measures that could be implemented to lessen the magnitude of the transit, freight, pedestrian, bicycle, and parking impacts identified in the previous section. Although no significant auto impacts were identified for Alternatives 1 or 2 (as compared to the No Action Alternative), some of the mitigation strategies included here would help to encourage use of non-SOV modes, reducing auto congestion.

Proven strategies to decrease vehicle demand include incentives to take transit (such as employer-subsidized transit passes) and disincentives to drive (such as parking management strategies). From both a policy and feasibility perspective, increasing roadway capacity in the U District is undesirable and cost-prohibitive. Therefore, the mitigation strategy for this project focuses on methods to improve the facilities and operations for non-auto modes.

Given the area-wide scale of the zoning alternatives, the recommended mitigation strategy focuses on three main themes:

1. **IMPROVING THE PEDESTRIAN & BICYCLE NETWORK** Projects listed in various plans and documents including the Pedestrian Master Plan (PMP)[10], Bicycle Master Plan (BMP), University Area Transportation Action Strategy (UATAS), and U District Urban Design Framework (UDF) were considered as mitigation measures to address pedestrian and bicycle impacts. There is a well-documented link between improved bicycle and pedestrian accessibility and reduced demand for vehicle travel. Moreover, impacts were identified based on the presence of high priority improvement needs within the study area. To mitigate these impacts, the City could pursue these improvements.
2. **IMPLEMENTING SPEED & RELIABILITY IMPROVEMENTS** The Seattle Transit Master Plan (TMP) identified numerous projects to improve transit speed and reliability in the U District. In conjunction with other funding sources, new development could pay for a share of TMP improvements on key routes.
3. **EXPANDING TRAVEL DEMAND MGMT & PARKING STRATEGIES** Given cost, right-of-way, and environmental constraints, it was deemed infeasible to provide additional roadway and intersection

10 The Pedestrian Master Plan identifies locations where sidewalk or crossing improvements are desirable, but does not propose specific solutions. The project team assumed sidewalks and crossings would be added or improved where it was reasonably clear that was the relevant improvement.

capacity beyond what is currently planned to reduce impacts to traffic congestion (which affects transit) and freight mobility. Therefore, managing demand for auto travel is a critical element to reducing auto, freight, and transit congestion. The City and UW have well established Commute Trip Reduction (CTR) and Transportation Management Programs (TMP) in the area. This mitigation strategy looks to expand on the travel demand management strategies proposed as part of the CTR and TMP programs to include new parking-related strategies.

The three potential mitigation packages are listed in more detail below; many of the potential individual mitigation measures are also shown in Figures 3.5–22 and 3.5–23. The Puget Sound region is making a substantial investment in the Link light rail system, and the projects that are recommended below would serve to enhance that investment by maximizing the benefits of high capacity transit to the U District. The following sections present an example of the types of projects that could be implemented—other projects could achieve similar results.

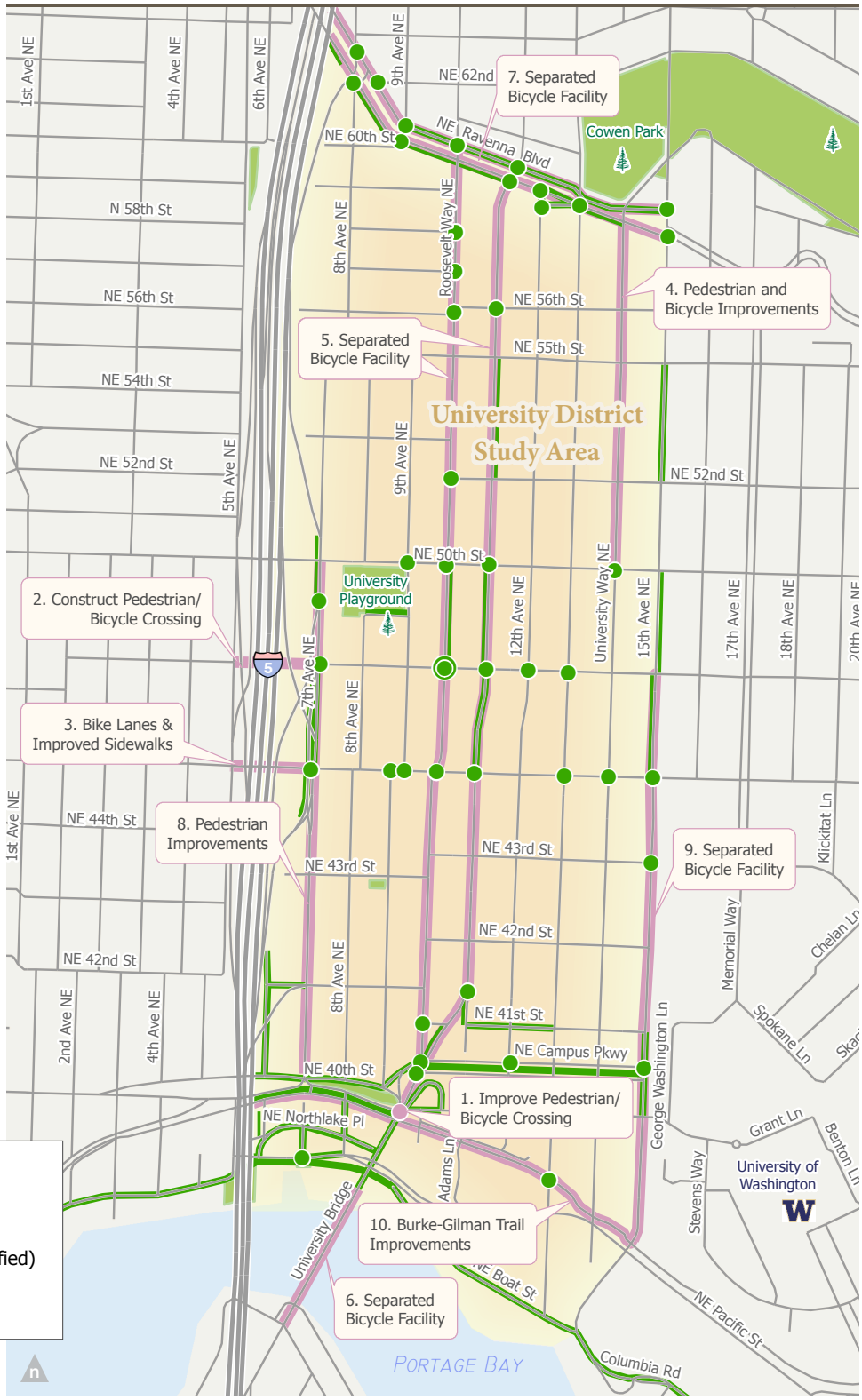
Pedestrian & Bicycle System

Improvements to the pedestrian and bicycle system would mitigate impacts to facility users by providing a more robust system and addressing high priority improvement locations identified by the PMP and BMP. Based on a review of the PMP, UATAS, and UDF, the projects shown in Table 3.5–15 and Figure 3.5–22 have been identified as potential mitigation measures. This list will continue to evolve and is not prescriptive as other plans identify other projects that may also improve the non-motorized network. This simply reflects a sample package of projects that could be pursued to improve the overall network. Development Standards codes could also be modified to include requirements for wider sidewalks, particularly along greenways and green streets to promote walking and bicycling.

TRANSIT SPEED AND RELIABILITY IMPROVEMENTS

Transit and freight travel times could be reduced by providing speed and reliability improvements on key routes. Specific projects on key transit corridors were identified in the 2012 Transit Master Plan, as listed in Table 3.5–16. SDOT has identified similar ITS solutions on NE Pacific Street, which is

Figure 3.5–22: **Pedestrian and Bicycle Potential Mitigation Measures**



Source: Seattle BMP, 2013 / Seattle PMP, 2009

Table 3.5–15: **Pedestrian and Bicycle Potential Mitigation Measures**

NO.	SOURCE	Project
1	PMP, UDF & UATAS	Reconfigure north end of University Bridge to improve pedestrian/bicycle crossing
2	PMP & UDF	Construct pedestrian/bicycle crossing at NE 47th Street over I–5
3	UATAS	Expand width of NE 45th Street crossing over I–5 for bicycles lanes and improved sidewalks
4	UATAS	Reconfigure University Way to provide dedicated bicycle facilities, wider sidewalks, and improve urban design
5	PMP	Address all PMP Tier 1 and Tier 2 improvements needs in the study area
6	PMP	Construct separated bicycle facility on Roosevelt Way NE and 11th Avenue NE
7	PMP	Construct separated bicycle facility on University Bridge
8	PMP	Construct enhanced pedestrian facilities on 7th Avenue NE
9	University of Washington	Construct separated bicycle facility on 15th Avenue NE
10	UW Burke-Gilman Trail Design Concept Plan	Burke-Gilman Trail Improvements (owned by UW through study area)
Areawide	PMP	Address all PMP Tier 1 and Tier 2 improvements needs in the study area
Areawide	City Staff	Prohibit left turns at intersections with pedestrian and/or bicycle safety concerns

Note: The Pedestrian Master Plan identifies locations where sidewalk or crossing improvements are desirable, but does not propose specific solutions. The project team assumed sidewalks and crossings would be added or improved where it was reasonably clear that was the relevant improvement.

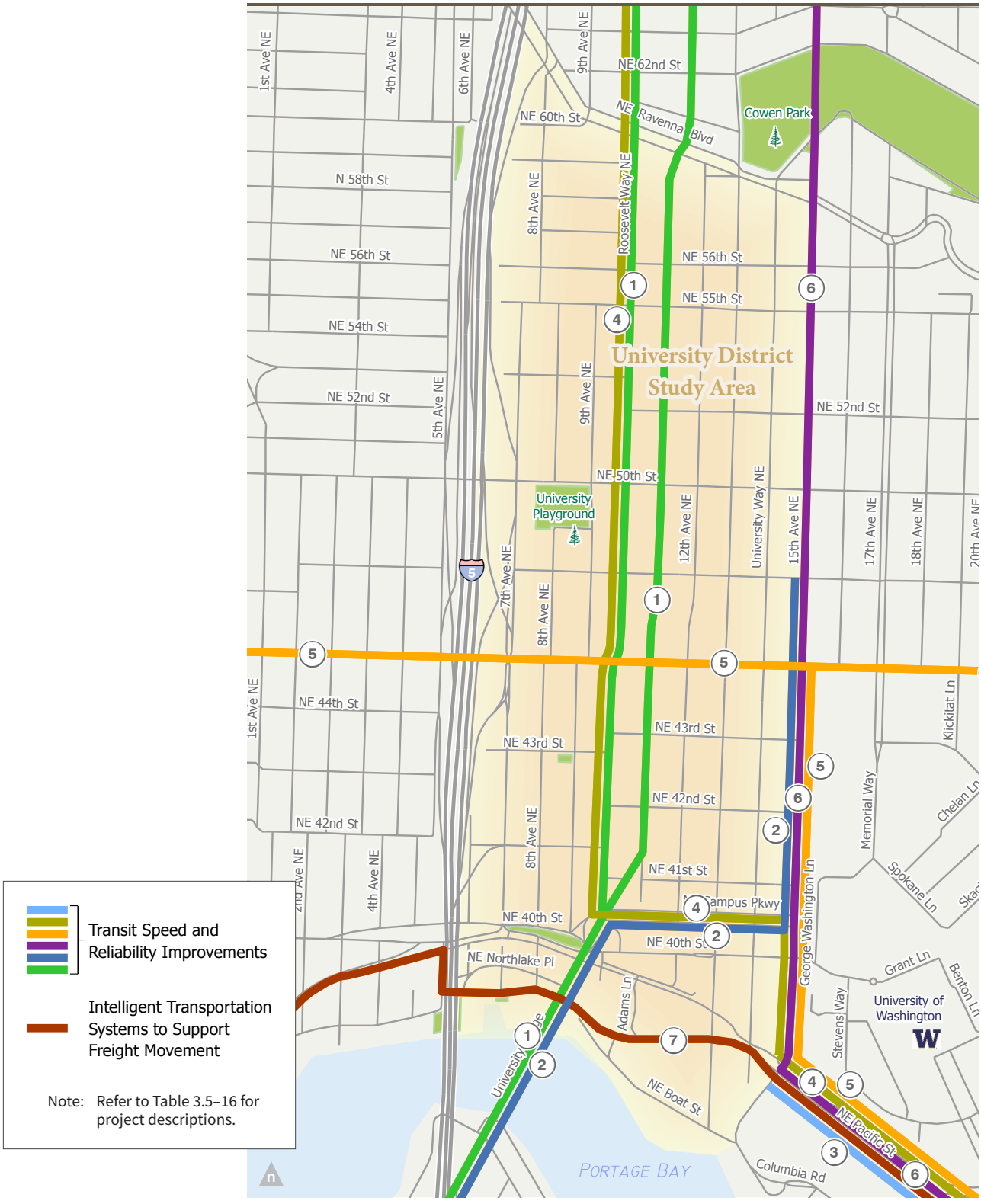
Sources ***PMP*** *2009 Pedestrian Master Plan*
UATAS *2008 University Area Transportation Action Strategy*
UDF *2013 U District Urban Design Framework*

an important corridor for freight mobility, although it has not been identified as being impacted by either of the rezone alternatives.

As with the pedestrian and bicycle measures, this transit and freight list will continue to evolve and is not exhaustive as other plans identify other projects that may also improve the transit and freight mobility. This list reflects a sample package of projects that could be pursued to improve the overall network.

The potential mitigation measures described above extend far beyond the study area in most cases. The relevant improvements within the U District are shown in Figure 3.5–23. Transit signal priority would be installed on Roosevelt Way NE, 11th Avenue NE, the University Bridge, 15th Avenue NE, NE Campus Parkway, and NE Pacific Street. Transit only or Business Access

Figure 3.5–23: **Transit and Freight Potential Mitigation Measures**



Source: Seattle BMP, 2013 / Seattle PMP, 2009

Table 3.5–16: **Potential Transit Mitigation Measures**

NO.	SOURCE	Project
1	TMP	**Seattle High Capacity Corridor 8** Eastlake HCT linking Downtown, Roosevelt and the U District via Eastlake Avenue E – Rail, streetcar or BRT
2	TMP	**Seattle Priority Bus Corridor 3** Othello-U District via Beacon Ave and Broadway. Capital components to support efficient and convenient transit service, such as queue jump lanes, transit lanes, bike/ped facilities, bus bulbs, ITS, transit shelters, pavement upgrades, street configuration redesign, signals, signage, and lighting.
3	TMP	**Seattle Priority Bus Corridor 5** Rainier Valley-U District via Rainier Ave and 23rd Ave (portions already underway). Capital components to support efficient and convenient transit service, such as queue jump lanes, transit lanes, bike/ped facilities, bus bulbs, ITS, transit shelters, pavement upgrades, street configuration redesign, signals, signage, and lighting. Upgrade signals to support ITS implementation throughout the corridor to support traffic adaptive operations including detection, communication, congestion, and travel time data collection.
4	TMP	**Seattle Priority Bus Corridor 12** Lake City-Northgate-U District via Northgate Way and 5th Ave. Capital components to support efficient and convenient transit service, such as queue jump lanes, transit lanes, bike/ped facilities, bus bulbs, ITS, transit shelters, pavement upgrades, street configuration redesign, signals, signage, and lighting. ITS detection needed to run corridor in traffic adaptive operation to support freight movement on NE Pacific Street.
5	TMP	**Seattle Priority Bus Corridor 13/13A** Ballard-U District-Laurelhurst via Market and NE 45th Streets. Capital components to support efficient and convenient transit service, such as queue jump lanes, transit lanes, bike/ped facilities, bus bulbs, ITS, transit shelters, pavement upgrades, street configuration redesign, signals, signage, and lighting. Include detection and communication to support traffic adaptive operations on NE Pacific Street and NE 45th Street and to support congestion and travel time data on NE 45th Street.
6	TMP	**Seattle Priority Bus Corridor 14** Crown Hill-Green Lake-U District. Capital components to support efficient and convenient transit service, such as queue jump lanes, transit lanes, bike/ped facilities, bus bulbs, ITS, transit shelters, pavement upgrades, street configuration redesign, signals, signage, and lighting. Project also needs to improve freight and ped/bike safety and signalization, including upgrades to cabinets, fiber communications, and traffic adaptive operations on NE 85th Street and NE Pacific Street to support freight movement.
7	SDOT ITS Program	**NE Pacific Street Corridor ITS** Include detection and communication to support traffic adaptive operations to support freight movement.

Sources: TMP 2012 Transit Master Plan / SDOT ITS Program

and Transit (BAT) lanes may be implemented along Roosevelt Way NE and 11th Avenue NE. Note that implementation of dedicated transit lanes may have secondary impacts on parking supply if a parking lane is taken.

TRAVEL DEMAND MANAGEMENT AND PARKING STRATEGIES

The City of Seattle could consider enhancing the travel demand management programs already in place in the U District. Research by the California Air Pollution Control Officers Association (CAPCOA), which is composed of air quality management districts in that state has shown that implementation of travel demand management programs can substantially reduce vehicle trip generation, which in turn reduces congestion for transit, freight, and autos. The specific measures described below are all potential projects, but are not assumed to be in place for the mitigation analysis.

Parking maximums would limit the number of parking spaces which can be built with new development. The City could also review the parking minimums currently in place within the UW parking impact area (as defined in the Municipal Code) to determine if they should be revised. Unbundled parking separates parking costs from total property cost, allowing buyers or tenants to forego buying or leasing parking spaces. These types of potential mitigation measures would tend to reduce the number of work-based commute trips and all types of home-based trips. Shopping-based trips would also decrease, but likely at a lower level since these types of trips are less sensitive to parking costs and limited supply for short-term use.

Incentive zoning provisions could also be explored to encourage developers to include parking spaces for car share and bike share programs. Site requirements could be modified to accommodate bike share stations on private sites in high demand areas. Bicycle share will launch in the U District in 2014 and more bike share stations will likely be added to the study area as demand and use increases. A more detailed review of the code would be required before setting specific recommendations for facilitation of bike share station siting. However, some regulatory sections for potential modification may include:

- Adding bike share stations as a “residential amenity” in the open space provisions;
- Floor Area Ratio (FAR) bonuses allowing bike share setback, listing bike share stations in the street improvement manual (as a “green street” improvement or separately); and

- Allowing modifications from landscaping setbacks to allow bike share stations, where appropriate.

The City could also consider encouraging parking operators, including UW, to upgrade their parking revenue control systems (PARC) to the latest technology so it could be incorporated into an electronic guidance system, such as the e-Park program that is currently operating Downtown. This technology would help direct drivers to off-street parking facilities with available capacity. An analogous approach for on-street parking—SF*park*—has been implemented in San Francisco. SF*park* uses sensors embedded in metered spaces to provide real-time data to drivers so they can find open spaces more easily and spend less time cruising for parking, thereby reducing congestion. The sensor data also allows the San Francisco Municipal Transportation Agency to periodically adjust parking pricing to match demand. In the absence of a new ITS parking program, the City would continue to manage on-street paid parking through SDOT's Performance-based Parking Pricing Program which evaluates data to determine if parking rates, hours of operation and/or time limits could be adjusted to achieve the City's goal of one to two available spaces per block face throughout the day.

In addition to the parking management strategies described above, the City of Seattle could also consider establishing an area-wide transportation management partnership organization to provide programs, services, and strategies to improve access to employment and residences while decreasing the SOV rate, particularly during peak periods. This could include integrated land use and transportation planning as well as partnerships with transit providers. Local Transportation Management Associations (TMAs) can provide some of these services. Programs like the state's Growth and Transportation Efficiency Center (GTEC) concept or the existing local Business Improvement Area (BIA) are possible models or future funding sources. The program could include features of relevant programs such as Seattle Center City's Commute Seattle, Whatcom County's SmartTrip or Tacoma's Downtown on the Go programs. The City could also work with UW to expand their existing TDM campus services to all UW-owned facilities in the study area.

Growth and Transportation Efficiency Center (GTEC)

GETC is an extension of the existing CTR program which engages residents and employers of all sizes though an area-wide approach

The City could consider updating municipal code and Director's Rules related to Transportation Management Plans required for large buildings to include TDM measures that are most effective in reaching the U District's mode share goal. This may include membership in a TMA and discounted or free transit passes and/or car share and bike share memberships. For residential buildings, the City could also consider extending the Transportation

Management Plans or requiring travel options programs (such as Green Trips in Oakland, CA and Residential Services in Arlington, VA).

SPECIFIC MITIGATION MEASURES AND RESULTS

As stated earlier, the specific mitigation projects listed in this document are illustrative only, and do not reflect the only way that the identified impacts could be mitigated. The following analysis of the effects of the proposed mitigation measures provides an example of how the impacts could be mitigated.

Impact 1: Under both rezone alternatives, there would be significant impacts to pedestrian and bicycle mobility.

Example Mitigation 1: To reduce the significance of this impact, it is recommended that the Pedestrian and Bicycle System mitigation measures be implemented.

Results: The Pedestrian and Bicycle System package was factored in at the trip generation level. Improving pedestrian and bicycle facilities generally increases the pedestrian and bicycle mode share. However, given the already high pedestrian and bicycle mode share in the U District, the increase is expected to be minimal, likely no more than a 1% increase. While this translates to more users, the benefit of the network improvement is expected to outweigh the modest increase in users by providing an improved, safer environment with better connections to the light rail station. Therefore, the magnitude of the impact is expected to decrease with mitigation to a less than significant level.

Impact 2: Under both rezone alternatives, there would be significant impacts to transit corridors.

Example Mitigation 2: To reduce the significance of this impact, the City could pursue the projects identified in the Speed and Reliability Improvements mitigation package. The TMP identifies specific locations for transit signal priority and transit only or BAT lanes within the U District which would function as part of larger citywide transit priority corridors. The TMP estimates travel time improvements of 15 to 20% depending on the corridor. These reductions were applied to the travel time forecasts to determine if they would fully mitigate the impacts.

Eastlake High Capacity Transit

The TMP considered three options for high capacity transit (HCT) between South Lake Union and the Roosevelt Neighborhood via Eastlake Avenue E: rail, bus rapid transit, or enhanced bus. Eastlake HCT would provide a superior quality of service between South Lake Union and the U District. Depending on the mode selected, the corridor is expected to draw between 4,300 and 10,700 net new weekday riders. This option would provide additional capacity across the University Bridge, which this analysis has shown is a bottleneck to the U District.

Results: Table 3.5–15 summarizes the transit travel time findings if the recommended speed and reliability investments are implemented along all the U District transit priority corridors identified in the TMP. Three corridors met the impact criteria under Alternative 1:

- Northbound 7th Avenue NE from NE 42nd Street to NE 45th Street
- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway
- Northbound University Way NE from NE Pacific Street to NE 45th Street

The University Bridge is still expected to operate at LOS F even with mitigation. However, the speed and reliability improvements would reduce the travel time below that of the No Action Alternative, removing the impact.

Although specific projects have not yet been identified for 7th Avenue NE and University Way NE, the TMP could be amended to include mitigating projects if it becomes necessary. However, given that 7th Avenue NE is projected to operate at LOS C and fewer buses are expected to use that route once University Link opens, it may become apparent that this location does not require improvements in the future.

One corridor met the impact criteria under Alternative 2:

- Northbound University Bridge from Fuhrman Avenue E to NE Campus Parkway

As was the case for Alternative 1, the University Bridge is expected to operate at LOS F even with mitigation. However, the speed and reliability improvements would reduce the travel time below that of the No Action Alternative, removing the impact.

Impact 3: Under both rezone alternatives, there would be potential significant impacts to freight mobility.

Example Mitigation 3: As described previously, no travel time related freight impacts are expected. However, it should be noted that the Pedestrian and Bicycle System and Travel Demand Management mitigation measures would help to reduce automobile trip generation, freeing up more capacity for freight traffic. Moreover, SDOT has identified an ITS project on NE Pacific Street that would support traffic adaptive operations to support freight movement, with potential benefits to travel times along that major truck street.

The benefits of each mitigation measure package are evaluated for the transportation system under the action alternatives, as is customary in an EIS. It should be noted these measures would also provide benefits under the No Action Alternative, and may be implemented regardless of which alternative is ultimately selected.

The potential impacts relate to the adequate provision of loading zones and business access. These are project-level issues that cannot be addressed at this level of analysis. As specific projects seek a Master Use permit, the City would review the applications to ensure that adequate loading and truck circulation facilities are provided based on the proposed use.

Impact 4: Under both rezone alternatives, there are potential impacts to on-street parking supply within the U District, as well as spillover impacts into adjacent neighborhoods, including Roosevelt and University Park.

Example Mitigation 4: To reduce the significance of this impact, the City could monitor the parking occupancy and RPZs both in the study area and immediately adjacent to the study area. Potential mitigation could include splitting existing RPZs into multiple zones, adding new RPZs, or adjusting RPZ boundaries. Bikeshare and carshare parking incentives could be implemented through updates to the City municipal code to help mitigate impacts to areas in which RPZs are not feasible.

POTENTIAL MITIGATION MEASURE IMPLEMENTATION

Funding for mitigation projects could come from a variety of sources. One way to generate additional funding would be a voluntary impact fee program. Implementation of the potential mitigation measures described above could be at least partially achieved through a voluntary impact fee program. This type of program would require additional analysis before it could be implemented, and would only cover a portion of the projects listed above. As the U District neighborhood builds out, SDOT would monitor the transportation system, prioritize projects, and use the fees collected to construct projects, similar to the way the current South Lake Union Voluntary Impact Fee Program is operated.

Projects that develop within the U District may pay the voluntary mitigation fee in order to receive a Master Use Permit. Alternatively, if a project applicant does not wish to pay the voluntary impact fee, they would be required to perform a supplemental environmental analysis to determine transportation impacts and appropriate measures to mitigate project impacts.

Travel demand management, parking mitigation measures, and bikeshare and carshare parking incentives could be implemented through updates to the City municipal code.

Table 3.5–17: **Transit Travel Times — Mitigated Alternatives**

			No Action Alternative		Alternative 1		Alternative 2	
ID	**Road**	**Segment**	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
1	NE Ravenna Blvd	8th Ave NE to 15th Ave NE	Auto Corridor Only					
2	NE 50th St	Latona Ave NE to 5th Ave NE	Auto Corridor Only					
3	NE 50th St	5th Ave NE to Roosevelt Way NE	Auto Corridor Only					
4	NE 50th St	Roosevelt Way NE to 15th Ave NE	Auto Corridor Only					
5	NE 45th St	Latona Ave NE to 5th Ave NE	C / 1:42	C / 2:01	C / 1:42	C / 2:01	C / 1:42	C / 2:01
6	NE 45th St	5th Ave NE to Roosevelt Way NE	E / 1:46	**F / 2:11**	E / 1:46	**F / 2:11**	E / 1:46	**F / 2:11**
7	NE 45th St	Roosevelt Way NE to 15th Ave NE	C / 1:41	C / 2:49	C / 1:41	C / 2:49	C / 1:41	C / 2:48
8	NE 45th St	15th Ave NE to Montlake Blvd NE	Auto Corridor Only					
9	NE 40th St	2nd Ave NE to 9th Ave NE	C / 1:27	D / 4:22	C / 1:27	D / 4:22	C / 1:27	D / 4:22
10	NE Campus Pkwy	Roosevelt Way NE to 15th Ave NE	C / 1:00	C / 1:28	C / 0:48	C / 1:10	C / 0:48	C / 1:10
11	NE Pacific St/NE Northlake Wy	6th Ave NE to 15th Ave NE	D / 2:07	--	D / 2:07	--	D / 2:07	--
12	NE Pacific St	15th Ave NE to Montlake Blvd NE	D / 2:34	C / 1:44	C / 2:06	C / 1:25	C / 2:06	C / 1:25
13	7th Ave NE	NE 42nd St to NE 45th St	C / 1:27	--	C / 1:36	--	C / 1:29	--
14	Roosevelt Way NE	NE Ravenna Blvd to NE 50th St	--	C / 3:02	--	C / 2:26	--	C / 2:26
15	Roosevelt Way NE	NE 50th St to NE 45th St	--	D / 2:22	--	C / 1:53	--	C / 1:54
16	Roosevelt Way NE	NE 45th St to NE Campus Pkwy	--	D / 3:46	--	C / 3:02	--	C / 3:02
17	University Bridge	NE Campus Pkwy to Fuhrman Ave E	**F / 7:15**	E / 4:37	**F / 6:18**	D / 4:02	**F / 6:22**	D / 4:01
18	11th Ave NE	NE Ravenna Blvd to NE 50th St	E / 4:43	--	E / 3:46	--	E / 3:46	--
19	11th Ave NE	NE 50th St to NE 45th St	E / 2:40	--	D / 2:08	--	D / 2:08	--
20	11th Ave NE	NE 45th St to NE Campus Pkwy	D / 3:09	--	C / 2:32	--	C / 2:33	--
21	University Way NE	NE Ravenna Blvd to NE 50th St	E / 3:34	C / 2:17	E / 3:34	C / 2:17	E / 3:34	C / 2:17
22	University Way NE	NE 50th St to NE 45th St	D / 2:10	C / 1:05	D / 2:10	C / 1:05	D / 2:10	C / 1:05
23	University Way NE	NE 45th St to NE Pacific St	**F / 6:07**	E / 4:38	**F / 6:08**	E / 4:39	**F / 6:07**	E / 4:40
24	15th Ave NE	NE Ravenna Blvd to NE 50th St	D / 3:39	C / 2:36	C / 2:58	C / 2:06	C / 2:58	C / 2:06
25	15th Ave NE	NE 50th St to NE 45th St	E / 2:47	C / 1:39	D / 2:15	C / 1:20	D / 2:15	C / 1:20
26	15th Ave NE	NE 45th St to NE Pacific St	C / 5:30	C / 6:23	C / 4:27	C / 5:10	C / 4:27	C / 5:09

Source: Fehr & Peers, 2013

3.5.4 Significant Unavoidable Adverse Impacts

This section describes the significant and unavoidable adverse impacts to transportation that would occur as a result of implementation of the rezone alternatives.

The proposed mitigation packages would reduce the magnitude of all of the identified impacts of the rezone alternatives to a less-than-significant level. Therefore, there are no significant unavoidable adverse impacts to transportation.

3.6 Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions adversely affect the environment by contributing to global climate change. The Washington State Department of Ecology has provided guidance for consideration of GHG in State Environmental Policy Act (SEPA) review. Consistent with this guidance, this section summarizes potential GHG impacts associated with the proposed alternatives. Please see the GHG Emissions Appendix E for the detailed calculation worksheets used in this analysis.

3.6.1 Affected Environment—Methodologies

The City of Seattle uses an origin-destination approach to estimate citywide GHG emissions. The methodology calculates VMT (Vehicle Miles Traveled) based on the forecasted number of trips as follows:

- All trips that begin and end within the City
- Half of trips that either begin or end within the City
- None of the trips that begin and end outside the City

This approach is most effective at the community scale since it results in a citywide average VMT. Since the U District has different travel characteristics from the City as a whole, a more detailed subarea evaluation was conducted. This analysis combined two methodologies: the King County SEPA Greenhouse Gas (GHG) spreadsheet and a VMT GHG Analysis tool geared toward a more detailed subarea evaluation. Both of these methodologies are discussed in more detail below.

King County SEPA GHG Spreadsheet

The SEPA GHG Emissions spreadsheet tool developed by King County[1] was used to calculate GHG emissions in the U District. The King County spreadsheet is a comprehensive tool that encompasses a variety of GHG emissions categories related to the building materials used to construct new development, energy consumed at the development, and transportation to and from the development. In accordance with findings regarding the primary sources of greenhouse gas emissions, this tabulation focused on three areas/sources of emissions as described below. The results of the GHG spreadsheet emissions calculations were then converted to an annual equivalent to facilitate a comparison between the different alternatives.

- Building materials and processes (embodied emissions). This portion of the calculation considered both the "upstream" (i.e., mining, harvest, manufacturing, and transport) and the "downstream" (i.e., subsequent, "in place" use and maintenance) of building materials. The embodied emissions are generated only once during the lifetime of the development, at the initial construction phase. The King County spreadsheet lifespan of the buildings is projected to be 80.5 years for multi-family buildings and 62.5 years for office and retail uses. These lifespans are used to annualize the embodied emissions results for new development.[2] Only the amount of new development was used to calculate embodied emissions.
- Post-development energy usage (energy). This element considered energy consumption such as heating and electrical usage. No consideration was made to whether or not the buildings would incorporate Built Green or Energy Star ratings, or LEED® ratings. Some studies suggest that these ratings could represent at least 20 percent reductions in overall energy usage. The complete inventory of U District land use (i.e., existing plus new development) was used to calculate energy-related emissions.
- Transportation (transport). This component considered GHG emissions related to vehicle travel of residences and employees. The King County default calculation was used to calculate existing conditions in Table 3.6–1, which includes annual miles traveled and mileage assumptions for King County residents.

$MTCO_2e$ is defined as Metric Tonne Dioxide Equivalent, equating to 2204.62 pounds of CO_2. This is a standard measure of amount of equivalent CO_2 emissions.

1 *your.kingcounty.gov/ddes/forms/SEPA-GHG-EmissionsWorksheet-Bulletin26.pdf*

2 *A building's lifespan acknowledges the finite useful life of a building; eventually buildings must be redeveloped or substantially renovated to maintain their value. This redevelopment/renovation cycle is captured in the building lifespan.*

To estimate the energy and transportation GHG emissions of the existing development within the U District, this analysis used data from the project travel demand model, consistent with the transportation analysis documented in Section 3.5 of this EIS. Embodied emissions are not calculated for existing conditions since the buildings are already in place and no additional embodied emissions are generated once a development is built. Data in the travel demand model is based on existing travel characteristics and is a reliable basis for measuring the incremental differences in GHG emissions resulting from the action alternatives.

Table 3.6–1 provides greenhouse gas emissions estimates from the existing development within the study area based upon the King County GHG Inventory Worksheets.

Based upon the calculations from the King County SEPA GHG Emissions worksheet, the existing development in the U District is estimated to generate roughly 183,000 $MTCO_2e$ GHG emissions per year.

Table 3.6–1: **Existing Annual Greenhouse Gas Emissions Based on King County SEPA GHG Emissions Inventory Worksheet**

Energy Emissions ($MTCO_2e$)	87,000
Transportation Emissions ($MTCO_2e$)	96,000
Total Estimated Existing GHG Emissions ($MTCO_2e$)*	183,000

*Total may differ from sum due to rounding during calculation.

Source: Fehr & Peers, 2013

VMT-GHG Analysis Tool

As described in the Transportation Chapter (3.5) of the EIS, the unique characteristics of the study area (high density, mix of land uses, demographics, robust pedestrian and bicycle network), will lead to less vehicle travel when compared to a typical area within King County. The King County SEPA GHG spreadsheet has no way to account for the travel characteristics of a dense urban area like the U District. As stated in the King County spreadsheet, the transportation GHG analysis is based on the average VMT estimate of Washington State residents. To prepare a more accurate transportation GHG analysis, an alternative approach based on the MXD trip generation model (described in Section 3.5) was used. The MXD trip generation model estimates account for the built environment within the U District.

The trip generation estimates were input into the project travel demand model to estimate the neighborhood's total VMT, stratified by speed. The VMT/speed data were processed using CO_2 emissions factors from the California Air Resources Board's EMFAC air quality model.[3] The emissions factor estimates from EMFAC were further factored to estimate CO_2 equivalent

3 *The more traditional US EPA MOBILE6 air quality model was not used since it does not consider variations in speed when estimating CO_2 emissions and therefore tends to produce inaccurate results.*

(which accounts for trace amounts of other GHGs like hydrocarbons and HFCs) using a factor from the US EPA.

The results of the EMFAC analysis indicate that the study area generates about 205 metric tons of transportation-related CO_2e per day, or 72,000 metric tons of transportation-related CO_2e per year.

Table 3.6–2: **Existing Annual Greenhouse Gas Emissions Based on King County SEPA GHG Emissions Inventory Worksheet with VMT GHG Tool**

Energy Emissions ($MTCO_2e$)	Transportation Emissions ($MTCO_2e$)	Total Estimated Existing GHG Emissions ($MTCO_2e$)*
87,000	72,000	159,000

*Total may differ from sum due to rounding during calculation.

Source: Fehr & Peers, 2013

Since the numbers above are large and difficult to put in perspective, the transportation GHG emissions can be summarized in another way, which compares the three-hour PM peak period CO_2e emissions in pounds per person (residents plus employees in the U District). As a point of comparison, driving an average car for one mile emits approximately one pound of CO_2e.

This result indicates that under existing conditions, each person who lives/works in the area generates about 2.95 pounds of CO_2e per person in the PM peak period. This result is higher than the 2035 CO_2e emissions estimates discussed under Impacts of the Alternatives later in this section (roughly 2.22 pounds per person), which is expected given the lower densities under existing conditions.

Based upon the calculations from the table above, the U District currently generates roughly 159,000 $MTCO_2e$ GHG per year.

3.6.2 Significant Impacts

Impacts Common to All Alternatives

The scale of global climate change is so large that a project's impacts can only be considered on a "cumulative" scale. It is not anticipated that a single development project or programmatic action, even one on the scale of the development alternatives in this Draft EIS, would have an individually discernible impact on global climate change. It is more appropriate to conclude that the greenhouse gas emissions from future development in the U District would combine with emissions across the state, country, and planet to cumulatively contribute to global climate change.

This section describes the assumed impacts of the development alternatives on climate change, and greenhouse gas emissions. This analysis does not quantify or take into consideration any potential efforts to reduce climate change impacts by incorporating sustainable features into future redevelopment. However, it is assumed that some sustainable features would be incorporated into future development to reduce the impacts quantified in this section.

Greenhouse Gas Emissions

As described in Chapter 2, the alternatives each assume a common growth estimate. (See Table 3.6–3 at right.) All alternatives have the same employment and housing growth estimates, but each alternative proposes a different distribution of growth to achieve these estimates.

Table 3.6–3: **Planning Estimates for Growth of Households and Jobs**

	Alternatives 1, 2 & 3
Households	3,900
Jobs	4,800

Source: Fehr & Peers and Studio 3MW, 2013

EMBODIED AND ENERGY EMISSIONS: KING COUNTY SEPA GHG SPREADSHEET

The growth in square footage and number of households was used to forecast 2035 embodied and energy GHG emissions totals using the King County GHG Emissions Inventory Worksheets. Embodied emissions were annualized based on the estimated building lifespans from the King County Worksheet.

TRANSPORTATION GHG EMISSIONS: VMT-GHG ANALYSIS TOOL

Similar to how the existing conditions GHG emissions were calculated, the MXD model and VMT-GHG spreadsheet were used to forecast 2035 annual transportation emissions. The results are shown below and an example calculation can be found in Appendix E.

Existing Conditions	72,000 $MMCO_2e$
No Action Alternative	86,000 $MMCO_2e$
Alternative 1	84,000 $MMCO_2e$
Alternative 2	85,000 $MMCO_2e$

Driving an average car for one mile emits approximately one pound of CO_2e.

Table 3.6–4 illustrates that under existing conditions, each person who lives or works in the area generates about 2.95 pounds of CO_2e during the PM peak period. This result is higher than the CO_2e emissions estimates for both of the action alternatives, which is expected given the lower densities under existing conditions. As is also shown in Table 3.6–4, the two action alternatives produce transportation GHG emissions per capita that is about two percent lower than the No Action Alternative.

The table also shows the result of the transportation GHG emissions rates for a more suburban employment center that is otherwise similar to the U District: Downtown Redmond. While Downtown Redmond is not located next to a major university, the overall level of employment and housing is similar to the U District. Downtown Redmond is also close to the major employment centers of Overlake and Downtown Bellevue, similar to the U District's proximity to Downtown Seattle. As shown, Downtown Redmond has about 85 percent higher CO_2e emissions per person because it is more isolated and less dense than the U District. Downtown Redmond also has substantially less transit service than the U District, even when assuming the extension of East Link and several major frequent bus lines to Seattle, Kirkland, and Bellevue.

Table 3.6–4: **Estimated Transportation GHG Emissions: VMT-GHG Analysis Tool**

	Pounds of CO_2e per Person* during 3 Hour PM Peak Period
Existing Conditions	2.95
No Action Alternative	2.26
Alternative 1	2.22
Alternative 2	2.22
Redmond Comparison Site	4.18

*U District residents and employees

Source: Fehr & Peers and Studio 3MW, 2013

Total GHG Emissions Results

Table 3.6–5 compares greenhouse gas emissions from the development alternatives based on the King County GHG Emissions Inventory Worksheets for embodied and energy emissions. Transportation

GHG emissions as described above were substituted for the transportation estimates included in the King County Worksheets. The completed SEPA GHG Emissions Worksheets for all alternatives, as well as an explanation of the methodology employed to create the formulas, are included in Appendix E of this Draft EIS.

Based on these calculations, all three 2035 alternatives generate roughly the same annual GHG emissions. The same embodied and energy emissions are expected under all three alternatives since the planning estimates are identical. The variation is within one percent and represents slightly different distribution patterns for the land uses and resulting differences in transportation-related GHG emissions:

- Alternatives 1 and 2 would generate roughly 216,000 $MTCO_2e$ GHG annual emissions
- Alternative 3 (No Action) would generate roughly 218,000 $MTCO_2e$ GHG annual emissions

Alternatives 1 and 2 have lower annual emissions than the No Action Alternative.

Table 3.6–5: **GHG Emissions Based on King County SEPA GHG Emissions Inventory Worksheets and VMT-GHG Analysis Tool**

	Estimated Annual GHG Emissions Associated by Alternative ($MTCO_2e$)
Existing Conditions	159,000
No Action Alternative	218,000
Alternative 1	216,000
Alternative 2	216,000

Source: Fehr & Peers and Studio 3MW, 2013

3.6.3 Mitigating Measures

The following potential mitigation strategies would reduce potential impacts to climate change, energy use and greenhouse gas emissions from future development in the U District.

TRANSIT, PEDESTRIAN, AND BICYCLE IMPROVEMENTS

Transit, pedestrian, and bicycle improvements would help encourage use of non-SOV modes, thereby reducing transportation-related GHG emissions. Refer to Section 3.5.4 for a complete discussion of transportation mitigation measures.

DISTRICT INFRASTRUCTURE SYSTEMS FOR ENERGY, WATER AND WASTE

District Infrastructure Systems aggregate enough service demands to make local neighborhood utility solutions feasible, and may reduce greenhouse gases by utilizing renewable sources of energy and increasing the use of local resources, materials and supplies. District parking solutions and car sharing

are designed to reduce vehicle trips and land devoted to parking. Water reuse and anaerobic digesters may reduce sewer flows. Rainwater capture may reduce stormwater flows. Water reuse and rainwater capture could also reduce potable water demands. The City could pursue a district energy system in the U District, which was identified as a major opportunity area for district energy in a 2011 study. The City could also pursue a partnership with private developers and UW to expand the University's existing district heat system to more areas within the U District.

WASTE MANAGEMENT AND DECONSTRUCTION

When existing buildings need to be demolished, there are often opportunities to reduce the amount of waste being sent to the landfill with sustainable waste management strategies. In the Seattle area, standard practice for building construction and demolition results in fairly high recycling rates of over 50 to 60 percent. However, these rates can be increased by implementing aggressive demolition recycling. The City could consider programs to require or encourage best practices to achieve higher recycling rates.

BUILDING DESIGN

Green building encompasses energy and water conservation, waste reduction, and good indoor environmental quality. Tools and standards that are used to measure green building performance, such as Built Green, LEED, the Living Building Challenge, and the Evergreen Sustainable Development Criteria, could be encouraged or required for development within the U District.

NATURAL DRAINAGE AND GREEN ROOFS

Green roofs can provide additional open space, opportunities for urban agriculture, and decreased energy demands by reducing the cooling load for the building. Green Stormwater Infrastructure (GSI), currently required for all redevelopment, also could reduce climate change impacts by adding landscaping and reducing energy requirements for stormwater treatment. Most areas north of NE 50th Street will be eligible for GSI funding through the Residential RainWise program, which is run as a partnership between Seattle Public Utilities and King County. Much of the U District is already required to meet a landscaping standard called Seattle Green Factor, which encourages incorporation of various landscaping features such trees, shrubs, groundcovers, green roofs, green walls, native plants, and food gardens. This program should be maintained, and potentially expanded to cover the entire study area.

TREE PROTECTION

The City of Seattle has aggressive urban forest goals in order to help restore tree cover which has been lost due to development. Trees can provide stormwater management, habitat value, noise buffering, air purification, carbon sequestration, and mitigation of the urban heat island effect. Trees also have a positive effect on property values and neighborhood quality. Protection of existing trees, as feasible, and careful attention to new tree planting could help meet the Seattle Comprehensive Urban Forest Management Plan Goals for multifamily residential and commercial office development by achieving 15–20 percent overall tree canopy within 30 years.

URBAN AGRICULTURE

New P-patch Community Gardens and rooftop gardens could be provided or encouraged within the neighborhood for residents to grow food. Balconies, decks, and right-of-way planting strips could also be utilized for individual residents' agriculture needs.

3.6.4 Significant Unavoidable Adverse Impacts

No impact is expected for Alternatives 1 or 2 since they would both have lower GHG emissions than the No Action Alternative. Moreover, the proposed development in the U District has lower GHG emissions than comparable development elsewhere in the Puget Sound region.

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3.7 Open Space & Recreation

This section of the Draft EIS describes the existing open space and recreation opportunities in the U District study area and surrounding site vicinity, and evaluates how each of the alternatives would affect open space and recreation opportunities.

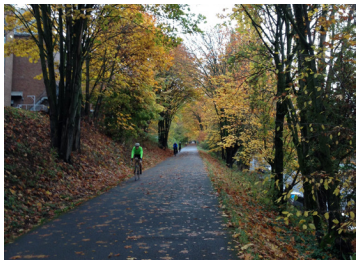
3.7.1 Affected Environment

The U District contains many parks and open spaces; more are located in surrounding neighborhoods. The following is an inventory of existing and planned open spaces in the U District and vicinity as shown in Figure 3.7-1.

Seattle Parks—owned and managed by the Seattle Department of Parks and Recreation

- **University Playground** occupies 2.75 acres adjacent to NE 50th Street The park includes two tennis courts, a children's play area, and a baseball/softball field that can be converted into a soccer field. The playground is well used by neighborhood residents and residents of surrounding neighborhoods. Community involvement in 2012–2013 led to playground upgrades, new exercise stations, and some programmed activities.
- **The Burke-Gilman Trail** passes through the southern end of the U District. This recreational trail does not contribute much open space acreage to the neighborhood, but it does provide a valuable connection for cyclists, runners, and walkers to many parks in the surrounding areas. Generally, the trail is managed jointly by Seattle Department of Transportation and Seattle Parks. On campus, it is managed by UW.
- **Peace Park** is a 0.3 acre park located at NE 40th Street and NE Pacific Street. This small landscaped open space contains a memorial bronze statue of Sadako Sasaki, a victim of the Hiroshima bombing.

University Playground



Burke-Gilman Trail

- **Christie Park** occupies 0.11 acres on a converted residential lot. It includes landscaped areas, a small picnic shelter with a table and benches, and a basketball hoop. The park is well located to serve the residential community south of NE 45th Street and west of Roosevelt Way NE but activities are somewhat constrained since homes are directly adjacent it.
- **Northlake Park** is a small (0.04 acre) park on the Ship Canal under the Interstate-5 bridge. It provides a viewpoint and a small amount of landscaping. This park was recommended in the Neighborhood Plan.
- **North Passage Park** is a 0.8 acre park located directly under Interstate-5 at 600 NE Northlake Way. It offers passive recreation and views of the Ship Canal.

Shiga Gardens

University Heights P-Patch

Open spaces owned and managed by other departments or organizations

- **Sakuma Viewpoint** is a small waterfront park at the south end of Brooklyn Avenue NE, owned by University of Washington (UW). It includes a lawn, seating, a water overlook, and landscaping.
- **University District P-Patch**, just north of NE 40th Street between 7th and 8th Avenues NE, is owned by King County Metro and operated in the Seattle Department of Neighborhoods' "P-Patch" program. It is approximately 0.4 acres.
- **Shiga Gardens** is a 0.11 acre P-Patch established in 2010 and located on the Avenue between NE 55th and NE 56th Streets. While the property is privately owned, the P-Patch program has a lease until 2018 with the option to extend.
- **University Heights P-Patch** is a 0.14 acre P-Patch adjacent to the University Heights Community Center. It is jointly managed by the community center and the Seattle Department of Neighborhoods.
- **NE Campus Parkway Median** provides 1.2 acres of open space, maintained by UW. It includes sculptures, trees and landscaping, seating, and lighting.

Table 3.7–1: **Village Open Space in the U District**

		Area (acres)
Existing	University Playground	2.75
	Peace Park	0.30
	North Passage Park	0.80
In progress	Christie Park	0.23
	University Heights South Lot	0.34
	Waterfront park	1.62
Total		**6.04**

Source: City of Seattle Department of Parks and Recreation

Figure 3.7–1
Existing and Planned Parks and Recreation Facilities in U District Study Area

Open spaces adjacent to the planning area

- **Cowen Park and Ravenna Park** are two large and heavily used City parks that abut the north end of the U District. Together, they total 58.3 acres, with trails, tennis courts, a playground and a play area, a ball field, and picnic areas.
- **Ravenna Boulevard** is a 6.4 acre park boulevard at the north end of the U District. One of Seattle's historic Olmsted Boulevards, it connects several neighborhoods to Green Lake and Ravenna Park.
- **The University of Washington Central Campus** contains roughly 300 acres of gardens, lawns, plazas, and open spaces. The campus is open to the public—while occupants are mostly students, faculty, and staff, many people from the U District community also visit campus.

Ravenna Boulevard

Planned Seattle Parks—anticipated to be built and managed by the Seattle Department of Parks and Recreation by 2020

- **University Heights South Lot** will become a new 0.34 acre park, yet to be named. Following recommendations of the University Community Urban Center Plan (Neighborhood Plan) and the University District Parks Plan, Seattle Parks purchased this property for development as a public park. As of April 2013, improvements are funded and the planning process is finishing.
- **Christie Park Expansion** In 2013, Seattle Parks acquired a residential lot on the south side of Christie Park, which will add 0.11 acres to the park when improved.
- **New waterfront park** To help mitigate the impacts of expanding SR 520, the Washington State Department of Transportation will pay for shoreline restoration and recreation improvements at Sakuma Viewpoint and the larger property to the west. Both are currently owned by UW, but the new park will be owned and managed by Seattle Parks. It is expected to be about 1.62 acres.

Abbreviations & Acronyms

Seattle Parks
Seattle Department of Parks and Recreation

UW
University of Washington

Neighborhood Plan
University Community Urban Center Plan

POPS
Privately owned public spaces

Planning Context

COMPREHENSIVE PLAN OPEN SPACE GOALS

The Seattle Comprehensive Plan establishes goals for open space and recreation facilities both inside and outside urban villages. These goals fall into three general categories: total supply of open space, specific types of facilities, and distribution of open space.

For total supply of open space, the following goals apply:

- One acre of Village Open Space per 1,000 households (within the urban center)
- One acre of Village Open Space per 10,000 jobs (within the urban center)
- One acre of "Breathing Room Open Space" per 100 residents (citywide)

Comprehensive Plan goals for specific facilities within urban centers:

- At least one "Village Commons" of at least one acre in size
- One indoor, multiple use recreation facility
- One dedicated community garden for each 2,500 households, with at least one dedicated garden site

Goals for distribution of open space in the Comprehensive Plan:

- All locations within an urban village boundary should be "within approximately ⅛ mile of Village Open Space"
- All locations outside of urban villages should be within ¼ to ½ mile of Usable Open Space"

GOALS AND PRIORITIES FROM OTHER COMMUNITY PLANNING EFFORTS

The 1998 University Community Urban Center Plan recommends improving NE 43rd Street, NE 42nd Street, and Brooklyn Avenue NE as "green streets." Following that recommendation, the City's Right-of-Way Improvements Manual designates those streets as green streets, defined as follows:

> *A Green Street is a street right-of-way that, through a variety of design and operational treatments, gives priority to pedestrian circulation and open space over other transportation uses. The treatments may include sidewalk widening, landscaping, traffic calming, and other pedestrian-oriented features. The purpose of a Green Street is*

Village Open Space

Dedicated open spaces of at least 10,000 square feet in size, publicly accessible, and usable for recreation and social activities

2005 Comp Plan

Village Commons

A Village Open Space that is at least one acre in size

2005 Comp Plan

Breathing Room Open Space

Combined acreage of all dedicated open spaces (parks, greenspaces, trails, and boulevards,) but not including... submerged parklands

Seattle Parks & Recreation 2006 Development Plan

Open Space Offsets

School grounds, recreation facilities, green streets, etc. These spaces may not be owned by Seattle Parks, but are used or experienced in a similar manner.

Seattle Parks & Recreation 2006 Development Plan

Privately Owned Public Spaces (POPS)

Parks and plazas on private property, but open to the public as a condition of development

> *to enhance and expand public open space, and to reinforce desired land use and transportation patterns on appropriate City street rights-of-way.*
>
> *—Seattle Right-of-Way Improvements Manual, Section 6.2*

Development adjacent to these designated green streets is required to provide street improvements that prioritize pedestrian and open space functions priorities. These street improvements are not counted toward the Village Open Space goals stated in the Comprehensive Plan, but they do provide public amenity space for residents and workers.

The 2005 University District Park Plan provides a detailed analysis of open space needs specific to the U District. It establishes open space priorities based on community input:

1. ***Highest Priority**: A centrally located park, approximately one-half acre, in a high-volume pedestrian area with current or projected multi-family mixed-use buildings; this type of park should be designed to accommodate a variety of recreation uses. Work with property owners in the vicinity of Brooklyn Avenue between NE 43rd and NE 47th streets to develop a central multi-use park.*
2. ***Highest Priority**: A number of smaller plazas in high-volume pedestrian areas. The design of these parks should be coordinated with adjacent development and need not necessarily be provided through Department of Parks and Recreation acquisition.*
3. ***High Priority**: Smaller neighborhood-oriented parks (approximately one-quarter acre) to serve local needs. The type of needs to be served will vary depending on the locale.*

The U District Urban Design Framework, a document summarizing community input in 2012–2013, reaffirmed community support for a centrally located open space on or near the Sound Transit light rail station planned at NE 43rd Street and Brooklyn Avenue NE. However, this process also highlighted concerns from business owners and some residents about safety and behavior problems in the U District's existing open spaces. While many participants in the planning process support a new central open space, others have concerns about how that space would be maintained and managed to avoid creating problems.

3.7.2 Significant Impacts

As discussed in the previous section, the Comprehensive Plan sets goals for the total supply, specific types, and distribution of open space to be provided in a neighborhood, based on density and urban village designation. Generally, these goals are based on the idea that growing neighborhoods need an increasing supply of open space facilities to serve residents and workers.

Table 3.7–2 summarizes assumptions about residential and job growth between 2013 and 2035. Growth projections are the same for all three EIS alternatives, but distribution of growth varies under each alternative. (See Section 2 of this document.)

Table 3.7–2: **U District EIS growth projections for Alternatives 1, 2 and 3**

	Households	Jobs
Existing (2013)	6,137	6,332
Projected (2035)	3,900	4,800
2035 totals	10,037	11,132

Source: City of Seattle, 2013

IMPACTS COMMON TO ALL ALTERNATIVES

Today, the U District does not meet some of the open space goals established by the Comprehensive Plan. While several planned parks will increase the supply of open space, this increase alone will not be enough to catch up to a growing neighborhood. Without additional open spaces, the deficit in the study area will grow from approximately 3 acres to 5 acres. (See Table 3.7–3.) Similarly, the U District does not meet the goal for indoor recreational space. With future growth, the goal for community gardens will not be met unless additional space is allocated.

The projections suggest that growth in the neighborhood will out-pace the expansion of open spaces and recreation facilities—generally this means that the neighborhood will be farther from meeting these goals in 2035 than it is today. These existing and projected deficiencies clearly support the acquisition and development of additional open space and recreational facilities to serve the study area. But because the growing deficiencies in supply and type of open space are the same with or without zoning changes, these deficiencies are not considered impacts for purposes of this EIS.

As for the 2004 Comp Plan citywide goal for Breathing Room Open Space, Seattle's 2012 population (634,535 residents) already surpassed the eligible Breathing Room Open Space. To meet the goal of one acre per 100 residents, Seattle would need 6,345 acres—as of 2011, there were 6,187 acres. Citywide population growth by 2035, projected to be approximately 140,000 new residents, will likely out-pace growth of Breathing Room Open Space—

therefore it is likely that the city will be farther from meeting its 2004 goal. (Growth in the U District accounts for about 5% of the citywide total over this period.) Like the deficiency in Village Open Space, the growing deficiency in Breathing Room Open Space is projected to be the same with or without zoning changes. Consequently, the increasing lack of Breathing Room Open Space is not considered an impact for purposes of this EIS.

Inconsistencies relating to Village Open Space goals and Breathing Room Open Space goals are true of all the alternatives, including the "no action" Alternative 3. Because these inconsistencies result from anticipated growth, not the proposed rezone and related actions, they are not significant impacts for purposes of this EIS.

Table 3.7–3: **Comprehensive Plan Open Space and Recreation Facility Goals for U District**

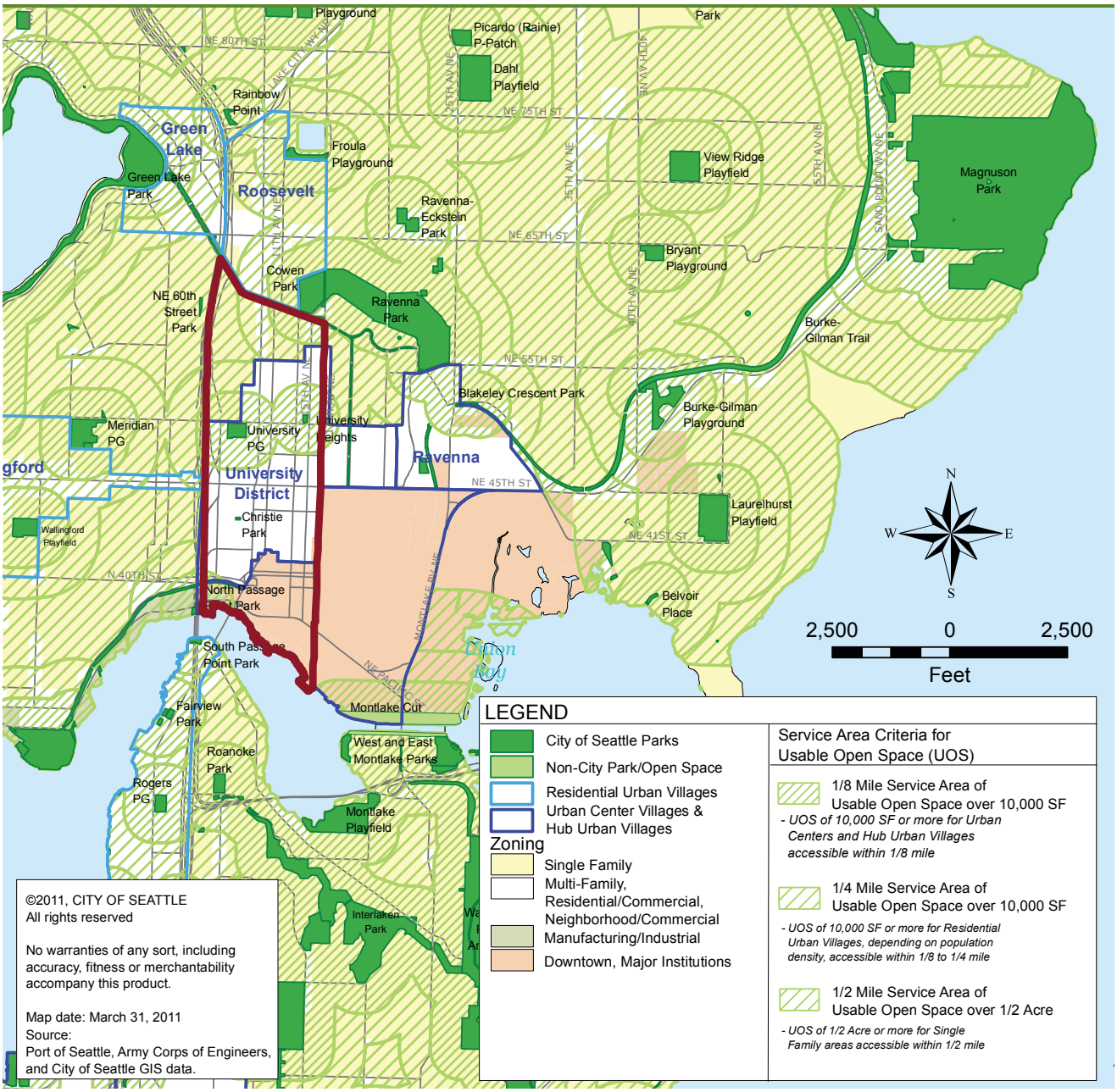
	Comprehensive Plan Goal	U District Target	Resource	Status
	Open Space Supply			
2013	**Village Open Space** ▶ one acre per 1,000 households ▶ one acre per 10,000 jobs	**6.77 acres total** 6.14 acres, by household 0.63 acres, by jobs	3.85 acres	Goal not met: **2.9-acre deficit**
2035	**Village Open Space** ▶ one acre per 1,000 households ▶ one acre per 10,000 jobs	**11.15 acres total** 10.04 acres, by household 1.11 acres, by jobs	6.04 acres anticipated, per planned projects	Goal not met: **5.1-acre deficit**
	One "Village Commons" ▶ where the existing or projected households total 2,500 or more	1 Village Commons	1 Village Commons (University Playground)	**Goal met**
	Specific facilities			
	One indoor, multi-use recreation facility ▶ per Urban Center	1 recreation center	No City-owned recreation center	**Goal not met**
2013	**One dedicated community garden** ▶ for each 2,500 households	2 community gardens	3 community gardens	**Goal met**
2035	**One dedicated community garden** ▶ for each 2,500 households	4 community gardens	3 community gardens	**Goal not met**

Source: City of Seattle, 2014

ALTERNATIVE 1

While the deficiencies outlined above do not differ from one alternative to another, there are differences between the alternatives in terms of the distribution of development, and ease of access for future residents to get to open space.

Figure 3.7–2: **Gaps in open space: U District Urban Center**



Source: An Assessment of Gaps in Seattle's Open Space Network: the 2011 Gap Report Update. Seattle Parks, 2011

The Comprehensive Plan establishes the goal of having all locations in an urban center within approximately ⅛ mile from Village Open Space. As shown in Figure 3.7–2, there is a large existing gap in open space access in the area between NE 47th and NE 41st streets.

Alternative 1 increases the capacity for job and residential growth in this same core area, which is currently under-served with open space amenities. This increases the likelihood that more people will live and work in an area that does not meet Comprehensive Plan goals for access to open space. This is a potential adverse impact of Alternative 1.

When the three planned parks (Christie Park expansion, University Heights south lot, and the waterfront) are complete, they will reduce but not eliminate the gap in the U District's core.

ALTERNATIVE 2

Same as Alternative 1. More development capacity in the core of the neighborhood increases the likelihood that new jobs and homes will not meet Comprehensive Plan goals for access to open space. This is a potential adverse impact of Alternative 2.

ALTERNATIVE 3

There are no impacts unique to Alternative 3.

3.7.3 Mitigating Measures

Section 3.7.2 highlights existing deficiencies and potential future adverse impacts relating to Seattle's open space goals and policies. Various actions could help provide more open spaces and recreational opportunities for the growing neighborhood (including Village Open Space, Breathing Room Open Space, and open space "offsets"):

- New property acquisition and improvement by Seattle Parks, funded through a future levy, open space impact fees, or other means—especially in the existing gap between NE 47th and NE 41st streets
- Provision of dedicated, publicly accessible open space as part of private development ("POPS"), through development standards or an incentive zoning program in the Land Use Code
- On-site open space provided as residential amenities through new development
- Public/private partnerships to develop, manage, and program public open spaces.
- Additional community gardens.
- Improvement of designated green streets to provide outdoor seating and other amenities. Adopt green street concept plans to the Right-of-Way Improvements Manual to guide private development, and/or grant funding for streetscape improvements.
- Improvement of "festival streets," i.e., special streets that can be shut down to vehicular traffic for community events.
- Improved access to campus for the public for the purposes of public access to open spaces located on the UW campus within the immediate vicinity of the planning area.

3.7.4 Significant Unavoidable Adverse Impacts

This section describes potential significant adverse impacts to open space that could result through implementation of the rezone alternatives. The proposed mitigation packages would reduce the magnitude of all identified impacts of the rezone alternatives to a less than significant level.

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3.8 Public Services

This section of the EIS describes the existing status of the provision of public services to the U District study area and evaluates impacts on such services from the proposed alternatives. Public services considered in this section include fire and emergency services, police services, and schools.

3.8.1 Affected Environment

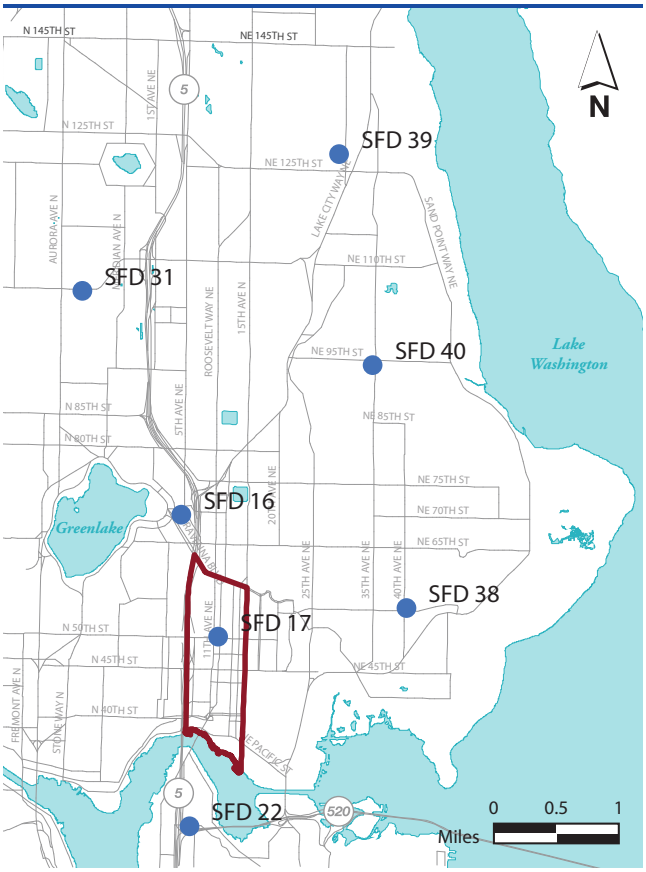
Fire and Emergency Services

The City of Seattle Fire Department provides fire protection Basic Life Support (BLS), Advanced Life Support (ALS), and hazardous materials (HazMat) response throughout the City, including the U District study area, from 33 fire stations. The Department also engages in mutual aid response to neighboring jurisdictions.

Fire and emergency apparatus is distributed amongst each station and includes 33 fire engines, 12 ladder trucks, 4 BLS Aid Units,7 ALS Medic Units, 4 fireboats, 2 air units, and 1 hose wagon. In 2012, the Department employed 981 uniformed personnel, with on-duty strength of 207 firefighters/emergency medical technicians. Seventy-six firefighters are trained paramedics to provide ALS.[1]

Seattle Fire Department Operations Division is organized into five Battalions, each supervised by

Figure 3.8–1: **Fire Station Locations in Battalion 6**



Source: Seattle Fire Department, 2013

1 *www.seattle.gov/fire/deptInfo/deptProfile.htm, December 2013.*

a Battalion Chief. The U District study area is in Battalion 6, which serves the neighborhoods of northeast Seattle, Eastlake, and the north end of Capitol Hill.

Figure 3.8–1 illustrates Fire Station locations in Battalion 6. As shown, Fire Station 17 is located in the U District study area. Fire Station 17 is the Battalion 6 headquarters. Surrounding the study area, the closest stations include Stations 16, 22 and 38.

Battalions are operationally organized as a collection of resources. Table 3.8–1 shows the distribution of resources throughout Battalion 6.

Table 3.8–1: **Battalion 6 Staffing and Equipment**

Station	Staffing	Equipment
Fire Station 16 6846 Oswego Pl. NE	Minimum of 4 on-duty personnel	Fire engine (E 16)
Fire Station 17 1050 NE 50th St.	Minimum of 11 on-duty personnel	Fire engine (E 17) Ladder truck (Ladder 9) Aid unit (Medic 16) Battlion Chief (B6)
Fire Station 22 901 E Roanoke St.	Minimum of 4 on-duty personnel	Fire engine (E 22) Incident Command Unit
Fire Station 31 1319 N Northgate Way	Minimum of 10 on-duty personnel	Fire engine (E 31) Ladder truck (Ladder 5) Aid unit (Medic 31) Reserve aid unit
Fire Station 38 4004 NE 55th St.	Minimum of 4 on-duty personnel	Fire engine (E 38) Reserve engine
Fire Station 39 2805 NE 127th St.	Minimum of 4 on-duty personnel	Fire engine (E 39) Reserve engine
Fire Station 40 9401 35th Ave NE	Minimum of 4 on-duty personnel	Fire engine (E 40) Reserve engine

Source: Seattle Fire Department, 2013

FIRE AND EMERGENCY INCIDENTS

Response time is directly influenced by the availability of fire personnel, equipment, traffic conditions, and the number and location of fire stations.

Buildings and associated densities are critical factors in estimating fire fighter requirements.

Between 2008 and 2012, Seattle Fire Department incident responses ranged from 79,267 to 81,733. As shown in Table 3.8–2, calls decreased in the 2009–2011 period, increasing again in 2012.

In 2012, around 85% of Seattle Fire Department's calls were for emergency medical services. Overall, a growing number of these calls are for non-emergencies, such as calls from patients who do not exhibit an injury or illness that requires medical care, nuisance fire alarms, and emergency incidents subsequently canceled.

In comparison with the overall department, incident response totals from 2008 to 2012 directly affecting Station 17 as follows:

- **Engine 17** (E17) increased around 8% from 2,862 to 3,100 incidents.
- **Ladder Truck 9** (L9) increased around 5% from 1,556 to 1,644 incidents.
- **Medic Unit 16** (M16) remained relatively stable at approximately 2,900 incidents.

Similar to the citywide statistics, calls for service dipped during the 2009–2011 period, increasing again in 2012, as shown in Table 3.8-3.

Table 3.8–2: **2008–2012 Seattle Fire Department Incident Responses**

Year	Emergency Medical Services (EMS) Incidents	Fire Incidents	Total Incidents
2008	64,427	14,840	79,267
2009	63,239	14,551	77,790
2010	64,107	13,395	77,502
2011	64,595	12,709	77,304
2012	69,082	12,651	81,733

Source: Seattle Fire Department 2012 Emergency Response Report

Table 3.8–3: **Study Area Emergency Response Totals**

Station	Equipment	2008	2009	2010	2011	2012
17	**Engine 17**	2863	2848	2923	3040	3110
	Medic 16	2921	2856	2744	2859	2909
	Ladder 9	1556	1556	1493	1545	1644
16	**Engine 16**	1688	1858	1791	1814	1879
22	**Engine 22**	1186	1226	1281	1211	1281
38	**Engine 38**	1781	1844	1908	1675	1659

Source: Seattle Fire Department 2012 Emergency Response Report

LEVEL OF SERVICE

The Seattle Fire Department Response Standards establish a response time goal of four minutes (to be achievable 90% of the time) for the first engine company to arrive at the scene of any reported incident. Between 2008 and 2009, the Department achieved this goal 81 to 85 percent of the time. The Department has also established a response time goal for full first alarm assignment (minimum of 15 members) on the scene within eight minutes for fire emergencies. Between 2008 and 2012, the Department achieved this goal on average 85% of the time.

Battalion 6 Fire Station response times have generally met the Department's response time goals for BLS, ALS, and fire emergencies. Table 3.8–4 summarizes response times (in minutes) for the Battalion 6 Fire Stations near the U District study area in comparison with overall City response times.

Table 3.8–4: **2008 Response Times (in minutes) Battalion 6 Company Comparison**

Station	Equipment	BLS	ALS	Fire, HazMat, Rescue
17	**Engine 17**	3.73	3.89	4.59
	Medic 16	4.34	3.79	5.32
	Ladder 9	5.33	6.79	6.78
16	**Engine 16**	4.09	4.36	5.07
22	**Engine 22**	4.04	4.03	5.05
38	**Engine 38**	4.24	4.26	5.06
	Overall Seattle Fire Department	3.75	3.76	4.32

Source: www.seattle.gov/fire/statistics/runTimes/dept_responseTimes.htm

Engine 17 achieved goals for BLS and ALS response times. The other units in Battalion 6 were slightly over the 4-minute goal for BLS but all of them met the 8-minute response time for ALS emergencies. Company response ranges for Fire, HazMat, and Rescue missions ranged from 4.59 to 6.78 minutes. This is over the goal of 4 minutes for first responders but within the 8-minute goal for full first time alarm assignment. The Seattle Fire Department reports that special operations and technical rescues such use of ladder trucks on average require 8.41 minutes for arrival.

FIRE DEPARTMENT PLANNING

In 2003, A Fire Facilities and Emergency Response Levy was approved by the Seattle voters to improve and upgrade the Department's fire facilities and emergency response system. All of the Department's fire stations were evaluated as needing major upgrades, renovation or replacement in order to provide service. The Levy provided approximately $167 million for multiple projects, including upgrades, renovations or replacement of 32 neighborhood fire stations.

Within Battalion 6, funds from this levy facilitated improvements to Station 17, Station 16, Station 31, Station 38 and Station 40. Stations 38 and 39

were replaced with new stations. Station 22 is scheduled for replacement at the same site location

The renovation and expansion of Fire Station 17 was completed in August 2010. Work included seismic upgrades, an addition on the north side to provide space for firefighting equipment and vehicles, increased space for instruction and training, new firefighters quarters, and improved mechanical and electrical systems. Built in 1929, Fire Station 17 received Landmark Designation in 2005. The renovation and expansion maintained this historically significant structure.

The City of Seattle Comprehensive Plan also identifies potential needs for the Fire Department to serve future growth in the City. As the population grows it is anticipated the total volume of calls in the city will also increase. More specifically additional EMS capabilities would be needed near South Lake Union, SODO, Northgate, and Central District neighborhoods. Additional fire stations in South Lake Union and Northgate may also be needed within the next 20 years.[2]

Police Services

The Seattle Police Department provides police protection service to the City of Seattle, including the U District study area. The Department includes approximately 1,870 authorized full time employees, including 868 police officers. Personnel are divided amongst five precincts: north, west, east, south, and southwest. Each precinct is further divided into sectors and beats which are dependent on the geographic area of each precinct. Citywide, there are 17 sectors and 51 beats. The U District study area is in the North Precinct.

The North Precinct headquarters are located at 10049 College Way North, about three miles northwest of the U District study area. With five sectors and 15 beats, this largest precinct in the Department covers 32 square miles in north Seattle between lake Washington and Puget Sound, and the Ship Canal and the north city limits. The U District study area is in the Union Sector, Beats U2 and U3. Refer to Figure 3.8–2 for a map of the North Precinct Sectors and Beat boundaries.

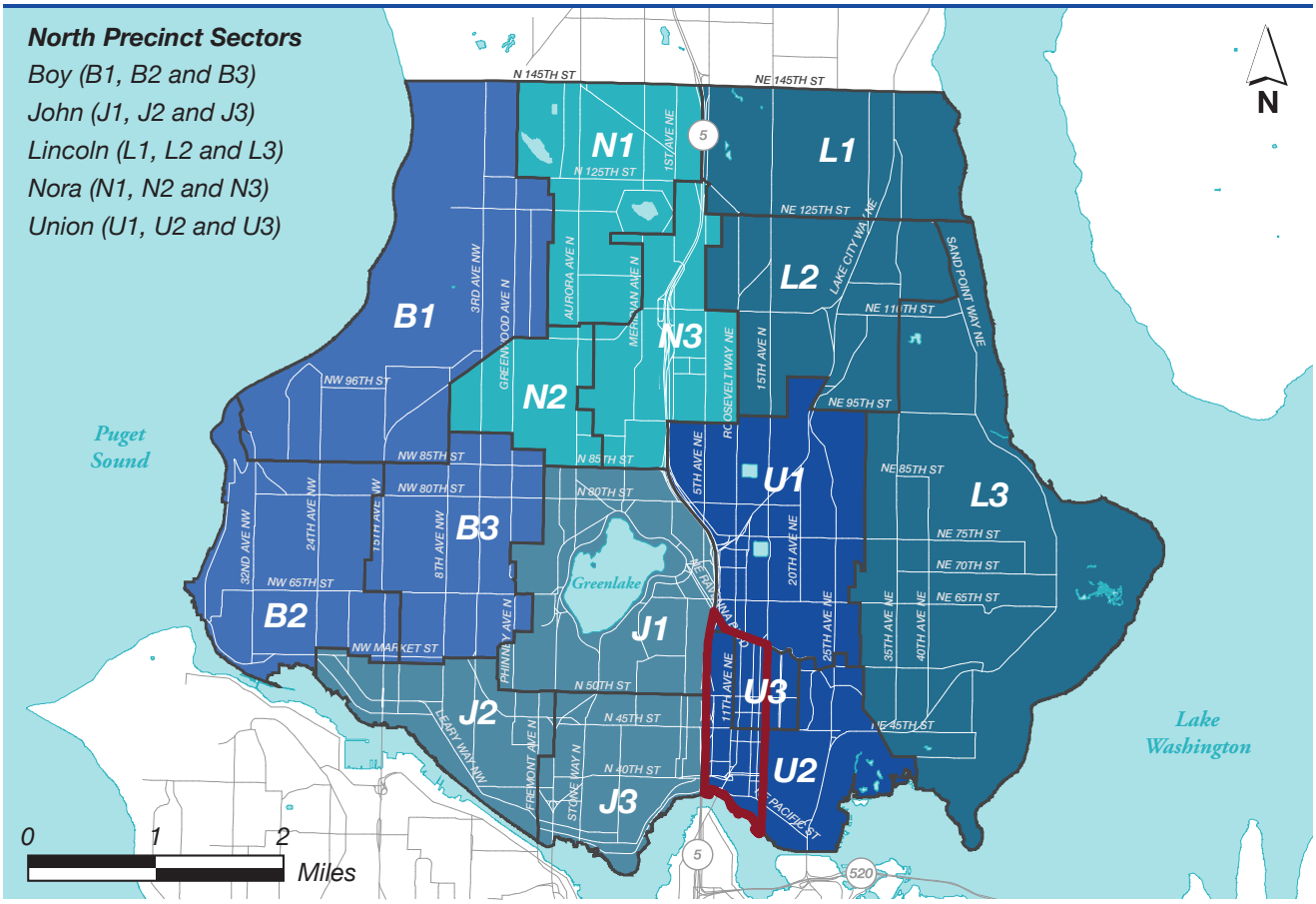
North Precinct services include 24/7 patrol and 911 response services, Bike Patrol, Anti-Crime Team, on-site Liaison Attorney, Burglary/Theft Detectives,

2 *Seattle Comprehensive Plan. Appendix A Capital Facilities. January 2005*

Crime Prevention, and Community Police Teams (CPT). CPTs focus on long-term or chronic neighborhood specific issues.

Precinct priorities for the U District include extended foot, bicycle and car patrol presence in the University District business core and an emphasis on paroling Greek Row on Friday and Saturday nights in the spring.

Figure 3.8–2: **Seattle Police Department North Precinct Sectors and Beats**



Source: Seattle Police Department, 2013

CALLS FOR SERVICE AND INCIDENTS

In 2009, the Seattle Police Department received approximately 339,000 calls for service (this includes Patrol and Field Unit Actions, Fire Department, and other agencies). Of those, 201,704 were dispatched calls and 137,300 on-view incidents (events that officers log during routine patrols. Total calls for service represented an 11 percent decrease from the previous year and a 20 percent decrease from 2005. Table 3.8–5 summarizes the Department's call volumes between 2005 and 2009.

The Department also reports a citywide decline in total reported major crimes from 2009 to 2012. Major crimes consist of murder, rape, robbery, aggravated assault, burglary, larceny/theft and vehicle theft. In 2012 there were 34,607 major crimes reported in Seattle compared with 38,951 in 2009, a reduction of about 12.5%.

Overall, crime activity in the North Precinct follows the citywide pattern with about 8% fewer reported major crimes. However, the two U District beats show increased activity from 2009 to 2012. The majority of major crimes reported in the study area beats were for burglary and theft (not auto). Table 3.8–6 compares citywide changes in reported crimes with the North Precinct and U District beats.

Table 3.8–5
2005-2009 Seattle Police 911 Calls for Service

Year	Dispatched Calls	On-Views	Total
2005	251,582	173,487	**425,069**
2006	249,033	175,470	**424,503**
2007	233,948	167,944	**401,892**
2008	223,976	154,907	**378,883**
2009	201,704	137,307	**339,011**

Source: Seattle Fire Department 2012 Emergency Response Report

Table 3.8–6
2009-2012 Major Crime Reports Comparison

	2009	2012	% Change
Citywide	38,951	34,607	**-12.5%**
North Precinct	13,536	12,436	**-8%**
Beat U2	985	1,029	**+4%**
Beat U3	652	784	**+20%**

Source: Seattle Fire Department 2012 Emergency Response Report

LEVEL OF SERVICE

The Seattle Police Department does not have adopted level of service standards for police service, but has identified strategic goals for optimizing operational efficiencies. These goals include an average response time guideline of seven minutes, enhanced percentage of patrol time available for proactive work, and two patrol cars free per precinct to provide flexible backup for officer safety and added capacity for proactive work. Proactive work is police time spent resolving underlying conditions that lead to violation of law and/or public order.

On average, the Department currently meets or exceeds its seven-minute response goal. However, performance is geographically uneven and can be slower at certain times of day and during certain days of the week.

POLICE DEPARTMENT PLANNING

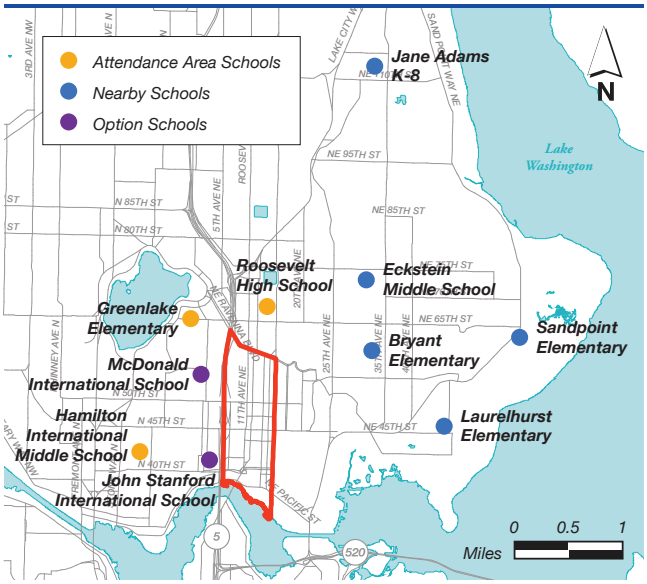
In 2007, the Seattle Police Department published the Neighborhood Policing Staffing Plan 2008–2012 that called for a net increase of 105 patrol officers between 2008 and 2012. The Department proceeded with its recruitment efforts in 2008 and 65 patrol officers were added to the Department. Since 2012, funding has been added into the City's budget to hire 42 additional police officers.

The City of Seattle Comprehensive Plan also identifies potential facility needs for the Department to serve potential future growth in the City. The North Precinct is currently overcrowded and it has been determined by the Department that it does not meet the needs of precinct personnel. It is anticipated that the North Precinct would need to be renovated and expanded within the next 20 years. No additional facility needs are identified at this time. However, as the City further considers neighborhood-based policing options, the long-range plans for police facilities may change.

Public Schools

The Seattle School District is the largest in Washington state, serving about 49,800 students in 95 schools. The District has a staff of about 8,000, including 3,100 teachers.

Figure 3.8–3: **Seattle Public School Locations**



Source: Seattle School District, 2013

Over the past five years, enrollment in the Seattle School District has increased by about 5,000 students and is expected to grow by another 5,000 by the 2017–18 school year. In February 2013 Seattle voters approved a Capital Levy (Building Excellence IV) to support construction of new and expanded school buildings. In November 2013, the District approved new growth boundaries and feeder patterns to relieve overcrowding and maximize efficiency in existing facilities.

There are no public school facilities in the study area. The University Heights Elementary School, located in the study area at 5031 University Way NE, opened in 1902 and was closed in 1989. The District cited the high cost of maintaining the facility as the primary reason for the closure. The building now serves as the University Heights Community Center.

Attendance area schools are schools in which students are assigned based on where they live, as long as the school offers the services that the student needs.

The attendance area schools that serve the U District study area and surrounding vicinity (shown in Figure 3.8–3) are listed in Table 3.8–7. The attendance area schools that serve the study area are Greenlake Elementary, Hamilton International Middle School, and Roosevelt High School. For elementary and middle schools, Table 3.8–7 also shows nearby elementary and middle schools that serve the nearby vicinity.

McDonald International School, located at 144 NE 54th Street and John Stanford International School, 4057 5th Avenue NE are also located near the study area. These two elementary schools are option schools, designed to provide programmatic opportunities for families looking for choices in addition to their attendance area schools. Students must apply to attend these schools and students living within near the schools are not guaranteed admission.

In general, it is anticipated that schools in northeast Seattle will be at or over capacity in the future. Continued monitoring of enrollment information, along with projections and community engagement, will be used to manage individual school capacities. In making projections, the District uses a cohort survival model based on new births and grade progression ratios.

Table 3.8–7: **School Facilities**

	Attendance[1]	Planning Capacity[2]	Projected Growth (2012–2016)[3]
Elementary Schools			
Greenlake	253	350	(25)
Bryant	593	575	(9)
Laurelhurst	401	375	(102)
Sandpoint	277	250	36
Middle Schools			
Hamilton International	1,101	973	482
Eckstein	1,252	1,093	155
Jane Addams	755	960	127
High School			
Roosevelt	1,728	1,707	72

1 *Attendance as of 9/5/2013: www.seattleschools.org/modules/groups/homepagefiles/cms/1583136/File/Departmental Content/communications/documents/SPSAddressList.pdf, accessed January 2014*

2 *Personal communication with Joe Wolf, Seattle School District, January 2014*

3 *Seattle School District, Five-Year School Projections: 2012–13 through 2016–17, December 13, 2012*

SCHOOL PLANNING POLICIES

As described in EIS Section 3.1, the Comprehensive Plan Neighborhood Planning Element—University Community Urban Center lists readily available public education resources as a major goal. More specifically, this element of the Comprehensive Plan identifies the following supporting policies:

UC-P33 Pursue opportunities to work with Seattle Public School District #1 in locating a public school in the community, capitalizing on the area's excellent accessibility and proximity to the University of Washington.

UC-P34 Work with the Seattle School District #1 to ensure appropriate, equitable school resources are available in the community, including after-school activities and facilities.

These policies address the University Community Urban Center, which encompasses the larger area around the U District study area, shown in Figure 3.1–2.

The Seattle School District has identified several guiding principles related to how school attendance boundaries are identified. One of the seven guiding principles is to maximize walkability. All guiding principles are listed below.[3]

- Ground decisions in data;
- Create boundaries that reflect equitable access to services and programs;
- Maximize walkability;
- Enable cost-effective transportation standards;
- Maintain key features of the New Student Assignment Plan (e.g. opportunities for creating diversity within boundaries, choice, option schools, feeder patterns);
- Be mindful of fiscal impact; and
- Be responsive to family input to the extent feasible

3.8.2 Significant Impacts

Impacts Common to All Alternatives

The proposal analyzed in this EIS considers the use of zoning changes to increase height and density in the U District study area. By itself, this proposal would not directly result in impacts to public services.

However, zoning regulations would allow for potential future development at increased heights and intensity and an associated increase in population and employment, which could result in a subsequent impact to public services and utilities. The impacts described below relate to the development that could result from the adoption of any of the proposed zoning alternatives. Because all of the alternatives assume a common growth assumption, the potential for impacts to public services would be comparable under all alternatives.

Fire and Emergency Services

From the perspective of fire and emergency service response, the potential for impact is based primarily on the total amount of development rather

3 *www.seattleschools.org/modules/groups/homepagefiles/cms/1583136/File/Departmental%20Content/enrollment%20planning/GrowthBoundaries_guiding-principles-050813.pdf?sessionid=4ecb3371068caf4dda8f2574e27109f1, accessed December 2013.*

than the distribution of development within the study area. Because the same planning estimate for growth is assumed for each alternative, the potential for impacts to fire and emergency services is also the same for all alternatives.

Construction activities associated with potential development under the proposed alternatives could result in an increase in demand for fire services. Fire Department service calls related to inspection of specific construction projects and calls to respond to potential construction-related accidents could increase as a result of construction. Existing Fire Department staffing and equipment are anticipated to be sufficient to handle increased service needed for construction activities.

As development occurs, the increased number of residents and workers would likely result in a commensurate increase in calls for emergency services. Growth in residential and worker population in the U District study area would occur incrementally, as individual development projects are constructed. The Fire Department would attempt to maintain response times consistent with current performance levels. However, depending on the rate and amount of new development, additional staffing and equipment may be required in order to maintain performance levels. EMS service typically generates the highest demand for the Fire Department.

As described under the Affected Environment, all Battalion 6 fire stations serving the U District study area have been recently renovated or are in the process of being renovated as part of the Fire Facilities and Emergency Response Levy and would not be anticipated to need renovations in the near future. Any potential future facility needs of the Fire Department could be included as part of the City's annual Capital Improvement Program process.

All potential new development in the U District study area would be constructed in compliance with the 2006 City of Seattle Fire Code, which is comprised of the 2006 International Fire Code with Seattle Amendments. Adequate fire flow to serve potential development would be provided as required by the Fire Code. Potential development would also be required to comply with code requirements for emergency access to structures.

Police Services

The potential increase in residential and employment density that could occur under the alternatives would result in a more consistent and

increased level of activity in the U District study area. A well-used street can both increase public safety and calls for service. Potential increases in on-site population and employment associated with development in the U District study area would be incremental and would result in associated incremental increases in demand for police services. It is expected that call volumes to the Police Department under all of the proposed alternatives would increase comparably.

Potential development in the area could include design features to help reduce criminal activity and calls for service such as orienting buildings towards the street, providing public connections between buildings, and providing adequate lighting and visibility.

Potential construction under the alternatives could result in an increase in demand for police services. Service calls to the Seattle Police Department could increase during construction due to construction site theft and vandalism. Existing Department staff and equipment are anticipated to be sufficient to handle the potential increase in service from construction activities.

It is anticipated that the Police Department would have sufficient staffing and facilities to accommodate the increased demand for service from the U District study area and no additional safety problems would occur as a result of development under the alternatives. Part of this can be attributed to the Department's ability to deliver proactive police-community project solving services to the area and the City of Seattle in general through the implementation of the Neighborhood Policing Staffing Plan.

Public Schools

Under any of the alternatives, an increase in households in the U District study area would contribute to a continuing need by the Seattle School District to manage capacity at local schools and to construct new and expanded facilities to accommodate a growing student population. Because the District estimates future growth based on a cohort survival model that does not explicitly include consideration of household growth and housing types, it is not possible to quantitatively estimate the impact of U District study area growth on future school capacity. However, as noted in EIS Section 3.2, the current study area population is characterized by a large number of student households and relatively few families. It is likely potential increases in public school student population associated with

development in the U District study area would be incremental and would result in associated incremental impacts on school facility capacity. These incremental increases would allow the District to respond through short-, intermediate- and long-term capacity management planning. Significant impacts associated with the proposal are not anticipated.

As described above, the only public school in the U District study area closed in 1989. Since that time, students in the study area have been served by schools in the surrounding area. Existing Comprehensive Plan policies support a collaborative effort to locate a public school in the University Community Urban Center, which is a larger area that encompasses the study area. It is likely that the location of a school in the UCUC, or more specifically in the study area, will require consideration of a range of issues, including the benefits of walkability and local access to the school facilities, cost effectiveness, equity and long-range demographic trends. Because all of the alternatives, including the No Action Alternative, assume a consistent amount of growth, the alternatives are unlikely to have an impact on the potential for locating a new school in the study area.

3.8.3 Mitigating Measures

Future population and employment increases associated with potential development in the U District study area would be incremental and would result in associated increases in demand for public services. These impacts could be addressed by the following mitigation measures.

1. A portion of the tax revenue generated from potential redevelopment in the study – including construction sales tax, business and operation tax, property tax and other fees, licenses and permits – would accrue to the City of Seattle and could help offset demand for police and fire services.
2. All new buildings would be constructed in accordance with the 2006 Fire Code which is comprised of the 2006 International Fire Code with Seattle amendments or the applicable fire code in effect at the time of permit submittal.
3. Design features could be incorporated into potential development in the study that would help reduce criminal activity and calls for police service, including orienting buildings towards the sidewalk

and public spaces, providing connections between buildings, and providing adequate lighting and visibility.

4. Ongoing capacity management by the Seattle School District will help meet future school capacity needs associated with growth in the U District study area. The School District also has the option of collecting impact fees under Washington State's Growth Management Act and voluntary mitigation fees paid pursuant to the State Environmental Policy Act.

3.8.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to fire and emergency services or police services are anticipated.

3.9 Utilities

This section describes the affects of the proposed alternatives on the provision of water, stormwater and sewer services, and electrical power. Seattle Public Utilities provides water, stormwater drainage and wastewater utility service within the City. Electrical power service is provided by Seattle City Light.

3.9.1 Affected Environment

Water System

Water for domestic use and fire fighting is provided to the area by Seattle Public Utilities (SPU). Seattle has two surface sources and one small groundwater source: the Cedar River System, the South Fork Tolt Reservoir, and the Seattle Well Fields. On average, the Cedar River System supplies seventy percent of SPU's total supply.

The SPU water system is comprised of transmission and distribution pipelines, and storage facilities and pressure zones.

U District water is supplied by the Cedar River system through a 42-inch water main from the Maple Leaf reservoir (at N 85th and 12th Avenue NE), entering the study area at NE Ravenna Boulevard and Brooklyn Avenue NE, continuing south along Brooklyn Avenue NE to NE 47th Street, then south along 7th Avenue NE to Portage Bay. Figure 3.9–1 shows the water distribution network in the study area.

The SPU water system is comprised of transmission and distribution pipelines, and storage facilities and pressure

Figure 3.9–1:
Water main and distribution network

Source: City of Seattle, 2013

zones. Almost all of the distribution lines in the U District are 8 inches in diameter, except for an area with 2-inch pipe along 8th Avenue NE between NE 52nd And NE 59th Streets. The system grid of interconnected pipes is designed for reliability.

Most of the distribution system was installed in the early 1900s except for along University Way NE between NE 47th Street and NE Campus Parkway, which was installed in 2003. Pipe materials are a combination of cast-iron and ductile-iron. The expected life span of these pipes is 100 to 120 years.

The network is maintained by SPU and repaired and improved as needed. In some cases, developers are asked to make replacements or improvements to the system near their properties as a condition of new development.

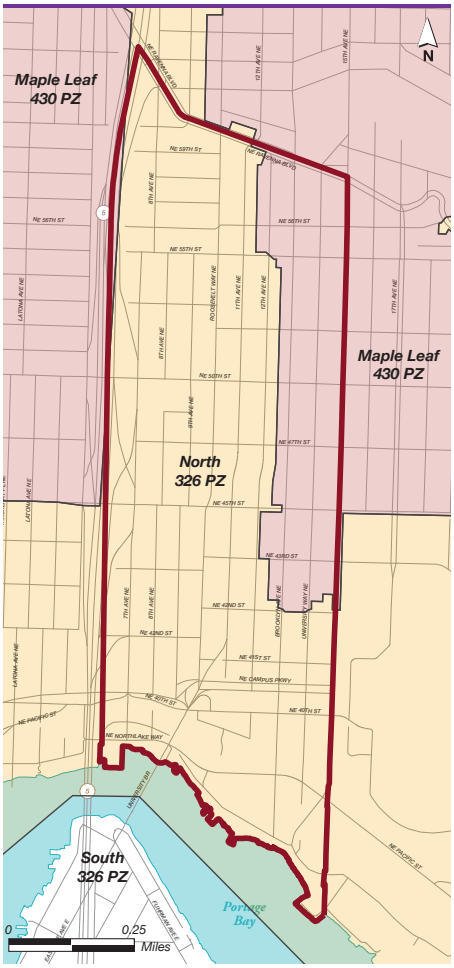
Water pressure zones are areas in which a certain maximum water pressure can be expected from the potable water distribution network.

SPU's water distribution system is primarily served by gravity, but pumps are used to serve some pressure zones to control flow and storage levels. The SPU water distribution system is divided into approximately 45 pressures zones that operate within a pressure range of about 30 to 130 psi (pounds per square inch). This range meets service level targets for providing safe drinking water and fire flow.

The U District study area is within two pressure zones (PZ), North 326 PZ and Maple Leaf 430 PZ. North 326 extends the length (north and south) of the study area from I-5 to 12th Avenue NE. Maple Leaf 430 extends north and south along the study area on Brooklyn Avenue NE, University Way NE, and 15th Avenue NE. Pressure zone boundaries are shown in Figure 3.9–2. A pressure improvement project was completed in the North 326 PZ in 2009 to ensure all retail service connections are greater than 20 psi during normal operations.

The majority of SPU's hydrants are able to deliver more than adequate flows to combat fires. However, there are some areas where a combination of factors including pipes with small diameters or old design standards cannot deliver fire flows to existing buildings under current codes required for new buildings. During fire flow conditions, the combination of storage and delivery system capacity must be adequate to provide water at the required flow rate and a minimum 20 psi in the main line. SPU Utilities System Management (USM) maintains models of the water distribution and transmission system. The modeling analysis determines the capacity of the main to provide peak hourly demand and fire flow.

Figure 3.9–2:
Pressure zone boundaries



Source: City of Seattle, 2013

Sanitary Sewer

SPU Drainage and Wastewater Utility collects and conveys sewage through a system of sanitary sewers, detention tanks/pipes, storm drains, pump stations, outfalls, and treatment facilities.

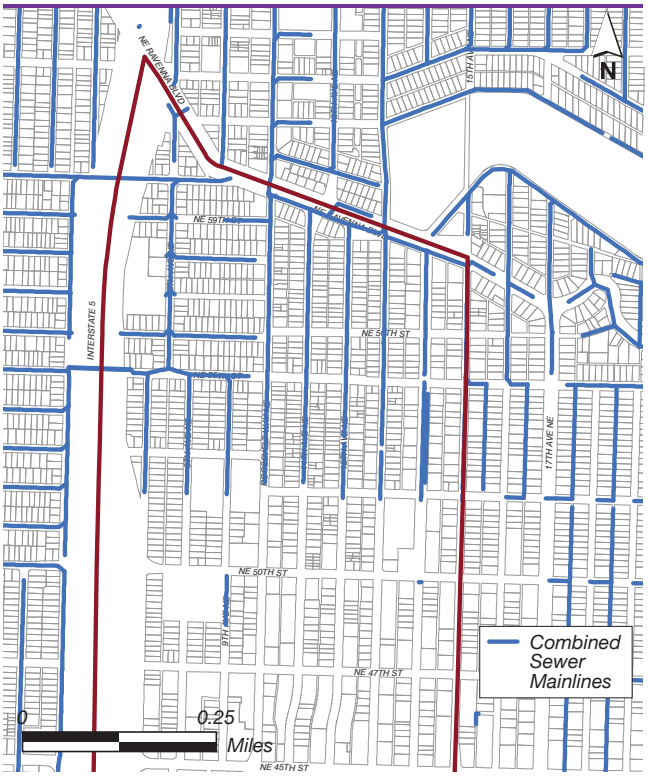
The U District study area contains both combined and separated wastewater infrastructure. In a separated system, stormwater runoff is directed to a separate storm drain system, while wastewater goes to a sanitary sewer and on to the wastewater treatment plant before discharging into a receiving water body. Combined sewer systems collect stormwater runoff and domestic sewage in the same pipe and transport it to a sewage treatment plant prior to discharge. Metropolitan King County is responsible for treating all wastewater in the city. Wastewater from the study area goes to the West Point Treatment Plant located about four miles northwest of downtown Seattle, along the Puget Sound shoreline.

Combined System

In the U District study area, the combined sewer system is found in residential areas bounded by NE Ravenna Boulevard, I-5, Roosevelt Way NE, and NE 53rd Street and portions of 12th Avenue NE, and the Ave (See Figure 3.9–3). The installation of the system is old, most pipes date back to the early 1900s. The pipes range from 8 to 12 inches in diameter and are primarily constructed of vitrified clay and concrete. SPU regularly inspects, repairs, and replaces pipe as needed. As needed, new development may be required to make system improvements. With maintenance, the expected life span of these sewers is indeterminate.

During wet weather, wastewater volumes in combined sewer systems can exceed the system's capacity so are therefore designed to overflow occasionally, discharging excess wastewater directly into nearby water bodies. In the study area, combined sewer overflows drain into the Portage Bay Combined Sewer Overflow (CSO) facility located east of the University Bridge. A lift station and combined sewer outfall located at

Figure 3.9–3: **Combined Sewer Mainlines**



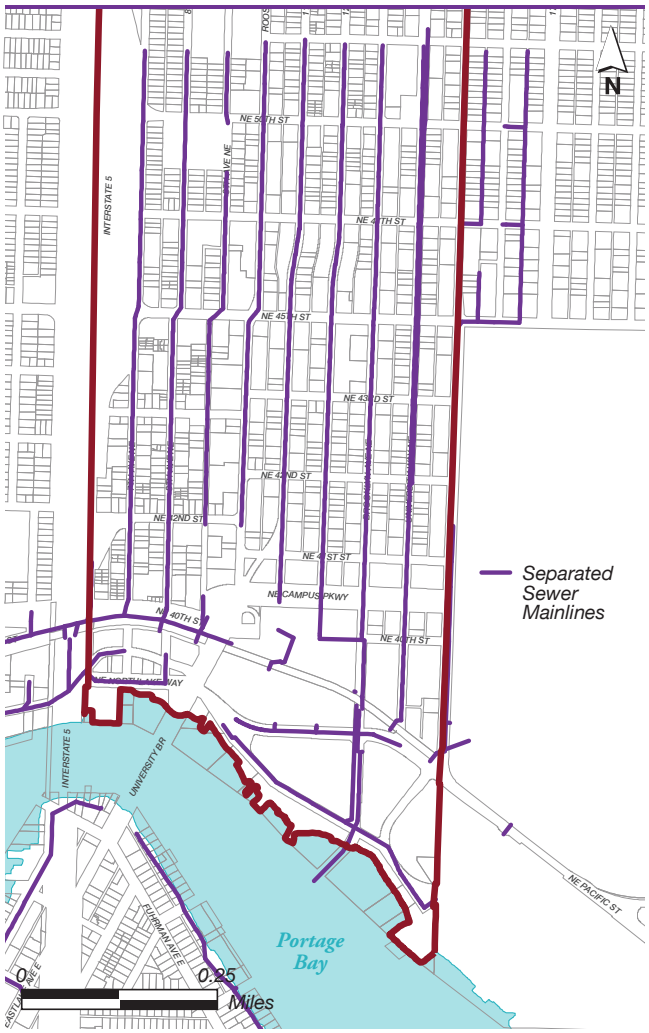
Source: City of Seattle, 2013

Brooklyn Avenue NE and Boat Street manage combined sewer flows. During major storm events the combined system can over flow untreated water into Portage Bay through this CSO facility. CSOs from regulated outfalls are allowed at times, when the system reaches capacity, and as permitted by agreements with the Washington Department of Ecology. The City and King County have made significant up-grades to the conveyance and detention capacity of the combined sewer system to limit these overflows but some storms and other circumstances will still exceed the limit of the system.

Separated System

As shown in Figure 3.9–4, the majority of the sanitary sewage in the study area is collected in a separate system of pipes that route directly to the West Point Treatment Plant. Wastewater collection and conveyance is managed primarily through a series of gravity lines ranging from 8 to 12 inches in diameter. Almost all mainlines in the study area were installed in the early 1900s and are constructed of concrete and vitrified clay.

Figure 3.9–4: **Separated Sewer Mainlines**



Source: City of Seattle, 2013

As shown in Figure 3.9–4, sewer lines run north-south through the study area and exit the study area to the southwest where they connect into larger reinforced concrete trunk mains located at 7th Avenue NE running along NE 40th Street.

Stormwater

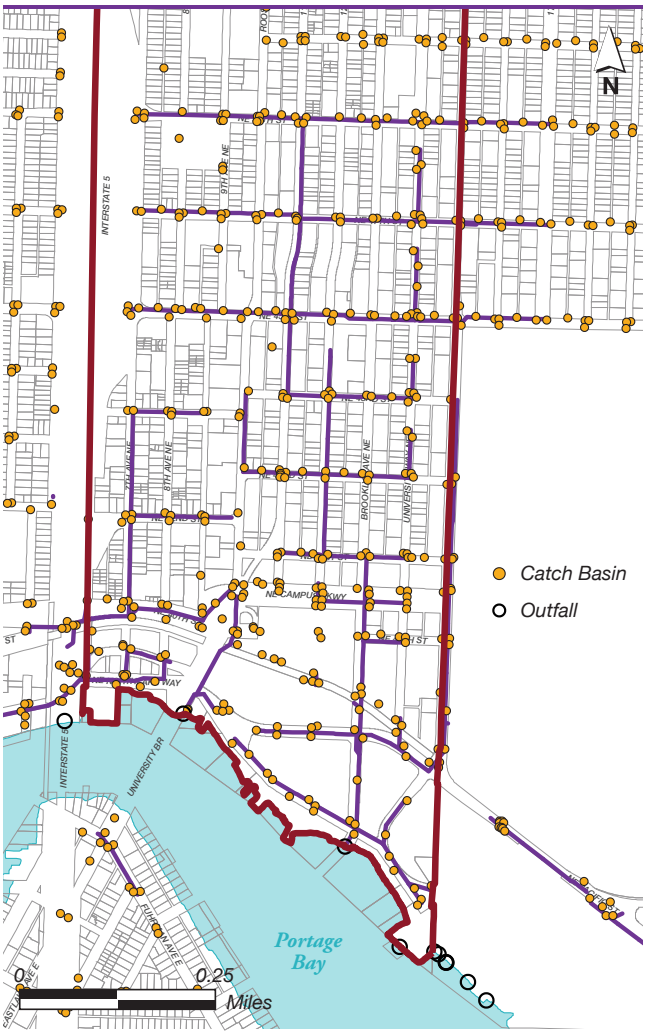
Stormwater in the study area is collected from streets and properties through a combination of combined and separate pipe networks managed by SPU. The combined system is described in the sanitary sewer discussion, above.

SPU manages stormwater drainage through asset based management and operational standards. The stormwater system is shown in Figure 3.9–5. The mainlines collecting and conveying stormwater range from 15 to 30 inches in diameter. Almost all of the mainlines were installed in 1972 and are constructed

of reinforced concrete pipe. Some newer sections along University Way NE, installed in 2005, are made of ductile iron pipe. The drainage system includes a series of catch basins running along main drainage lines to take surface water runoff from roadways and parking lots. A monitoring station at the east side of Brooklyn Avenue NE monitors stormwater discharge through a 36" diameter reinforced concrete pipe installed in 1972.

In addition to structural infrastructure, SPU regulates plans, builds and maintains green stormwater infrastructure (GSI). Examples of green stormwater infrastructure include permeable pavement, bioretention facilities, and green roofs. Starting in 2009, Seattle has required GSI as part of stormwater mitigation for all redevelopment.

Figure 3.9–5:
Stormwater Mainlines, Catchbasins, Drainage Outfall



Source: City of Seattle, 2013

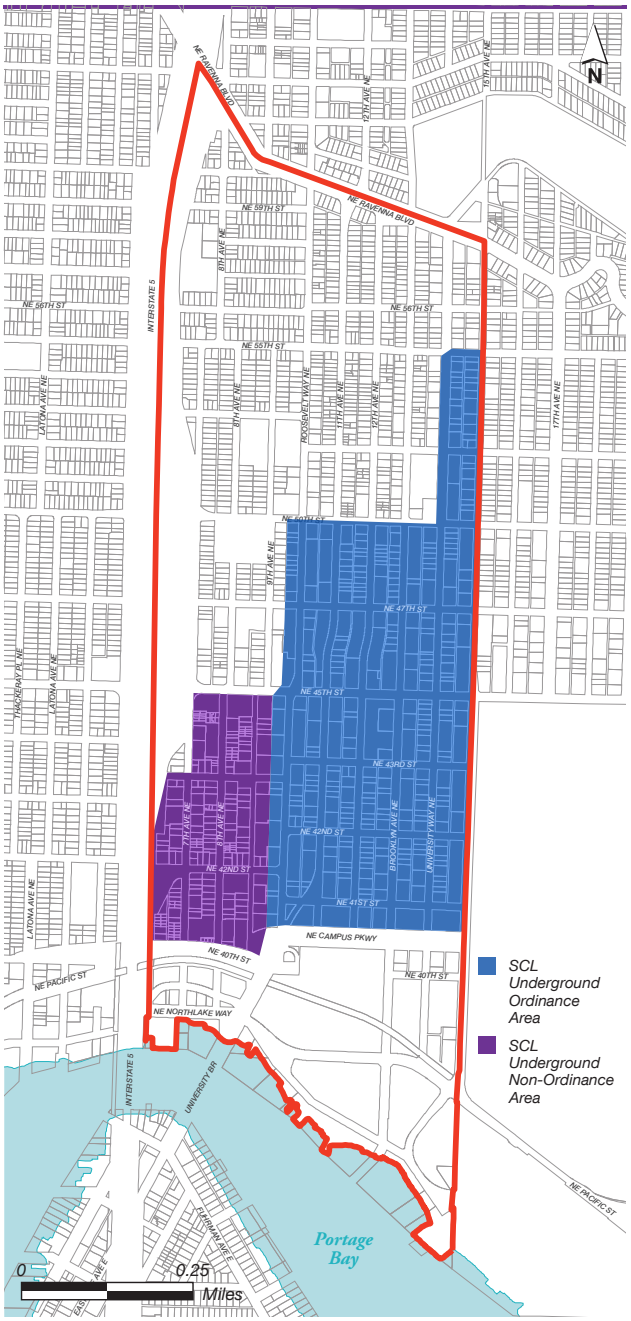
Electric Power

Power in the U District is provided and maintained by Seattle City Light (SCL). SCL is publicly owned and relies on hydropower energy sources.

Power is brought to the study area through the University Substation, located just south of the study area and the North Substation, located north of the study area. In general, power is provided through three distinct 26kV distribution systems, briefly described below:

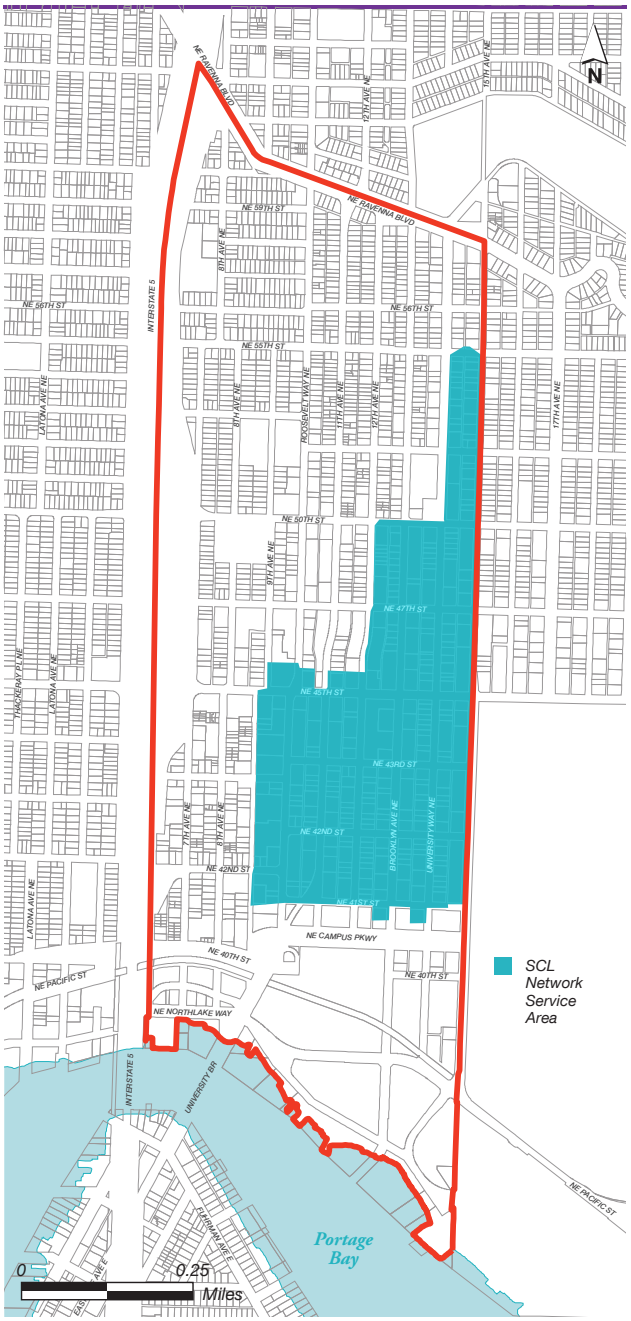
- **Network distribution system.** As shown in Figure 3.9–6, the network distribution system is generally bounded by NE South Street, Campus Parkway, 15th Avenue NE and Roosevelt Way NE. Network systems are typically used in situations where extremely high reliability is essential, such as for hospitals, airports, major data processing centers, as examples. The trade-off for this level of reliability is higher cost to the consumer. In the study area, this system cannot be expanded and is generally operating at capacity under existing conditions.

Figure 3.9–6:
Electric Network Service Area



Source: Seattle City Light, 1989

Figure 3.9–7:
Underground Electric Service Area



Source: Seattle City Light, 2000

- **Looped radial distribution system.** The looped radial system serves those areas not served by the network distribution system and also overlaps in some areas with the network system. The looped radial system is also highly reliable and appropriate for most residential, commercial and office uses. The looped radial system can be expanded to accommodate new growth and development.
- **University of Washington distribution system.** Seattle City Light provides electrical power to the University of Washington, but is not responsible for distribution of power throughout the campus, which is handled by the UW. This system is currently operating at maximum capacity and the UW is considering options to expand service to the main campus.

The network and looped radial distribution systems are separate systems that cannot be interconnected. Similarly, the UW system is separate from the network and looped radial system.

As shown in Figure 3.9–7, two areas within the study area are designated for underground utility service. The first is called the "University District Underground Ordinance Area" and requires by ordinance that all services by undergrounded.[1] With the exception of some properties along 9th Avenue NE, this area is served by the network distribution system, described above and shown in Figure 3.9–6. The second area designated for underground service is referred to as the "Non-Ordinance Area." In this area, alleys are too narrow to maintain a 26kV overhead system, so undergrounding is required for new service or upgrades to existing service.

3.9.2 Significant Impacts

The proposed action would adopt new or maintain existing development standards. By itself, this action would not directly result in impacts to utilities.

New or existing development standards would allow future development over time at varying heights and densities. Development under any of the alternatives would create additional load on the utility infrastructure in this area and is briefly discussed below.

1 *July 10, 1989 Seattle City Light Memorandum from Jerry Swanson to Kay Kinnish. Subject: Ordinance and Non-Ordinance Areas in the University District*

Impacts Common to all Alternatives

WATER

The increased density and intensity of development that would be permitted by any of the alternatives, including No Action, could result in greater demands on the water supply and distribution system. However, new development will be required to include practices which will incorporate efficient plumbing fixtures, water-conserving landscaping, and water reuse opportunities that can reduce per capita water demand. These practices will reduce the overall impact to water use resulting from the proposed alternatives. It should be noted that the potential impact to water use is equally likely under the no action alternative as under the action alternatives. Therefore, increased water use is not considered a significant impact of the proposal.

SANITARY SEWER SYSTEM

Development that would be permitted by the alternatives could result in greater demands on the local sewer collection system and on the downstream conveyance and treatment facilities. Although there will be a greater overall need for sewage facilities with increased density, new development can reduce per-capita demand, as newer, low- or no-flow plumbing fixtures and equipment replaces older, less efficient, installations. This could help reduce this overall impact. Since the potential increased demand is equally likely under the no-action alternative as under the action alternatives, increased demand for sanitary sewer service is not considered a significant impact of the proposal.

Current drainage code will require redeveloped sites that discharge to the combined sewers to provide stormwater detention with either Green Storm Water Infrastructure (GSI) that allows some water to infiltrate and be kept on site, or traditional underground tanks and vaults that temporarily hold the water and slowly release it to the sewer. Either of these methods will help control peak rates of stormwater through the local combined sewer systems, limiting the frequency of street flooding from the local collector pipes and reducing the risk of Combined Sewer Overflows from the trunk mains.

STORM SEWER SYSTEM

Current drainage code will require redeveloped sites that discharge to the storm sewers to provide stormwater detention with Green Storm Water Infrastructure (GSI) that allows some water to infiltrate, and be kept on site,

before the rest is released to the storm sewer. No significant impacts to the stormwater system are anticipated under any of the alternatives.

ELECTRICITY

Under all scenarios, including the No Action Alternative, future growth and development will increase demand for electrical energy. The existing substation and transmission infrastructure may be adequate to meet future needs. Further studies are required to determine whether major upgrades to the substation infrastructure will be required.

Under any scenario, the local distribution system may need improvements or reconfiguration to meet future growth needs throughout the study area. As noted above, the network distribution system is currently operating at capacity and cannot be expanded. Therefore, development concentrated in the network distribution area may have a higher impact to the electrical system than development spread over a wider area and/or in the area served by the looped radial distribution system.

3.9.3 Mitigating Measures

Depending on the nature of future site-specific development, mitigation may be necessary to address site-specific impacts that could occur under any of the alternatives.

Leadership in Energy and Environmental Design (LEED) provides a framework and ranking system to reduce the impact of development on the environment including the utility infrastructure. By using LEED methods to reduce energy and other resources, projects can reduce the overall effects of new or re-development. Encouraging the use of the LEED or a similar standard score card (Built Green) for resource use reduction with some type of development incentives would help to reduce the effects on the utility infrastructure.

WATER

- The use of low- or no-flow fixtures and water saving devices in new construction and renovations.
- Collection and re-use of storm water for non-potable uses (irrigation, toilet flushing, mechanical make up water, etc.) would reduce demand on the public water supply.

COMBINED SEWER

- As individual sites redevelop, current Stormwater Code standards, including Green Stormwater Infrastructure, will help control peak rates of stormwater through the local combined sewer systems and reduce the risk of combined sewer overflows.

STORMWATER

- New development in the area will be required to meet the 2009 City of Seattle Drainage Code. Stormwater collected on site will be required to be held on site with Green Stormwater Infrastructure (GSI) methods, or detained before discharge to the city storm system. These measures will reduce the peak rate of water discharged to the combined and storm sewer systems.

ELECTRIC POWER

- Evaluate and identify the future service system needs through collaborative planning process between Seattle Department of Development and Seattle City Light.
- The installation of photovoltaic and other local generating technologies will reduce the demand on the public generating and distribution facilities.
- Construction and operation of LEED compliant (or similar ranking system) buildings will reduce the level of increase required in power systems.
- Reduce the use of power in building heating and cooling with passive systems and modern power saving units.

3.9.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to utilities are anticipated.

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