

EIS ADDENDUM

for the proposed

UW Medical Center – Northwest Behavioral Health Teaching Facility Project



UNIVERSITY *of* WASHINGTON

October 2020

*EA Engineering, Science, and Technology, Inc., PBC
Transpo Group*

UNIVERSITY OF WASHINGTON
ADOPTION OF EXISTING DOCUMENT and ADDENDUM

Date: October 1, 2020

Lead Agency: University of Washington

Description of Proposal: The proposed UW Medical Center – Northwest Behavioral Health Teaching Facility is intended to provide innovative and integrated behavioral health care and teaching services to address the shortage of such services in the state of Washington. It would include the construction of a new building on the site of the existing D-wing building, would be up to seven stories tall, and provide approximately 210,000 square feet of above grade building space.

Location of proposal, including address, if any: 1550 N 115th Street, Seattle WA 98133. The project site is generally bounded by N 120th Street on the north, Meridian Avenue N to the east, N 115th Street on the south, and the Bikur Cholim Cemetery and multifamily residences to the west.

Title of document being adopted: Northwest Hospital Major Institution Master Plan Final Environmental Impact Statement

Date adopted document was prepared: 1991

Description of document being adopted: The Northwest Hospital Major Institution Master Plan guides development on the campus and includes guidelines and policies for new development on the campus. It is formulated to maintain and enhance the fundamental mission of the hospital and facilities. The Draft and Final EIS for the master plan analyzed the potential impacts of all identified development sites. The proposal is one of the development sites identified in the master plan and was analyzed in the EIS.

The adopted document is available at: <https://facilities.uw.edu/committees/sepa>

Title of EIS Addendum: UWMC-Northwest (formerly known as Northwest Hospital) Behavioral Health Teaching Facility EIS Addendum

The EIS Addendum is available at: <https://facilities.uw.edu/committees/sepa>

As lead agency and after independent review, we have identified and adopted this document as being appropriate for this proposal with additional information provided in an EIS Addendum. This proposal and site is consistent with the Major Institution Master Plan.

Responsible Official: Julie Blakeslee, AICP, Environmental & Land Use Planner
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ENVIRONMENTAL IMPACT STATEMENT (EIS) ADDENDUM

for the

UW Medical Center – Northwest Behavioral Health Teaching Facility Project

University of Washington

UW Facilities Asset Management

The EIS Addendum for the University of Washington *UW Medical Center-Northwest Behavioral Health Teaching Facility Project* has been prepared in compliance with the State Environmental Policy Act (SEPA) of 1971 (Chapter 43.21C, Revised Code of Washington); the SEPA Rules, effective April 4, 1984, as amended (Chapter 197-11, Washington Administrative Code); and rules adopted by the University of Washington implementing SEPA (478-324 WAC). Preparation of this EIS Addendum is the responsibility of UW Facilities Asset Management. The Asset Management office and the University's SEPA Advisory Committee have determined that this document has been prepared in a responsible manner using appropriate methodology and they have directed the areas of research and analysis that were undertaken in preparation of this EIS Addendum. This document is not an authorization for an action, nor does it constitute a decision or a recommendation for an action; in its final form, it will accompany the *Proposed Action* and will be considered in making the final decisions on the proposal.

Date of EIS Addendum Issuance October 1, 2020

FACT SHEET

PROJECT TITLE	UWMC – Northwest Behavioral Health Teaching Facility Project
PROPONENT/APPLICANT	University of Washington
LOCATION	The UW Medical Center – Northwest Campus (UWMC-Northwest) of the University of Washington is located in Northeast Seattle. In general, the campus is bounded by N 120 th Street on the north; Meridian Avenue N to the east; N 115 th Street on the south; and, the Bikur Cholim Cemetery and multifamily residences to the west.
PROPOSED ACTION	The Proposed Action for the Behavioral Health Teaching Facility (BHTF) Project is intended to provide innovative and integrated behavioral health care and teaching services to address the shortage of such services in the state of Washington. The proposed project would include the construction of a new building on the site of the existing D-wing building. The new BHTF building would be up to seven stories tall and provide approximately 210,000 square feet of above grade building space. Driveways and sidewalks would provide access and connections that integrate with the existing campus and perimeter landscaping would be provided consistent with the Master Plan and the existing campus.
LEAD AGENCY	University of Washington, Facilities Asset Management
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**PURPOSE OF THIS
EIS ADDENDUM**

The SEPA environmental review process is designed to be used along with other decision-making factors to provide a comprehensive review of the proposal (WAC 197-11-055). The purpose of SEPA is to ensure that environmental values are given appropriate deliberation, along with other considerations. This EIS Addendum is an addendum to the 1991 EIS for the UWMC – Northwest Campus (formerly known as Northwest Hospital). As SEPA Lead Agency, the University of Washington is responsible for ensuring SEPA compliance.

FINAL ACTION

The decision by the Board of Regents, after consideration of environmental impacts and mitigation, to approve the proposed project.

PERMITS AND APPROVALS

Preliminary investigation indicates that the following permits and/or approvals could be required or requested for the Proposed Actions. Additional permits/approvals may be identified during the review process associated with specific development projects.

University of Washington

- ***Board of Regents***
 - Approval of the proposed project

Agencies with Jurisdiction

- ***State of Washington***
 - Dept. of Labor and Industries
 - Dept. of Ecology, Construction Stormwater General Permit
- ***Puget Sound Clean Air Agency***
 - Demolition and Asbestos Notification
- ***City of Seattle***
 - Grading Permit
 - Shoring Permit
 - Building Permit
 - Electrical Permit
 - Mechanical Permit
 - Occupancy Permit

- Comprehensive Drainage Control Plain, Inspection and Maintenance Schedule
- Construction Stormwater Control Plan Approval
- **Seattle Department of Transportation**
 - Street Use Permits (i.e., construction staging, construction operations, etc.)
 - Street Improvements (i.e., sidewalks, curbcuts, etc.)
- **Seattle-King County Department of Health**
 - Plumbing Permits

EIS ADDENDUM AUTHORS AND PRINCIPAL CONTRIBUTORS

The UWMC – Northwest Behavioral Health Teaching Facility Project EIS Addendum has been prepared under the direction of the University of Washington Facilities, Asset Management and analyses were provided by the following consulting firms:

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PREVIOUS ENVIRONMENTAL DOCUMENTS

Per WAC 191-11-635, this document is an addendum to the following environmental document:

- Northwest Hospital Environmental Impact Statement (Draft EIS – April 1990, Final EIS – February 1991)

LOCATION OF BACKGROUND INFORMATION

Background material and supporting documents are located at the office of:

**University of Washington
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University Facilities Building
Box 352205
Seattle, WA 98195-2205
(206) 543-5200

DATE OF EIS ADDENDUM ISSUANCE

October 1, 2020

AVAILABILITY OF THE EIS ADDENDUM

This EIS Addendum has been distributed to agencies, organizations and individuals noted on the Distribution List contained in **Appendix A** to this document. Copies of the EIS Addendum are available for review on the University's Online Public Information Center (<https://facilities.uw.edu/committees/sepa>).

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Introduction and Description of the Proposed Action

CHAPTER 1

INTRODUCTION AND DESCRIPTION OF THE PROPOSED ACTION

This document is an addendum to the *Northwest Hospital EIS*¹ (February 1991), consistent with SEPA Rules WAC 197-11-706, and the University of Washington’s Rules implementing SEPA, which states that an “*addendum is an environmental document used to provide additional information or analysis that does not substantially change the analysis of significant impacts and alternatives in the existing environmental document*”.

This chapter of the State Environmental Policy Act (SEPA) Environmental Impact Statement Addendum (EIS Addendum) provides the following: summary of the proposed Behavioral Health Teaching Facility (BHTF) Project; background discussion on the legislative and planning history of the BHTF Project; discussion on the previous *Northwest Hospital*¹ *SEPA EIS* (February 1991) for the *Northwest Hospital Major Institution Master Plan (Master Plan)* approved in July 1991; information on the BHTF site, Northwest Hospital campus, and the surrounding area; detailed description of the proposed BHTF Project; and, a comparison of the proposed BHTF Project with the assumptions in the 1991 EIS. A comparison of existing conditions, environmental impacts, mitigation measures, and significant unavoidable adverse impacts under the proposed BHTF Project with conditions described in the 1991 EIS is provided in **Chapter 2** of this EIS Addendum.

1.1 PROJECT SUMMARY

The proposal is to construct a new 210,000 square foot, 150-bed, BHTF at the UW Medical Center - Northwest campus. The proposed BHTF is intended to provide innovative and integrated behavioral health care and teaching services to address the shortage of such services in the state of Washington.

1.2 BACKGROUND

Project Need and Legislative History

The Washington State legislature identified the need for services for individuals with behavioral health needs, and that there is a shortage of behavioral health workers in Washington. The legislature recognized the University of Washington School of Medicine

¹ “UW Medical Center - Northwest” was referred to as “Northwest Hospital” in 1991. UW Medical Center – Northwest is the current name of the medical center.

Department of Psychiatry and Behavioral Sciences as a nationally competitive program with the expertise to establish innovative clinical inpatient and outpatient care for individuals with behavioral health needs and train the next generation of behavioral health workers.

Accordingly, the Washington State Legislature appropriated funding (House Bill 1593) for the University of Washington to manage the predesign, siting, and design of a facility to provide innovative and integrated behavioral health care and teaching services. The appropriation stipulated that the facility must provide a minimum of 50 long-term civil commitment beds, 50 geriatric/voluntary psychiatric beds, and 50 to 60 licensed medical/surgery beds, with the capacity to treat patients with psychiatric diagnoses and/or substance use disorders. The facility must also include a 24/7 telehealth consultation program. Additional scope includes: 1) procedural area for electroconvulsive therapy, and neuromodulation to support patients' commitment to community-based living and health care; and, 2) capacity to conduct comprehensive workforce training and development for behavioral health and general health care providers. See **Figure 1-1** for the general location of UW Medical Center – Northwest.

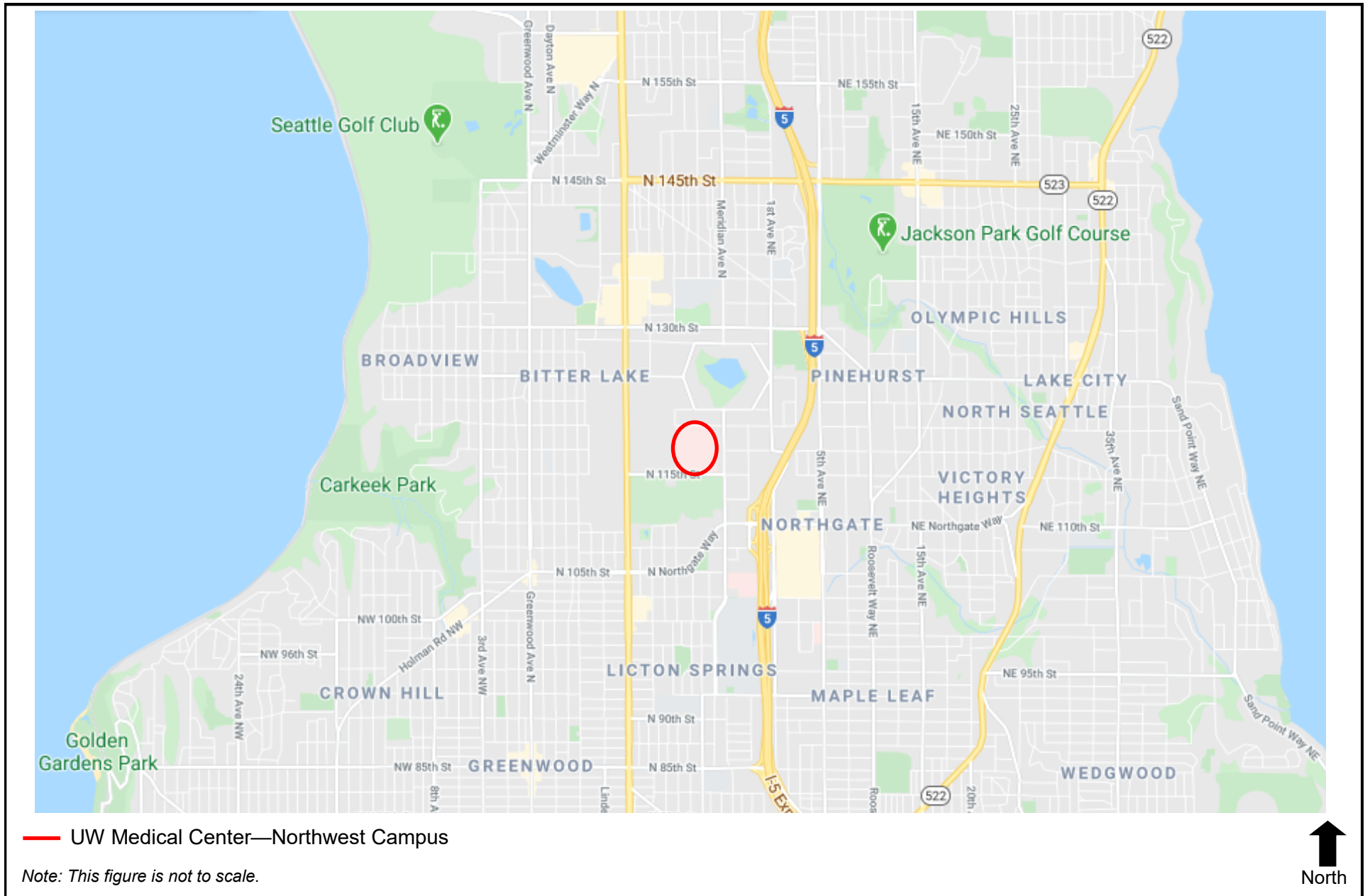
BHTF Siting (UW Medical Center – Northwest)

The University of Washington provides medical services at three hospitals in the region: Harborview Medical Center, UW Medical Center – Montlake, and UW Medical Center – Northwest. The University of Washington determined that of the three UW hospitals in the region, UW Medical Center – Northwest best meets the project needs, including existing behavioral health expertise and supporting services in place, with available building area and capacity.²

UW Medical Center – Northwest (UW Northwest) is a 281-bed hospital in north Seattle. The Medical Center was built in 1960, became a part of the University of Washington system in 2010, and became UW Medical Center – Northwest in 2020. UW Northwest is a full-service hospital for both inpatient and outpatient services, including Geropsychiatric Center (senior behavioral health), Neurosciences, Surgical Services, and Primary Care.

² Harborview campus was not determined to be the optimal location due to the desire to geographically diversify mental health services in the region (Harborview currently has the most psychiatry beds in the state). UW Medical Center – Montlake was not determined to be the optimal location because the ability to build the facility in the desired timeline could not be achieved due to the number and complexity of enabling projects required to relocate existing facilities and programs.

UW Medical Center—Northwest BHTF Project EIS Addendum



Source: Google Maps and EA Engineering, 2020



Figure 1-1
Vicinity Map

On the UW Northwest campus, the site in the northeast portion of the UW Northwest campus currently containing the D-Wing Administration Building has been identified as the optimal site for the BHTF Project (BHTF site); See **Figure 1-2** for an aerial photo indicating the BHTF site (D-Wing) and **Figure 1-3** for a map of the UW Medical Center – Northwest campus.

1.3 PREVIOUS ENVIRONMENTAL REVIEW

The *Northwest Medical Center and Hospital Draft EIS* was issued by the City of Seattle in April 1990, and the Final EIS was issued in February 1991. The EIS analyzes environmental conditions associated with four alternatives for the approximately 33-acre Northwest Medical Center and Hospital campus. Alternatives analyzed in the EIS include: Option A – Highest level of Development, Option B – Medium level of Development, Option C – Lowest Level of Development, and the No Action Alternative.

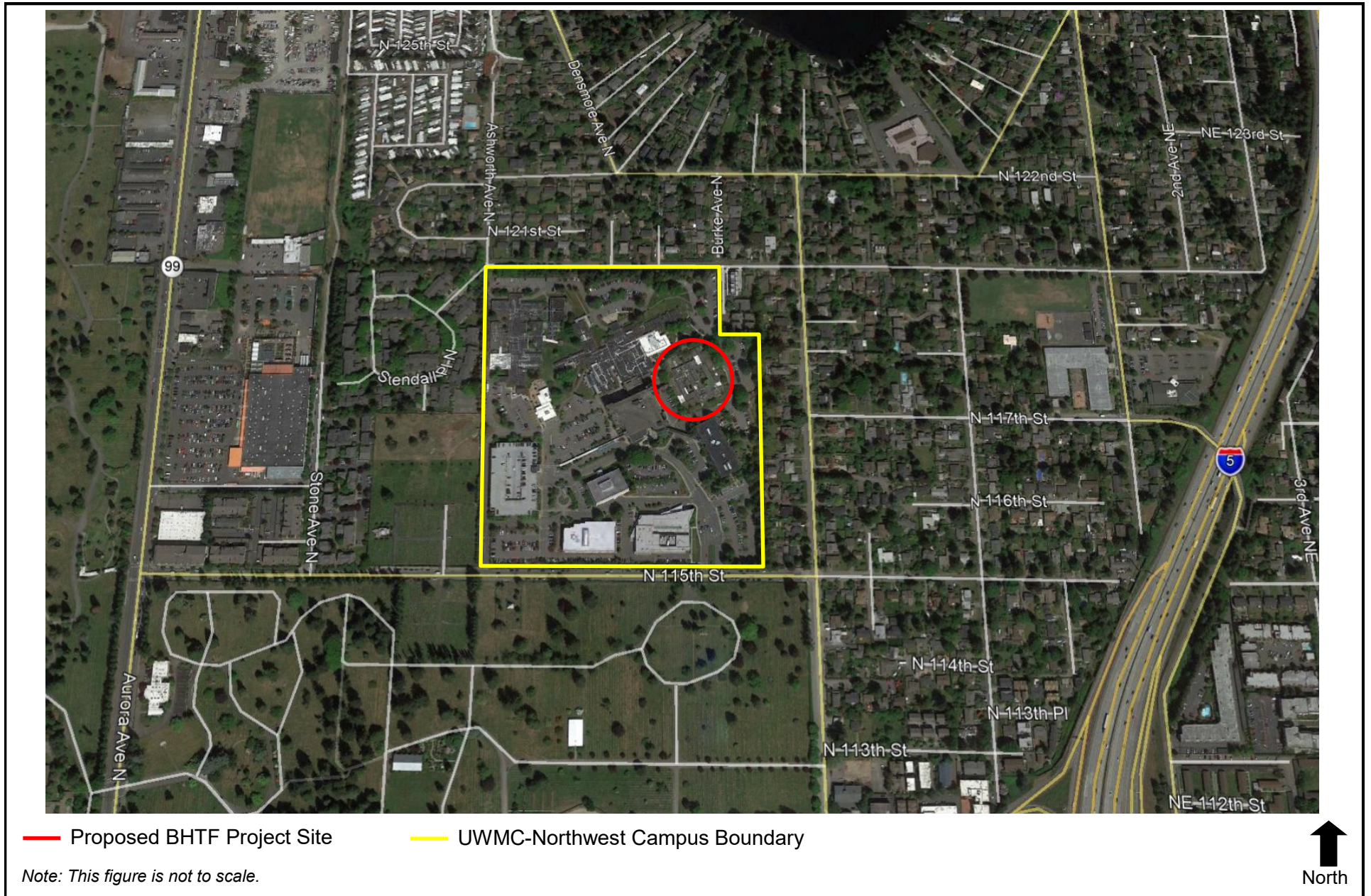
The 1991 *Northwest Medical Center and Hospital EIS* contains environmental analysis relative to the following elements of the environment:

- Construction
- Noise
- Land Use
- Relationship to Plans & Policies
- Glare & Shadows
- Aesthetics
- Transportation
- Solid Waste
- Water/Stormwater
- Water Supply

Table 1-1 lists the level of new development assumed under the three development alternatives (Options A, B and C) analyzed in the 1991 EIS, as well as the maximum zoning heights for the proposed BHTF site.

Subsequent to issuance of the 1991 EIS, the City of Seattle adopted the Major Institution Master Plan (Master Plan) for the campus. The Master Plan establishes development standards, as well as the general location and size of development. The Master Plan includes a level of development on the campus that is generally consistent with 1991 EIS Option C.

UW Medical Center—Northwest BHTF Project EIS Addendum



Source: Google Maps and EA Engineering, 2020



Figure 1-2
Aerial Map

UW Medical Center—Northwest BHTF Project EIS Addendum



Source: UW Medical Center, 2020



Figure 1-3

UW Medical Center Northwest Campus Map

**TABLE 1-1
1991 EIS DEVELOPMENT ASSUMPTIONS**

	1991 EIS Option A	1991 EIS Option B	1991 EIS Option C
Total Campus Acreage	33	33	33
Existing 1991 GSF¹	516,891	516,891	516,891
New GSF²	1,026,585 ³	833,185 ⁴	741,885 ⁵
Total Campus GSF with New²	1,543,476	1,350,076	1,258,776
Maximum Building Height for the BHTF Site	105 feet	105 feet	105 feet

¹Existing includes GSF associated with West Campus Office Building

²Total new GSF includes space associated with structured parking.

³ New space includes 512,585 gsf medical/office and 514,000 structured parking.

⁴ New space includes 375,185 gsf medical/office and 458,000 structured parking.

⁵ New space includes 323,885 gsf medical/office and 418,000 structured parking.

1.4 EXISTING SITE CONDITIONS

UW Medical Center - Northwest Campus

Northwest Hospital was established in the 1940s by the Community Memorial Hospital Association on an approximately 33-acre site in north Seattle. Northwest Hospital opened in 1960 with 113 acute care beds. The number of licensed beds increased in 1969 with the addition of the E-Wing and increased again in 1984 with the acquisition of Northgate Hospital. Currently, the total licensed bed capacity is 281. On January 1, 2020 Northwest Hospital became UW Medical Center – Northwest (UW Northwest), a third campus of the University of Washington Medical Center.

The UW Northwest campus currently contains approximately 581,800 square feet in building space including the Acute-Care Hospital (A-Wing), Surgical Services/Childbirth (B-Wing), Administration Building (D-Wing), E-Wing Building, SCCA Proton Therapy Building, and three medical office buildings. A structured parking garage, surface parking lots, paved sidewalks and walkways, and interior and perimeter landscaping comprise the remainder of the campus area (refer to **Figure 1-3**).

The main vehicular entrance to the UW Northwest campus is provided from North 115th Street, with emergency/secondary access from North 120th Street.³

BHTF Site

The site in the northeast portion of the UW Northwest campus which currently contains the D-Wing Administration Building, has been identified as the optimal site for the BHTF Project (BHTF site); Refer to Figure 1-2.

The D-Wing Administration Building is an approximately 30,800-square foot single-story building with a partial basement constructed in 1960. The wood frame building was originally intended to be used for convalescent care and was converted to administrative offices in the early 2000s. The site also contains a circular-entry driveway, paved outdoor patio, building perimeter landscaping, and lawn area. Refer to **Appendix B** of this EIS Addendum for additional detail on the D-Wing Building.

Surrounding Area

The area surrounding the UW Medical Center – Northwest campus is primarily residential and open space (cemetery) in character. One- to two-story single family residences comprise the majority of the uses to the north and east of the campus. Two-story multifamily residences (Stendall Place) are located to the west of the campus. Residences in the site vicinity are surrounded by existing mature landscaping and trees. Existing cemeteries are also located to the west and south of the campus, including the Bikur Cholim Cemetery to the west, the Orthodox Brotherly Cemetery of Saint Nicholas to the south and the Evergreen Washelli Cemetery to the southwest.

1.5 Description of the BHTF Project

Introduction

The proposed BHTF is intended to provide innovative and integrated behavioral health care and teaching services to address the shortage of such services in the state of Washington. The appropriation by the Washington State legislature stipulates that the facility must provide a minimum of 150 beds, including a minimum of 50 long-term civil commitment beds, 50 geriatric /voluntary psychiatric beds, and 50 to 60 licensed medical/surgery beds with the capacity of treat patients with psychiatric diagnoses and/or substance use disorders.

³ The emergency/secondary access from North 120th Street is controlled by a gate.

The proposed BHTF would be located in the northeast portion of the UW Northwest campus, on a site currently containing the D-Wing Administrative Building and associated driveway, walkways and landscaping.

Project Goals

The Washington State legislature and the University of Washington identified the following goals for the BHTF Project.

- Provide innovative and integrated care to help patients with long-term behavioral health recovery;
- Provide alternatives to existing long-term (90/180-day) civil commitment beds at Western State;
- Provide a training site for the next generation of health and behavioral health care providers for Washington state;
- Support the first of its kind 24/7 365 day a year tele-psych consultation program; and,
- Complete a behavioral healthcare continuum by providing long-term care beds, a teaching focus on modern behavioral health techniques and tele-psychiatric services across the state.

Building Concept

The proposed BHTF Project is intended to accommodate the integrated behavioral health care and teaching necessary to help meet the mental health care needs of the state of Washington, as identified by the Washington State legislature.

Although the specific design of the building is not defined at this point in the pre-design process, the primary program elements of the building are listed below.

- Provide approximately 210,000 square feet in overall above grade building space.
- Provide up to seven floors including approximately:
 - One floor for Outpatient/Training
 - One floor for Kitchen/Dining/Visitor Amenities
 - Two floors for Involuntary Psych
 - One floor for Voluntary Psych and Geriatric Psych
 - Two floors for Medical/Surgical Inpatient Units
- Provide space for support functions below the building.

- Provide driveway and sidewalks to provide adequate access that integrates with the UW Medical Center – Northwest campus.
- Provide perimeter landscaping consistent with the Master Plan and the UW Medical Center – Northwest campus

For the purpose of providing a conservative depiction of building height and bulk for analysis in this EIS Addendum, the Master Plan zoning envelope for the BHTF site is extruded; the eventual BHTF building design would be within the building envelope depicted (i.e. the proposed building would be smaller than the depicted zoning envelope), thus, the zoning envelope represents a conservative worst case depiction. See **Figure 1-4** for an illustration of the Master Plan zoning building envelope on the BHTF site.

1.6 Relationship to Previous Environmental Review

This document is an addendum to the *Northwest Medical Center EIS* (February 1991), consistent with SEPA Rules WAC 197-11-706, and the University of Washington’s Rules implementing SEPA, which states that an “*addendum is an environmental document used to provide additional information or analysis that does not substantially change the analysis of significant impacts and alternatives in the existing environmental document*”. Refer to **Chapter 2** of this EIS Addendum for a comparison of environmental conditions and impacts identified in the EIS with those anticipated under the proposal.

As exhibited in **Table 1-2** below, the level of development under the proposal, combined with the existing Northwest Medical Center development, would be within the range of development analyzed in the EIS and that an EIS Addendum is appropriate to comply with SEPA requirements.

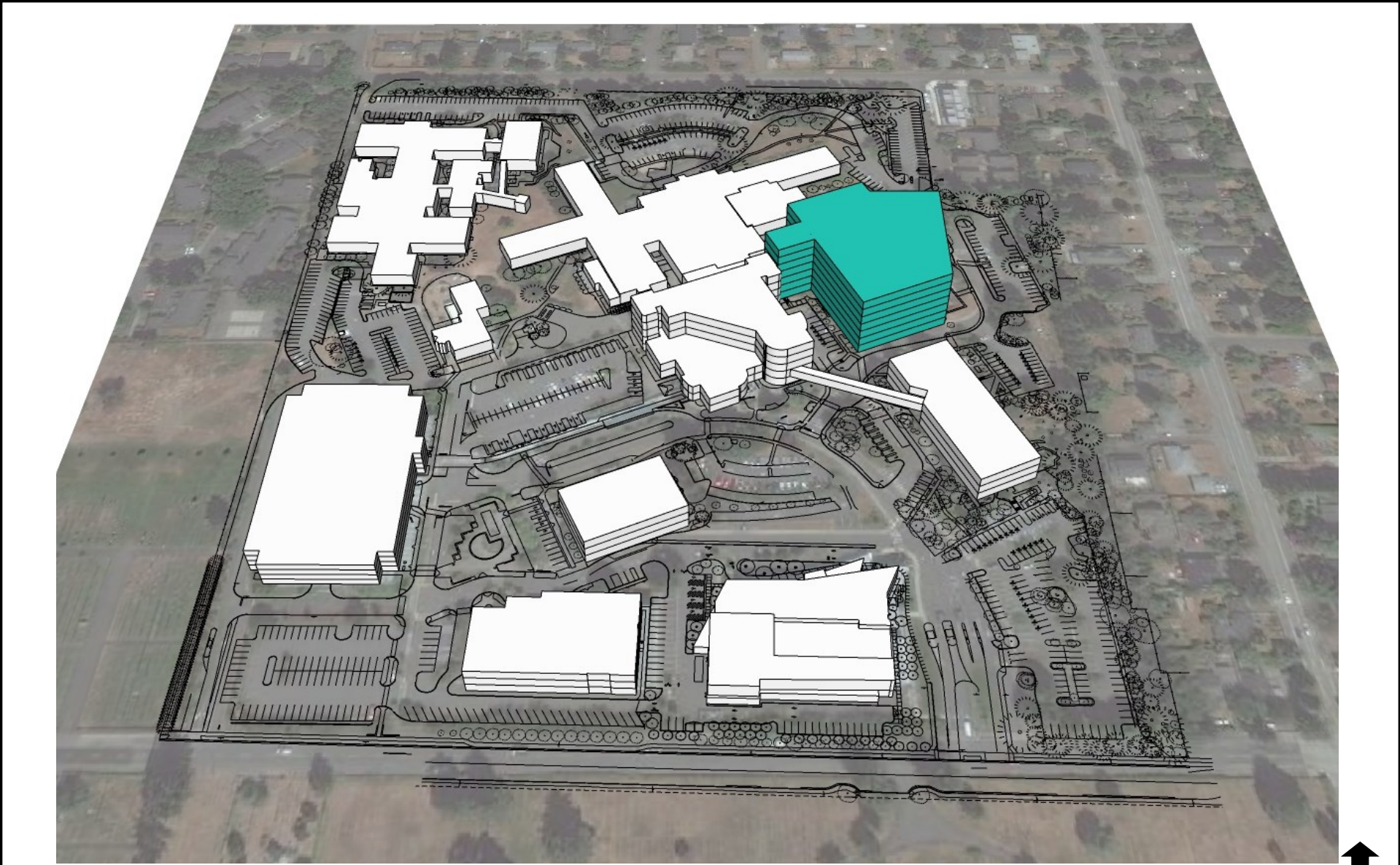
**TABLE 1-2
COMPARISON OF PROPOSED BHTF TO 1991 EIS DEVELOPMENT ASSUMPTIONS**

	1991 EIS Option A	1991 EIS Option B	1991 EIS Option C (Approved Master Plan)	With Proposed BHTF
Total Campus Acreage	33	33	33	33
Total Campus Max. GSF¹	1,543,476	1,350,076	1,258,776	1,258,776
Maximum Height at BHTF Site	105 Feet	105 Feet	105 Feet	105 Feet

¹ Total GSF includes space associated with structured parking.

² Site acreage assumed for the Specialty Center I site (D-Wing) in the 1991 EIS.

UW Medical Center—Northwest BHTF Project
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Note: This figure is not to scale.



Source: Ankrom Moisan, 2020.



Figure 1-4
Site Plan

As shown in Chapter 2 of this EIS Addendum, impacts under the proposed BHTF Project are similar to those identified in the 1991 EIS.

Parking

The campus includes a total of 1,618 parking stalls across 16 surface lots and a multi-level above grade garage. The existing parking supply is sufficient to accommodate parking associated with the proposed BHTF Project, and no additional parking is required (see **Section 2.8 – Transportation** of this EIS Addendum for detail on parking conditions).

However, to provide greater on-campus parking opportunities in the vicinity of the proposed BHTF program, approximately 80 additional surface parking stalls is considered. Although specific location(s) of additional parking is not defined, surface lots B, C, D, E and/or F could be considered for expansion.

Existing parking lots would be reconfigured and optimized as much as possible to obtain additional parking stalls but also would increase the amount impervious surface, reconfigure existing or add parking lot lighting, and likely result in removal of existing landscaping/trees. Construction under this additional parking option would avoid impacting exceptional trees (SMC 25.11) and any landscaping removed would be replaced on campus consistent with Master Plan guidelines. The east and north native vegetation perimeter buffers would be preserved to the maximum extent feasible, with replacement vegetation provided in the perimeter buffers as necessary⁴.

1.7 Relationship to Major Institution Master Plan

Development on the UW Northwest campus is controlled by the Final Adopted Major Institutional Master Plan (1991 Master Plan) adopted by the City of Seattle in November 1991 (Ordinance 115914). The Master Plan establishes development standards, as well as the general location and the size of future development. The Master Plan includes a level of development on the campus that is generally consistent with EIS Option C.

Considering development on the UWMC-Northwest campus completed under the Master Plan (i.e. subsequent to July 1991), along with building demolition since adoption of the Master Plan, the total amount of building gsf currently available to accommodate new development on the campus is 182,775 gsf. With proposed demolition of the 30,819 gsf D-

⁴ Note that as an action independent of the proposed BHTF project, UW Medical Center - Northwest will assess the health of the mature trees along the campus boundary to maintain safety at adjacent properties and long-term landscape buffer.

Wing building, the total building gsf available under the Master Plan for the proposed BHTF is approximately 213,594.

As described in Chapter 2 of this EIS Addendum, impacts under the proposed BHTF Project are no greater than those identified in the *Northwest Hospital EIS*.

**Comparison of Existing
Conditions, Environmental
Impacts and Mitigation
Measures**

2.1 AIR QUALITY

This section of the EIS Addendum provides a discussion on existing air quality conditions, compares the probable significant impacts under the proposed BHTF Project on air quality to those conditions identified in the 1991 EIS, indicates the applicability of mitigation measures identified in the 1991 EIS, and identifies applicable “best management practices” incorporated into the project design or new mitigation measures (if any).

2.1.1 Affected Environment

1991 EIS

At the time of publication of the 1991 EIS the Northgate area, including the Northwest Hospital campus (campus) was listed as an area of non-attainment for the carbon monoxide (CO) air quality standards. This was primarily due to the high volumes of vehicle traffic passing through the area on Interstate-5 (I-5) and frequent congestion at freeway ramps and near Northgate Mall. Air quality levels improved greatly as one moves away from the freeway and Northgate Way and therefore, it was anticipated that violations of CO standards were unlikely to occur at the campus itself.

Air quality emissions from the campus are indicated as being primarily from two sources: vehicles traveling to and from the site and building emissions, particularly emissions from the campus incineration system. Existing air quality levels were analyzed in the 1991 EIS for three intersections/roadway segments in the vicinity of the campus¹. Higher CO levels were documented in areas adjacent to the intersections but these are not considered areas where people are likely to spend substantial amounts of time and therefore would not represent a significant air quality health threat.

Incineration systems are generally used by hospitals for the safe disposal of solid waste that may have been exposed to bacteria contamination and contributes airborne particulates and chlorides as part of its usage. At the time of publication of the 1991 EIS, the campus was under a regulatory order from Puget Sound Clean Air Agency (PSCAA) to reduce chloride emissions from the incineration system. In accordance with this order, the campus eliminated the use of polyvinyl chloride plastics and planned to replace the existing incinerator with an improved design or remove the system in its entirety.

¹ The intersections of Aurora Ave, N/115th Street, Meridian Ave. north and south of Northgate Way, and 130th Street in the vicinity of 5th Avenue were analyzed. The 1991 EIS indicates that higher CO levels were likely caused by high traffic volumes and long delays but CO concentrations decrease markedly with increasing distance from the roadways.

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Since the publication of the 1991 EIS, air quality conditions in the campus site vicinity and the overall state in general have improved due to work from the Washington State Department of Ecology and local clean air agencies such as the Puget Sound Clean Air Agency. Currently, all areas of Washington State meet the National Ambient Air Quality Standards (NAAQS) that are set by the United States Environmental Protection Agency (EPA).

Air quality emission sources from the campus continue to primarily be from vehicles traveling to and from the site and building emissions. Since the 1991 EIS, development has occurred on the campus which results in an associated increase in vehicle emissions and building emissions. However, as stated above, all areas currently meet the NAAQS for air quality. In addition, the campus incinerator has been removed and all associated emissions from its operation are no longer occurring on campus.

2.1.2 Environmental Impacts

1991 EIS

Development on the campus as part of the Master Plan was anticipated to result in increased vehicle trips to the campus which could result in an increase in vehicle emissions. As part of the 1991 EIS, air quality modeling was completed for the future development scenario under the Master Plan, as well as a No Action Alternative to illustrate the future conditions without development on the campus. Modeling concentrations for the year 2000 without development on the campus show improvements in the CO levels and air quality at all three intersections that were studied near the campus. This improvement was due to reduced emissions from new cars. Development under the Master Plan was anticipated to slightly increase those CO levels; however, these levels would be similar to the No Action Alternative and would be below the existing condition levels that were measured in the 1991 EIS. With the implementation of mitigation measures that were identified in the 1991 EIS, CO levels were anticipated to be reduced even further.

Development under the Master Plan as analyzed in the 1991 EIS would increase the amount of burnable infectious wastes as the hospital's patient load increases. However, in complying with the regulatory order to decrease chloride emissions (including replacement of the existing incinerator), all emissions would be reduced to levels that are substantially lower than the present conditions at the time of the 1991 EIS. In addition, if at some point the incinerator is taken out of service and all burnable infectious waste is sent to a landfill or remote processing location then all chloride emissions would cease.

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The development of the proposed BHTF Project would increase the amount of building space on the campus with the addition of up to approximately 210,000 square feet of new building space. The new building would be anticipated generate an associated increase in construction-related emissions, vehicle-related emissions and building emissions which would represent an increase in emissions when compared to the existing conditions. However, development of the proposed BHTF Project would be within the range of development analyzed in the 1991 EIS and with compliance with existing code regulations and applicable mitigation measures, no additional significant air quality-related impacts would be anticipated.

The reconfiguration of existing parking lots to provide greater on-campus parking opportunities in the vicinity of the BHTF would generate some construction-related emissions. The parking would not be anticipated to generate vehicle trips to the campus and no additional significant air quality-related impacts would be anticipated.

Although not analyzed in the 1991 EIS, another consideration with regard to air quality relates to Greenhouse Gas Emissions (GHG). In order to evaluate climate change impacts of the proposed project relative to the requirements of the City of Seattle, a Greenhouse Gas Emissions Worksheet has been prepared for the project (see **Appendix C**). Although GHG emissions result in global rather than localized impacts, this Worksheet estimates the emissions from the following sources: embodied emissions; energy-related emissions; and, transportation-related emissions. In total, the estimated lifespan emissions for the proposed BHTF project would be approximately 537,300 MTCO_{2e}. Based on an assumed building life of 62.5 years, the proposed building would be estimated to generate approximately 8,600 MTCO_{2e} annually. This level is under Washington State Department of Ecology's threshold for potential significant GHG emissions. Therefore, the proposed project would not be anticipated to generate a significant amount of GHG emissions.

The optional reconfiguration of existing parking lots would not be anticipated to generate a significant amount of GHG emissions.

2.1.3 Conclusions

The potential air quality-related impacts from the proposed BHTF Project would be similar to those identified in the 1991 EIS, and no additional significant impacts would be anticipated.

² MTCO_{2e} is defined as Metric Ton Carbon Dioxide Equivalent and is a standard measure of amount of CO₂ emissions reduced or sequestered.

2.1.4 Mitigation Measures

Mitigation measures for potential air quality-related impacts are identified in the 1991 EIS and are applicable to the proposed BHTF Project. Because no additional significant air quality impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

2.1.5 Significant Unavoidable Adverse Impacts

As identified in the 1991 EIS, development on the campus (such as the proposed BHTF Project) would result in increased emissions; however, with the implementation of mitigation measures, these impacts would be minimized. No additional significant unavoidable adverse air quality-related impacts would be anticipated.

2.2 ENERGY

This section of the EIS Addendum provides a discussion on existing energy conditions, compares the probable significant impacts under the proposed BHTF Project on energy to those conditions identified in the 1991 EIS, indicates the applicability of mitigation measures identified in the 1991 EIS, and identifies applicable “best management practices” incorporated into the project design or new mitigation measures (if any).

2.2.1 Affected Environment

1991 EIS

At the time of publication of the 1991 EIS, the Northwest Hospital campus (campus) utilized energy (primarily electricity and natural gas) for lighting, heating and cooling, potable water heating, and process uses. A limited amount of oil was used for emergency boiler and engine/generator fuel. Existing energy usage for the campus was calculated in the 1991 EIS and included approximately 45,100 Millions of British Thermal Units (MBtu) of natural gas and approximately 17,000 Megawatt Hours (MWh) of electricity. In addition, energy usage across the campus varied by building types. Older hospital wings (e.g., B-Wing, C-Wing and D-Wing) were built in the 1960s and were not as energy efficient as more recently constructed buildings on the campus (e.g., A-Wing, Medical Office Building, and Medical Arts Building).

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Electrical service for the campus continues to be provided by Seattle City Light and natural gas service is provided by Puget Sound Energy. Since the publication of the 1991 EIS, energy usage on the campus has continued to increase with the development of new buildings on campus including the Seattle Cancer Care Alliance Proton Therapy Building, the McMurray Medical Building, and the West Parking Garage. While the overall energy use on campus has increased due to new development that is consistent with the Master Plan, some existing buildings have also become more energy efficient due to renovations that have occurred since the 1991 EIS.

2.2.2 Environmental Impacts

1991 EIS

Development on the campus as part of the Master Plan was anticipated to result in increased energy consumption on the campus as a result of new development, in particular new hospital spaces because hospitals are generally large consumers of energy. Lower increases in energy would be anticipated to result from new office space and parking garages on the campus. As one of the proposed hospital buildings under the Master Plan, a conceptual building on the Specialty Center I site (the site of the proposed BHTF) was anticipated to be one of the larger building consumers of energy on the campus. Mitigation measures were identified in the 1991 EIS to minimize potential impacts from increased energy usage, including compliance with the City of Seattle Energy Code.

EIS Addendum - Proposed BHTF Project

The development of the proposed BHTF Project would increase the amount of building space on the campus with the addition of up to approximately 210,000 square feet of new building space. The new building would be anticipated generate an associated increase in energy usage, including electricity and natural gas, which would represent an increase in when compared to the existing conditions. However, development of the proposed BHTF Project would be within the range of overall development and assumed energy usage for the campus that was analyzed in the 1991 EIS and with compliance with existing code regulations and applicable mitigation measures, no significant energy-related impacts would be anticipated. Development of the BHTF would comply with the City of Seattle Energy Code and energy efficiency measures could also be implemented as feasible to further reduce energy consumption from the proposed BHTF Project.

Other than the potential for new lighting, the reconfiguration of existing surface lots would not increase energy usage. Significant impacts to energy under the reconfiguration of existing surface lots is not anticipated.

2.2.3 Conclusions

The potential energy-related impacts from the proposed BHTF Project would be similar to those identified in the 1991 EIS, and no additional significant impacts would be anticipated.

2.2.4 Mitigation Measures

Mitigation measures for potential energy-related impacts are identified in the 1991 EIS and are applicable to the proposed BHTF Project. Because no additional significant energy impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

2.2.5 Significant Unavoidable Adverse Impacts

As identified in the 1991 EIS, development on the campus (such as the proposed BHTF Project) would result in increased energy usage; however, with the implementation of mitigation measures, these impacts would be minimized. No additional significant unavoidable adverse energy-related impacts would be anticipated.

2.3 CONSTRUCTION

This section of the EIS Addendum describes the applicable discussion from the 1991 EIS related to Construction and compares to conditions under the proposed BHTF Project.

2.3.1/2.3.2 Affected Environment/Environmental Impacts

1991 EIS

The construction section of the 1991 EIS referred the reader to the short-term impacts discussions in the Noise, Air Quality and Transportation sections of the 1991 EIS.

EIS Addendum - Proposed BHTF Project

Please refer to the Air Quality, Noise, and Transportation sections of this EIS Addendum for detail on construction impacts and comparison to conditions analyzed in the 1991 EIS.

2.3.3 Conclusions

The potential construction-related impacts from the proposed BHTF Project, and reconfiguration of existing surface parking lots, would be similar to those identified in the 1991 EIS, and significant impacts would not be anticipated.

2.3.4 Mitigation Measures

Mitigation measures for potential construction related impacts are identified in the 1991 EIS and are applicable to the proposed BHTF Project. Because no significant impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

2.3.5 Significant Unavoidable Adverse Impacts

As identified in the 1991 EIS, other than temporary increase in noise, air emissions, and traffic/parking no significant unavoidable adverse impacts related to construction are anticipated to occur as a result of the proposed BHTF Project.

2.4 NOISE

This section of the EIS Addendum provides a discussion on existing noise conditions, compares the probable significant impacts under the proposed BHTF project on noise conditions to those conditions identified in the 1991 EIS, indicates the applicability of mitigation measures identified in the 1991 EIS, and identifies applicable “best management practices” incorporated into the project design or new mitigation measures (if any).

2.4.1 Affected Environment

1991 EIS

The 1991 EIS indicates that noise affecting the Northwest Hospital campus (campus) and surrounding neighborhood is primarily caused by vehicular traffic, some of which is related to campus medical activities. The 1991 EIS indicates that those most affected by traffic noise reside along Meridian Avenue North, the closest arterial. Other sources of noise include campus heating/ventilation and mechanical equipment (HVAC), as well as emergency and delivery vehicles.

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Current noise conditions on and in the vicinity of the campus are generally similar to those described in the 1991 EIS. Compared to the campus described in the 1991 EIS, the types of noise sources on the campus are similar to those projected with implementation of the master plan over time.

2.4.2 Environmental Impacts

1991 EIS

The 1991 EIS indicates that typical noise sources associated with the campus would remain well within the daytime and nighttime limits set by the City of Seattle. Although noise associated with construction would exceed normal operating levels, noise during construction would comply with Seattle Municipal Code maximum sound levels for construction equipment (SMC 25.08.425).

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Similar to that described in the 1991 EIS, construction noise would be short-term in nature and would be the most noticeable noise generated by the BHTF Project. This includes noise

generated during demolition (D-Wing Administration Building), excavation and building construction, and noise associated with construction-related traffic (refer to Section 2.8, Transportation, of this EIS Addendum for detail). The Master Plan establishes development standards for the campus, including standards related to noise. Master Plan Condition 41 limits exterior construction activities to non-holiday weekdays between the hours of 7:30 AM and 6:30 PM. The UWMC-Northwest campus also follows quiet hours of 8:30 PM to 7:30 AM.

Operational noise associated with the proposed BHTF would generally consist of operation of HVAC equipment and general traffic noise. As described in the 1991 EIS, operational noise would be expected to remain within daytime/nighttime limits established by the City of Seattle.

Construction and operations of the reconfiguration of existing surface parking lots would be consistent with applicable Master Plan and City of Seattle requirements, and significant noise impacts would not be anticipated.

2.4.3 Conclusions

The potential noise-related impacts from the proposed BHTF Project would be similar to those identified in the 1991 EIS, and additional significant impacts would not be anticipated.

2.4.4 Mitigation Measures

Mitigation measures for potential noise-related impacts (construction noise) are identified in the 1991 EIS and are applicable to the proposed BHTF Project (refer to Section 3.8 – Transportation for mitigation related to construction traffic). Because no significant impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

2.4.5 Significant Unavoidable Adverse Impacts

As identified in the 1991 EIS, other than temporary increase in noise during construction, no significant unavoidable adverse impacts related to noise are anticipated to occur as a result of the proposed BHTF Project.

2.5 LAND USE

This section of the EIS Addendum provides a discussion on existing land use conditions, compares the probable significant impacts under the proposed BHTF Project on land use conditions to those conditions identified in the 1991 EIS, indicates the applicability of mitigation identified in the 1991 EIS, and identifies applicable “best management practices” incorporated into the project design or new mitigation measures (if any).

2.5.1 Affected Environment

1991 EIS

The 1991 EIS identifies the Northwest Hospital campus (campus) as being primarily in medical complex use, with medical hospital and medical office buildings, surface parking, drainage retention pond, and landscaped area. The buildings are generally brick, glass, and setback from adjacent streets. The most intensive level of development is in the center and south portions of the campus. The D-Wing Administration building is identified as being constructed in the mid-1960 and being consistent with the original buildings on campus.

Land uses adjacent to the site are identified as consisting of single-family residential to the north and east, with cemetery to the south and west. The Stendall Place Condominium is identified as bordering the northwest corner of the campus. The 1991 EIS describes two distinct commercial and manufacturing areas in the vicinity of the campus, including the area along Aurora Avenue North to the west and the area along Northgate Way to the southeast.

Underlying zoning on the campus and in the vicinity is identified as I1-L1, I4-L2 and I2-L1 on the campus, with SF 7200 to the north and east, PUD and L-3 to the west, and L-3 to the south.

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The current land use conditions on the UW Northwest campus are generally similar to those described in the 1991 EIS. Compared to the campus described in the 1991 EIS, the types of uses are similar (medical hospital and medical office) with an intensified level of campus development consistent with the type and level of development assumed in the 1991 EIS and Final Adopted Master Plan (Master Plan).

The site of the proposed BHTF Project currently contains the existing single-story D-Wing building which is generally constructed of brick and glass with associated driveways, sidewalks and landscaping, similar to other existing buildings on the campus.

The land use conditions of the surrounding area are also generally similar to those described in the 1991 EIS. One- to two-story single family residences comprise the majority of the uses to the north and east of the campus. Two-story multifamily residences (Stendall Place) are located to the west of the campus. Residences in the site vicinity are surrounded by existing mature landscaping and trees. As in 1991, cemeteries are located to the west and south of the campus, including the Bikur Cholim Cemetery to the west, the Orthodox Brotherly Cemetery of Saint Nicholas to the south and the Evergreen Washelli Cemetery to the southwest.

The level and type of commercial use along Aurora Avenue North to the west and along Northgate Way to the southeast are generally similar to 1991 conditions. The cemeteries to the south and southeast continue to provide a buffer between the campus and more intensive land uses along Aurora Avenue North and Northgate Way.

2.5.2 Environmental Impacts

1991 EIS

The 1991 EIS analyzed campus development under a range of alternatives (Options A, B and C), with the level of new campus development ranging from 1,026,585 square feet of new development (Option A) to 741,885 square feet of new development (Option C). The building heights on the campus would range from 37 feet to 105 feet. The proposed structures under the development options are described as being consistent with the scale and architectural style established by the existing A-Wing and Medical Office Building.

The Land Use analysis in the 1991 EIS indicated that under all Options, the level of development intensity on the campus would increase with the majority of the development occurring in the central and southern portions of the campus. Full development would result in a loss of greenery and pastoral tranquility, increased noise and traffic, increased glare and shadow on surrounding residences (particularly to the east and northeast of campus), and a more city-like environment.

EIS Addendum - Proposed BHTF Project

Similar to that discussed in the 1991 EIS, development of the proposed BHTF Project would result in redevelopment of the D-Wing Administration building site. Although the specific design of the BHTF building is not defined at this point in the pre-design process, the building height and bulk would be controlled by the standards of the Master Plan, including a maximum building height of 105 feet. For the purpose of providing a conservative depiction of building height and bulk for analysis in this EIS Addendum, the Master Plan zoning envelope for the BHTF site is extruded; the eventual BHTF building design would be within the building

envelope depicted, thus, the zoning envelope represents a conservative worst case depiction (see **Figure 1-4** for an illustration of the Master Plan zoning building envelope on the BHTF site). It is proposed that the BHTF building would be up to seven-stories tall and contain up to approximately 210,000 sq. ft. of building space and would easily be constructed within the zoning envelope (i.e. the proposed building would be smaller than the depicted zoning envelope).

The proposed BHTF is intended to meet goals of the Master Plan as summarized below:

- **Priority Development Goal** - *to give top priority to redevelopment and/or expansion of departments and services which are in substandard space or rapidly outgrowing their space.*

Discussion – The proposed BHTF is proposed to meet the State of Washington’s critical need for additional behavioral health services. The proposed BHTF would utilize the currently underutilized non-clinical D-Wing Building space.

- **Campus Aesthetics Goal** – *To preserve the feeling of openness, greenery and beauty which has been associated with NWH while permitting needed development to accommodate the expected growth.*

Discussion – The BHTF is proposed for a previously developed site (D-Wing Building) and would not result in the conversion of existing open space. In addition, the proposal would include new landscaping consistent with Master Plan standards and existing landscaping on campus.

- **Hospital Functional Efficiencies Goal** – *To integrate closely related activities, paying special attention to the sequential flow of services, to achieve maximum functional efficiencies and effectiveness.*

Discussion – The proposed BHTF site (D-Wing Building) encourages maximum functional efficiencies by being located in close proximity to the main hospital building and Emergency Department.

- **Residential Sensitivity Goal** – *To develop a facility plan which is sensitive to the residential nature of the surrounding community.*

Discussion – Sensitivity to the residential nature of the surrounding community is prioritized through building siting, tree retention in the setback, building orientation, design concept, and landscaping.

In addition, the proposed BHTF Project is intended to be consistent with Master Plan Development Standards related to square footage of building development, building height, building setbacks, and landscaped buffers.

As described in the 1991 EIS, development of the proposed BHTF Project on the D-Wing site would contribute to the intensification of medical facilities on the campus. Development of the seven-story proposed building would change site character from the existing single-story D-Wing building to reflect increased building density and building height on the UW Northwest campus. While the proposed BHTF building would be larger than the conceptual building assumed for the Specialty Center I that was illustrated in the 1991 EIS, the design of the building and proposed building materials would be intended to be consistent with the character of the existing campus buildings and consistent with Master Plan design guidance. In addition, the proposed project would maintain a 180-foot setback from the eastern campus boundary and provide perimeter landscaping that would be consistent with Master Plan and the UW Northwest campus (see **Figure 2.5-1** for an illustration of the BHTF site height limit and setback from the eastern campus boundary).

The reconfiguration of existing surface parking lots to provide greater on-campus parking opportunities in the vicinity of the BHTF program would increase the amount of built area on campus (impervious surface). Consistent with Master Plan goals, the increase in parking opportunities would retain existing vegetation to the maximum extent feasible, replace removed vegetation with new vegetation, and would increase efficiencies by locating new parking in proximity to the proposed BHTF.

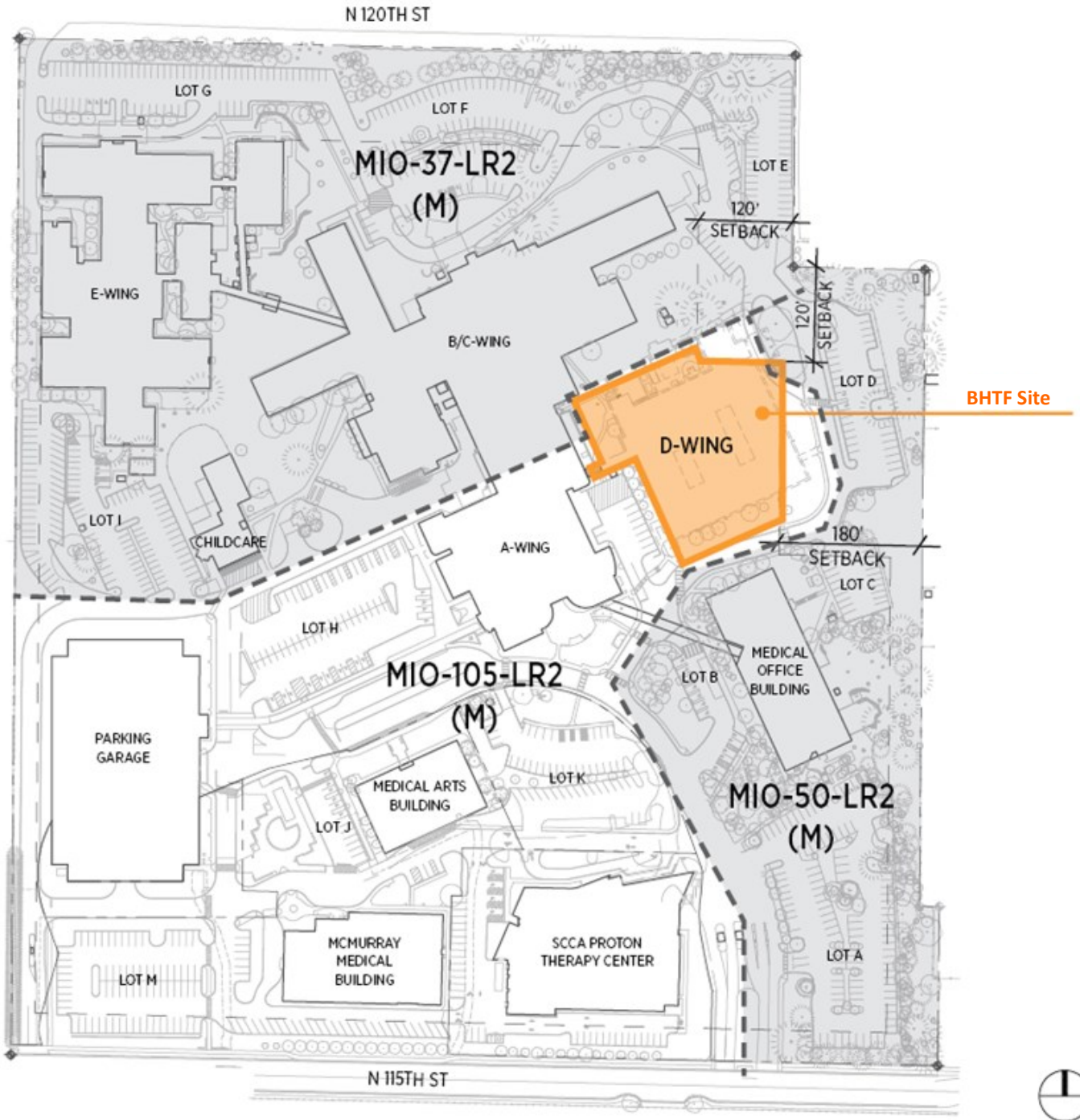
2.5.3 Conclusions

In general, the overall level of development on the campus under the proposed BHTF Project would be similar to or less than the overall level of development analyzed in the 1991 EIS, and the potential for land use-related impacts under the proposed BHTF Project would be similar to those identified in the 1991 EIS. With implementation of the mitigation measures identified in the 1991 EIS, no significant land use impacts are anticipated.

2.5.4 Mitigation Measures

Mitigation measures for potential land use related impacts are identified in the 1991 EIS and are applicable to the proposed BHTF Project. Because the proposed BHTF would be developed consistent with the Master Plan guidelines and no significant impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

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Note: This figure is not to scale.

Source: University of Washington, 2020.

Figure 2.5-1
Existing Zoning Map

2.5.5 Significant Unavoidable Adverse Impacts

As identified in the 1991 EIS, other than the overall increase in campus building intensity, no significant unavoidable adverse impacts related to land use are anticipated to occur as a result of the proposed BHTF Project.

2.6 LIGHT, GLARE AND SHADOWS

This section of the EIS Addendum provides a discussion on existing light, glare and shadow conditions, compares the probable significant impacts under the proposed BHTF Project on light, glare and shadow conditions to those conditions identified in the 1991 EIS, indicates the applicability of mitigation measures identified in the 1991 EIS, and identifies applicable “best management practices” incorporated into the project design or new mitigation measures (if any).

2.6.1 Affected Environment

1991 EIS

The 1991 EIS identifies light, glare and shadow conditions on the Northwest Hospital campus (campus) as being typical of a developed, urban environment. Sources of light on the campus include existing medical buildings, lighted parking areas and access driveways, and vehicle headlights traveling to and from the campus.

The existing campus buildings utilize low reflective glazing (approximately 6 – 15 percent) and the position of the buildings on the campus, combined with the existing landscaping and trees, minimize the visual impact of glare to the surrounding areas.

Shadows from the existing campus buildings do not typically extend beyond the campus boundaries and do not affect any public parks or gathering areas. Existing mature trees on and adjacent to the campus also contribute to the shadows in the site area.

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The current lighting sources on the campus are generally similar to those described in the 1991 EIS. The sources of light and glare on the campus continue to be comprised of existing buildings, parking areas and access driveways, and vehicle headlights traveling to and from the campus.

As described in the 1991 EIS, shadows from existing buildings on the campus do not typically extend beyond the campus boundaries and do not affect any public parks or gathering areas. Glare from existing building can cast to adjacent properties, primarily during early morning hours when the sun’s angle is low.

2.6.2 Environmental Impacts

1991 EIS

Light

The 1991 EIS indicates that development under the Master Plan would result in additional site lighting on the campus from new building development, parking areas, and pedestrian walkway areas. Some spill-over lighting would occur from the campus buildings into adjacent neighborhood areas.

Glare

Development on the campus under the Master Plan would create potential glare impacts on the residential uses to the north and east of the campus. In particular, the conceptual building development assumptions for the Specialty Center I site¹ would result in reflected glare that would extend beyond the campus boundaries and on to properties to the east of campus. Reflected glare to off-site areas would generally occur during early mornings when the sun is at its lowest angle. Mitigation measures for potential glare impacts were identified in the 1991 EIS, including measures related to building glazing and the planting of additional landscaping and trees along the campus boundaries.

Shadows

Potential shadow impacts from development under the Master Plan were also analyzed in the 1991 EIS. Calculations were made to determine the degree of shadow impact during the winter as a worst-case scenario. Based on the conceptual building development assumptions in the 1991 EIS for the Specialty Center I site¹, shadows from the building would extend beyond the campus boundary and increase the amount and extent of shade on existing residences to the northwest in the mornings and to the east and northeast of the campus in the afternoons. The extent of the shadows would be greatest during winter in the afternoon and evening hours.

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Light

Similar to the 1991 EIS, development of the BHTF Project would result in additional lighting on the site from the proposed building and associated site lighting (e.g., pedestrian safety lighting, etc.). Light sources from the BHTF Project would be similar to those analyzed in the

¹ The 1991 EIS included a development concept for the Specialty Center I site reflecting proposed development standards and height limit.

1991 EIS, including interior and exterior building lighting, pedestrian walkway lighting, and vehicular headlights. In addition, due to the site's location near the eastern campus boundary, there is the potential for some light spillage to neighboring properties. As identified in the 1991 EIS, the increase in potential light spillage could be minimized by the use of directional shields and other lighting design measures. In addition, landscaping installed along the eastern perimeter of the campus subsequent to the 1991 EIS has matured and provides additional screening between the proposed BHTF and surrounding uses. No additional impacts from lighting would be anticipated.

Reconfiguration of existing surface lots would include the reconfiguration of existing parking lot lighting or addition of new parking lot lighting. Any increase in the potential for light spillage to neighboring properties would be minimized by the use of directional shields and other lighting design measures, as well as the retained mature landscaping along the campus perimeter. No significant lighting impacts associated with the parking would be anticipated.

Glare

Similar to the 1991 EIS, development of the proposed BHTF Project would result in the potential for glare to be cast off campus to the north and east. As described in the 1991 EIS, reflected glare to off-campus areas would generally occur during early mornings when the sun is at its lowest angle².

Existing mature trees along the eastern boundary of the site, as well as existing buildings on the campus would block a large portion of the glare that could be generated by the building. As a result, it is anticipated that glare generated by the proposed BHTF project would be minimized by existing landscaping/mature trees and existing buildings that would serve as a buffer between the building and surrounding uses. In addition, mitigation measures for potential glare impacts that were identified in the 1991 EIS, including measures related to building glazing and the planting of additional landscaping along the campus boundaries would help to further minimize potential glare from the building. Therefore, it is anticipated that the proposed BHTF Project would not result in any significant glare-related impacts.

The optional reconfiguration of parking would not result in additional vehicles on campus, although vehicles could be located in areas that do not currently contain parking. Any glare from vehicles under the reconfigured parking option would be similar to existing conditions, and retained and new landscaping would minimize the potential for glare to be cast beyond the campus. Significant glare impacts under the optional reconfiguration of parking would not be anticipated.

² Because the glare diagrams presented in the 1991 EIS utilized a methodology not consistent with current standards and current City of Seattle policy recommend glare diagrams only for proposals where glare can be cast to major arterials or freeways, glare diagrams are not appropriate and were not prepared for this EIS Addendum.

Shadows

As noted in the 1991 EIS, shadow diagrams were completed to determine the extent of shadows that could occur with development of the proposed BHTF Project. As noted previously in this section, for the purpose of providing a conservative analysis in this EIS Addendum, the Master Plan zoning envelope for the BHTF site is extruded. The eventual BHTF building design would be within the building envelope depicted (i.e. the proposed building would be smaller than the depicted zoning envelope), thus, the zoning envelope represents a conservative worst-case depiction for potential shadows. Similar to the analysis in the 1991 EIS, shadows from the proposed BHTF Project would be the greatest in the winter due to the low angle of the sun (see **Figure 2.6-1** for the shadow diagrams for the BHTF Project).

During the morning hours (9 AM), shadows from the building envelope extend to the northwest and shade existing buildings, parking areas and vehicle access lanes on the campus. Shadows from the building envelope also extend beyond the campus boundaries toward portions of N 120th Street and portions of single family residences adjacent to N 120th Street. During the mid-day hours (12 PM), shadows from the building envelope extend to the north across portions of existing buildings, parking areas and vehicle access lanes; shadows do not extend beyond the campus boundaries during this time period. In the afternoon (3 PM), shadows from the building envelope extend to the northeast across existing parking areas and vehicle access lanes on campus and extend beyond the campus boundaries. No public parks would be affected by shadows from the building envelope. It is anticipated that shadows from the proposed BHTF Project would be similar to those analyzed in the 1991 EIS and no additional impacts would be anticipated.

2.6.3 Conclusions

The potential light, glare and shadow-related impacts from the proposed BHTF Project would be similar to those identified in the 1991 EIS, and significant impacts would not be anticipated.

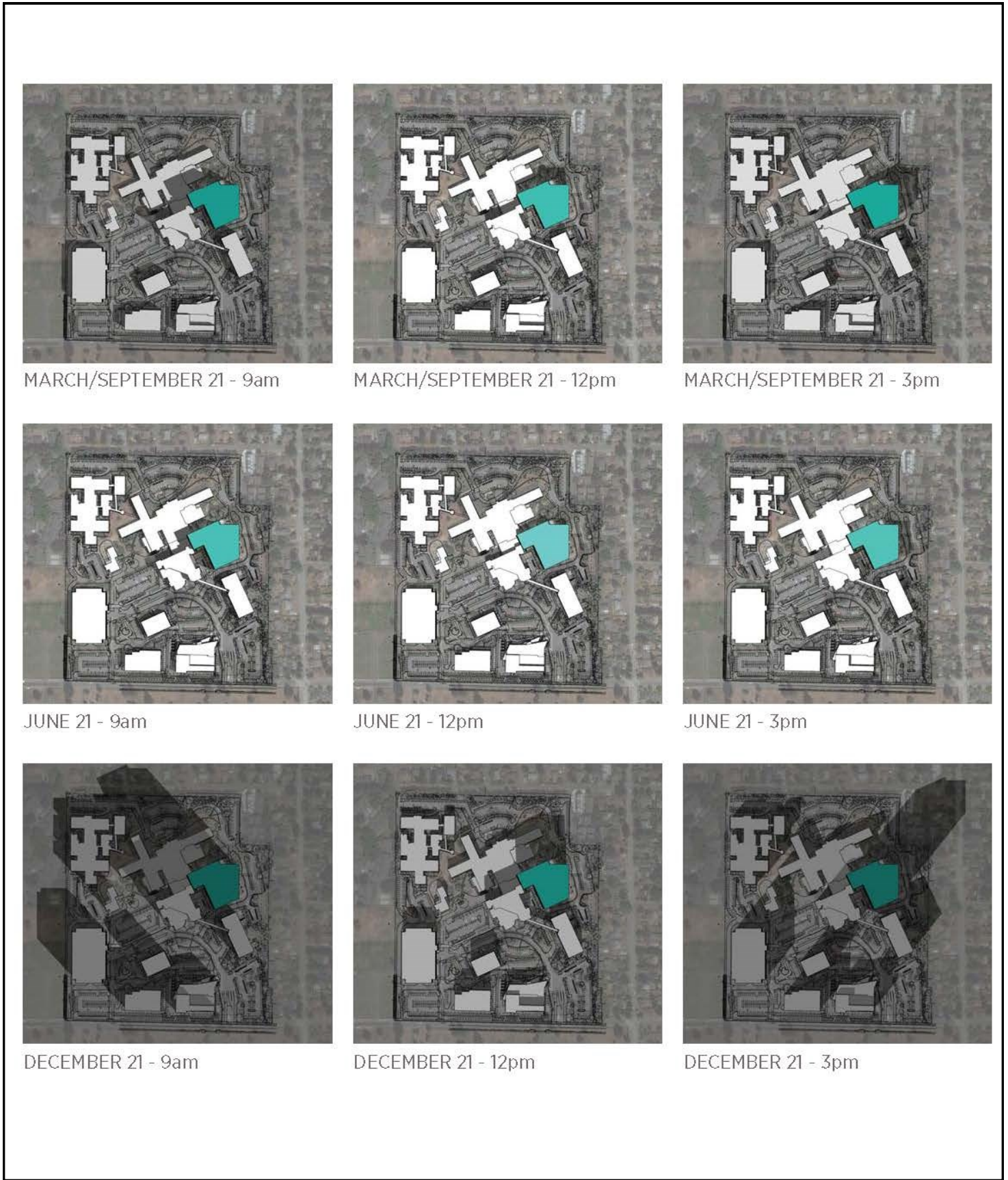
2.6.4 Mitigation Measures

Mitigation measures for potential light, glare and shadow-related impacts are identified in the 1991 EIS and are applicable to the proposed BHTF Project. Because no additional significant impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

2.6.5 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts related to light, glare and shadows are anticipated to occur as a result of the proposed BHTF Project.

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Source: Ankrom Moisan, 2020.

Figure 2.6-1
Shadow Diagrams for the Proposed BHTF

2.7 AESTHETICS

This section of the EIS Addendum provides a discussion on existing aesthetic conditions, compares the probable significant impacts under the proposed BHTF Project on aesthetic conditions to those conditions identified in the 1991 EIS, indicates the applicability of mitigation identified in the 1991 EIS, and identifies applicable “best management practices” incorporated into the project design or new mitigation measures (if any).

2.7.1 Affected Environment

1991 EIS

The 1991 EIS identifies the Northwest Hospital campus (campus) as being primarily in medical complex use, with medical hospital and medical office buildings and surface parking. The buildings are generally brick and glass construction and are setback from the streets with the most intensive development located in the center and south portions of the campus. The campus also includes several landscape open space areas.

The area surrounding the campus is primarily comprised of single family residences. The majority of the residences are one-story in height and include wide setbacks from the street and adjacent residences. Landscaping is provided adjacent to most residences and includes mature plants and trees. In addition to existing residences, three cemeteries are located in the vicinity along N 115th Street, which contributes to the open feel of the surrounding areas.

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The current aesthetic conditions on campus are generally similar to those described in the 1991 EIS. Compared to the campus described in the 1991 EIS, the types of uses are similar (medical hospital and medical office) with an intensified level of campus development, including construction of the Seattle Cancer Care Alliance Proton Therapy Building, the McMurray Medical Building, and the West Parking Garage, consistent with development identified in the 1991 EIS and the Master Plan for the campus. The site of the proposed BHTF Project currently contains the existing single-story D-Wing building which is generally constructed of brick and glass, similar to other existing buildings on the campus.

The aesthetic conditions of the surrounding area are also generally similar to those described in the 1991 EIS. One- to two-story single family residences comprise the majority of the uses to the north and east of the campus. Two-story multifamily residences (Stendall Place) are located to the west of the campus. Residences in the site vicinity are surrounded by existing mature landscaping and trees. Existing cemeteries are also located to the west and south of

the campus, including the Bikur Cholim Cemetery to the west, the Orthodox Brotherly Cemetery of Saint Nicholas to the south and the Evergreen Washelli Cemetery to the southwest.

2.7.2 Environmental Impacts

1991 EIS

Aesthetic Character

The 1991 EIS indicates that development under the Master Plan would renovate and expand facilities on the campus, with the majority of development located in the center and south portions of campus, away from the residential community to the north. Under the Draft EIS, two options for development were analyzed (Option A and Option B) and it was assumed that the building height of all development would be within the zoning limits¹. Under the Final EIS, an Option C was analyzed for a lesser amount development on campus. The proposed structures under the development options would be consistent with the scale and architectural style established by the existing A-Wing and Medical Office Building.

Views

Views of proposed development on the campus from surrounding neighborhoods were also analyzed in the 1991 EIS for each of the development options. Photographs were taken from 10 viewpoint locations surrounding the campus and simulations of proposed development were prepared to illustrate the potential changes in views under the development options in the Draft EIS. The proposed twin tower and conceptual buildings on the Specialty Center I and II sites would be the most visible from areas to the north of campus. A small portion of a conceptual building on the Specialty Center I site would be visible from areas to the east of campus (along Meridian Avenue N), but the majority of the building would be obstructed from view by existing mature trees. From the south, views would also change to reflect proposed medical office buildings and parking garages that would be located near N 115th Street.

As part of the Final EIS, visual simulations were prepared to illustrate development under Option C which assumed a lesser amount and scale of development on campus. In particular, the conceptual buildings on the Specialty Center I and II sites were reduced in height and scale as viewed from areas to the north and west of campus.

¹ The Specialty Center II and Specialty Center I buildings were assumed for analysis purposes in the 1991 EIS to be lower than the maximum zoning height allowed, and were assume to be 4-stories (50 feet) in height.

EIS Addendum - Proposed BHTF Project

Aesthetic Character

The specific design of the BHTF building is not defined at this point in the pre-design process. However, for the purpose of providing a conservative depiction of building height and bulk for analysis in this EIS Addendum, the zoning envelope for the BHTF site is extruded. The eventual BHTF building design would be within the building envelope depicted (i.e. the proposed building would be smaller than the depicted zoning envelope), thus, the zoning envelope represents a conservative worst-case depiction. See Figure 1-4 for an illustration of the zoning building envelope on the BHTF site.

Similar to that described in the 1991 EIS, development of the BHTF would change the aesthetic character of the site from the existing single-story D-Wing building to reflect increased building density and building height on the UW Northwest campus. While the proposed BHTF building would be larger than the conceptual building that was assumed for the Specialty Center I site that was illustrated in the 1991 EIS, the proposed building would be consistent with the zoning height limit and the design and materials of the building would be intended to be consistent with the aesthetic character of the existing campus buildings. In addition, the proposed project would maintain a setback from the eastern campus boundary and provide perimeter landscaping and buffer that would be consistent with Master Plan and the UW Northwest campus.

The reconfiguration of existing surface parking could include the conversion of some landscaped/grass area to paved surface parking which could change the aesthetic character of the specific area converted to parking. The assumed retention of existing vegetation to the extent feasible and replacement of removed vegetation with new vegetation would minimize the potential for aesthetic impacts.

Views

Development of the proposed BHTF Project would modify some existing views on the campus and from the surrounding areas. As part of the analysis for this EIS Addendum, visual simulations were prepared to illustrate how development of the proposed BHTF Project could affect the visual character and views on the campus and from surrounding areas.

Visual massing simulations were prepared for this EIS Addendum based on photographs of the site from selected viewpoints and photo simulations of potential development from these viewpoints². The identification of viewpoints for the visual analysis considered several

² Simulations of potential development represent conceptual building massings and are not reflective of specific building designs.

factors, including viewpoint locations that were analyzed in the 1991 EIS, the primary viewer groups in the area and the potential for development to impacts views. Five viewpoints were selected as being most representative of area viewpoints and/or were determined to have the greatest potential for potential development to change the character of the view; each of these viewpoints were also analyzed in the 1991 EIS. The viewpoints are listed in **Table 2.7-1** and shown on **Figure 2.7-1**.

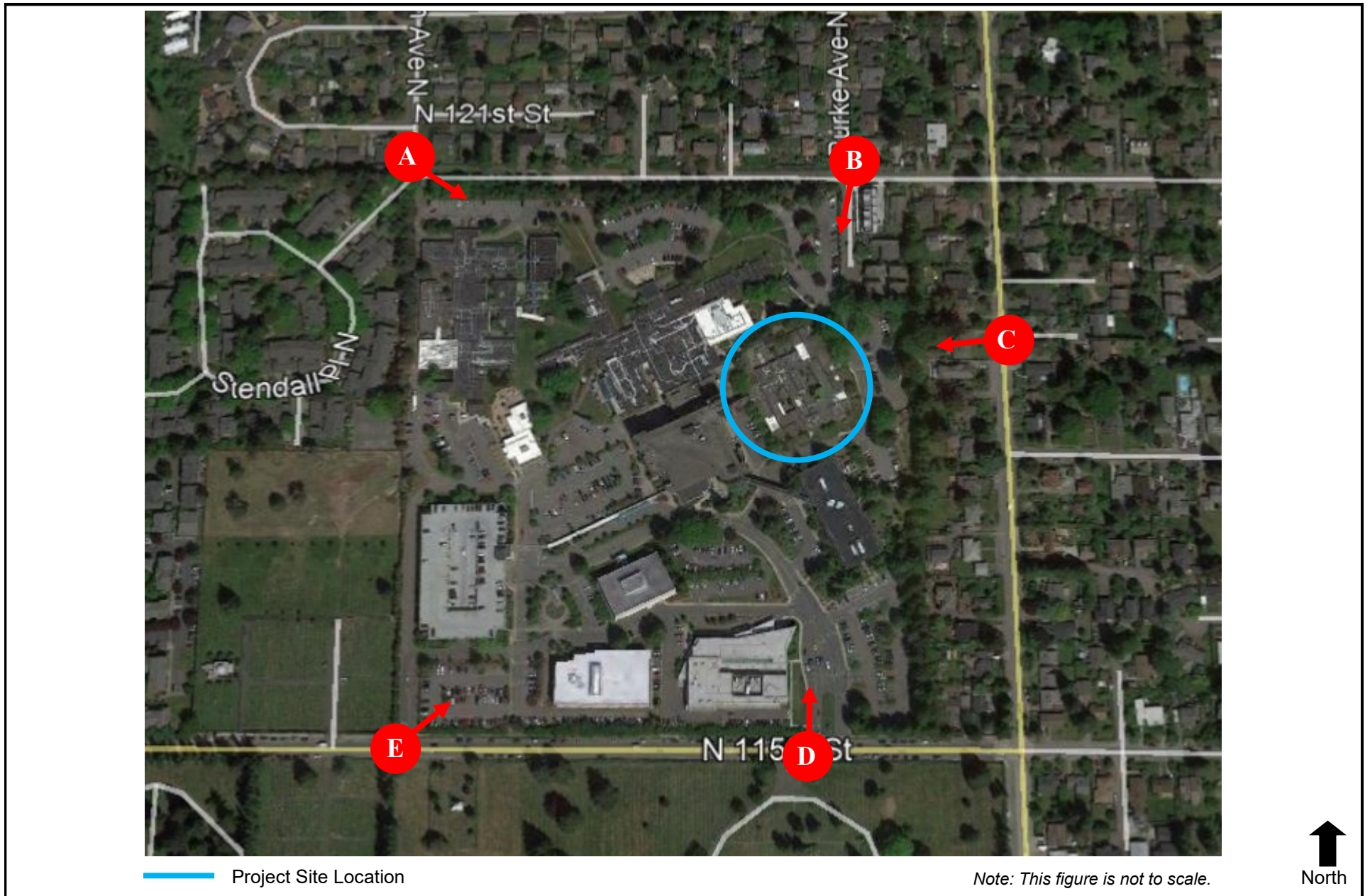
**Table 2.7-1
VIEWPOINT LOCATIONS**

Viewpoint	Description
<i>Viewpoint A</i>	<i>View from N 120th St/Ashworth Ave N (looking southeast); corresponds with 1991 EIS Viewpoint 1.</i>
<i>Viewpoint B</i>	<i>View from N 120th St/Burke Ave N (looking south); corresponds with 1991 EIS Viewpoint 3.</i>
<i>Viewpoint C</i>	<i>View from Meridian Ave N (looking west); corresponds with 1991 EIS Viewpoint 5</i>
<i>Viewpoint D</i>	<i>View from N 115th St/Campus Main Entrance (looking north); corresponds with 1991 EIS Viewpoint 8.</i>
<i>Viewpoint E</i>	<i>View from N 115th St/Campus West Entrance (looking northeast); corresponds with 1991 EIS Viewpoint 9.</i>

For each of the viewpoints identified in **Table 2.7-1**, photo simulations of the zoning envelope (massing envelope) for the BHTF site were prepared; the eventual BHTF building would be located within the envelope depicted and the envelope represents a conservative worst-case depiction. The simulations also do not reflect any potential building modulations or associated mature landscaping/vegetation. The visual analysis presented in this EIS Addendum includes figures that include the following:

- Photographs illustrating the existing visual condition as viewed from the respective viewpoints listed in **Table 2.7-1**, including views to campus from adjacent public areas.
- Simulations of building massing envelope representing the extent of building massing potentially visible from the respective viewpoints, reflecting zoning setbacks and maximum height.

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Source: Google Maps and EA Engineering, 2020



Figure 2.7-1
Viewpoint Location Map

A description of the existing views to the site from the identified viewpoints are provided below, along with a description of the potential view of the massing envelope from each viewpoint.

Viewpoint A – N 120th Street / Ashworth Avenue N (looking southeast)

From Viewpoint A, which depicts a view from the northwestern campus boundary looking toward campus, the existing view includes N 120th Street, Ashworth Avenue N and existing mature trees that are located on the edge of campus and within the N 120th Street right-of-way. Filtered views of portions of existing campus buildings are available from this location; however, the majority of campus development is obstructed from view from this location, including the BHTF Project site (see **Figure 2.7-2** for the existing view from this location).

From Viewpoint A, the massing envelope for the BHTF Project would not be visible from this location and the existing views would remain unchanged (see **Figure 2.7-2** for the proposed view simulation from this location).

Viewpoint B – N 120th Street / Burke Avenue N (looking south)

The view from Viewpoint B consists of existing multifamily residences, N 120th Street, Burke Avenue, and existing landscaping and mature trees in the foreground and midground view. Existing mature trees located on the campus and in the surrounding neighborhood are visible in the background view. A portion of the UW Northwest A-Wing is also visible in the background from this location above the existing trees (see **Figure 2.7-3** for the existing view from this location).

With the massing envelope for the BHTF Project, the existing foreground and midground views from this location remain unchanged. Existing mature trees on campus and in the surrounding neighborhood continue to comprise the majority of the background view. Portions of the massing envelope are visible in the background from this location; however, most of the massing envelope is obstructed from view by existing trees (see **Figure 2.7-3** for the proposed view from this location).

Viewpoint C – Meridian Avenue N (looking west)

The foreground and midground views from Viewpoint C consist of Meridian Avenue N, existing single family residences and associated landscaping that are located adjacent to the eastern boundary of the UW Northwest campus. Existing mature trees in the neighborhood and on the campus are visible in the background view (see **Figure 2.7-4** for the existing view from this location).

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Existing Conditions



Proposed Project Conditions

Source: Ankrom Moisan, 2020.

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Existing Conditions



Proposed Project Conditions

Source: Ankrom Moisan, 2020.

Figure 2.7-3

Viewpoint B—N 120th St / Burke Ave N (Looking South)

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Existing Conditions



Proposed Project Conditions

Source: Ankrom Moisan, 2020.

With the massing envelope for the BHTF Project, the existing foreground and midground views from this location remain unchanged and primarily consist of the existing single family residences adjacent to the campus. Background views from this location change somewhat with the massing envelope visible in the background and appearing taller and larger than the existing single family residences in this area (see **Figure 2.7-4** for the proposed view from this location).

Viewpoint D – N 115th Street / Campus Main Entrance (looking north)

From Viewpoint D, the existing view consists of N 115th Street, the Campus Main Entrance, Parking Lot A and existing landscaping in the foreground and midground views. Existing mature trees on campus and existing campus buildings are visible in the background view, including the Seattle Cancer Care Alliance Proton Therapy Building, the UW Medicine Medical Office Building and the UW Northwest A-Wing (see **Figure 2.7-5** for the existing view from this location).

With the massing envelope for the BHTF Project, the foreground and midground views from this location remain unchanged. Background views would also remain generally similar. Portions of the upper levels of the massing envelope are visible in the background view from this location; however, the majority of the massing envelope is obstructed from view by existing mature trees and the existing UW Northwest A-Wing (see **Figure 2.7-5** for the proposed view from this location).

Viewpoint E – N 115th Street / Campus West Entrance (looking northeast)

From Viewpoint E, the existing view consists of N 115th Street, the campus West Entrance, existing landscaping and trees, and Parking Lot M in the foreground and midground view. The existing Parking Garage building and the McMurray Medical Building are located in the background view (see **Figure 2.7-6** for the existing view from this location).

The foreground and midground views from this location would remain unchanged with the massing envelope for the BHTF Project and generally consist of existing parking areas, mature trees, and landscaping. The background view also remains largely similar with the existing Parking Garage and McMurray Medical Building in view. A portion of the upper level of the massing envelope for the BHTF Project is visible from this location; however, most of the massing envelope is obstructed from view by existing buildings and trees on the campus (see **Figure 2.7-6** for the proposed view from this location).

2.7.3 Conclusions

The potential aesthetic-related impacts from the proposed BHTF Project would be similar to those identified in the 1991 EIS, and significant impacts would not be anticipated.

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Existing Conditions



Proposed Project Conditions

Source: Ankrom Moisan, 2020.

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Existing Conditions



Proposed Project Conditions

Source: Ankrom Moisan, 2020.

2.7.4 Mitigation Measures

Mitigation measures for potential aesthetic-related impacts are identified in the 1991 EIS and are applicable to the proposed BHTF Project. Because no additional significant impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

2.7.5 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts related to aesthetics are anticipated to occur as a result of the proposed BHTF Project.

2.8 TRANSPORTATION

This section of the EIS Addendum identifies potential transportation-related impacts associated with the proposed University of Washington (UW) Behavioral Health Teaching Facility planned on the UW Medical Center - Northwest campus in Seattle. As necessary, mitigation measures are identified that would offset or reduce significant transportation related impacts that the proposed project may have on the surrounding transportation system (if any).

Study Scope

The scope of this analysis was developed in coordination with City of Seattle Department of Construction and Inspections staff. Based on the anticipated vehicular impacts of the proposed project, the following intersections were selected for analysis:

1. Aurora Avenue N/N 130th Street
2. 1st Avenue NE/N 130th Street
3. Aurora Avenue N/N 115th Street
4. Meridian Avenue N/N 115th Street
5. Aurora Avenue N/N 105th Street/N Northgate Way
6. Meridian Avenue N/Northgate Way
7. I-5 Southbound Ramps/Corliss Avenue N/N Northgate Way
8. I-5 Northbound Ramp/1st Avenue NE/N Northgate Way
9. 1st Avenue NE/I-5 Northbound Ramp/NE 107th Street

The study intersections and site vicinity are included on **Figure 2.8-1** and a preliminary site plan is included on **Figure 2.8-2**. In addition, the two existing site accesses on N 115th Street were evaluated under existing and future conditions. Based on coordination with the City, the study focuses on the weekday AM and PM peak hours. The report first describes existing and future (2023) without-project conditions in the vicinity of the project site including the street system, non-motorized facilities, transit service, existing and future without-project weekday PM peak hour traffic volumes, traffic operations, and traffic safety. Future (2023) with-project conditions are then described. The project's impacts on the surrounding transportation system were identified by comparing the future with-project conditions to the future without-project conditions.

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Source: Transpo Group, 2020.

Figure 2.8-1
Project Site and Study Intersections

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Note: This figure is not to scale.

Source: Ankrom Moisan, 2020.



Figure 2.8-2
Site Plan

The specific amount of parking to be added is still being evaluated. For purposes of the transportation review, the analysis assumed a core assumption of no additional parking to be added to the campus. This results in a more conservative estimate of future campus-wide utilization. However, a sensitivity analysis is provided that assumes up to 80 stalls is created through modifications to existing parking.

2.8.1 Affected Environment

Roadway Network

Characteristics of the existing street network in the proposed project vicinity are shown in **Table 2.8-1**. As shown in **Table 2.8-1**, the major streets surrounding the site are principal arterials with no bicycle facilities. The street system in the vicinity of the site provides pedestrian connections, intermittent bicycle lanes or sharrows, and parking.

**TABLE 2.8-1
STUDY AREA EXISTING STREET NETWORK SUMMARY**

Roadway	Arterial Classification ¹	Posted Speed Limit	Number of Travel Lanes	Parking?	Sidewalks?	Bicycle Facilities?
Aurora Avenue N	Principal Arterial	40 mph ²	4	No	Yes ⁴	No
N 130th Street	Principal Arterial	30 mph	4	No	Yes	No
N Northgate Way	Principal Arterial	30 mph	4	No	Yes	No
Meridian Avenue N	Collector Arterial	30 mph	2	Yes ³	Yes	Yes
N 115th Street	Collector Arterial	30 mph	2	Yes	Yes ⁵	No
1st Avenue NE	Collector Arterial	30 mph	2	Yes	Yes ⁴	Yes

1. Based on the Seattle Arterial Classification Map.
2. Posted speed limit of 40 mph north of N 115th Street and 35 mph south of N 115th Street.
3. Time restricted parking is only available on the west side between N 122nd Street and N 115th Street
4. Intermittent sidewalks
5. Provided only on the north side between Aurora Avenue N and Meridian Avenue N

Transit Service

Transit service in the study area is provided by King County Metro. The nearest bus stop to the proposed project is located on-site at the UW Medical Center - Northwest. Outside of the medical center, the nearest bus stops are located approximately 350 feet from the site entrance at the Meridian Avenue N/N 115th Street intersection. Local transit routes serving stops within the vicinity of the project site, hours of operation, and scheduled headways are summarized in **Table 2.8-2**.

**TABLE 2.8-2
EXISTING TRANSIT ROUTES**

Route	Days of Operation	Hours of Operation		Headway
		Weekdays	Weekends	
316 – Meridian Park to Downtown Seattle	Mon-Fri	6:00 a.m.-8:30 a.m.	-	12
345 ² (with 41 & 331) – Shoreline Community College to Northgate TC to Downtown Seattle	Mon-Sun	6:30 a.m.-11:30 p.m.	Sat: 7:30 a.m.-9:00 p.m. Sun: 6:00 a.m.-11:00 p.m.	25-30
346 (with 41) – Aurora Village TC to Northgate TC to Downtown Seattle	Mon-Sun	5:30 a.m.-11:15 p.m.	Sat: 6:15 a.m.-11:15 p.m. Sun: 6:45 a.m.-11:45 p.m.	30
RapidRide E-Line – Aurora Village to Downtown Seattle	Mon-Sun	4:30 a.m.-3:45 a.m.	Sat: 4:50 a.m.-3:45 a.m. Sun: 4:50 a.m.-3:45 a.m.	5-10

Source: King County Metro

1. Headways in minutes during weekday AM and PM peak periods.
2. On weekends Route 345 does not serve Shoreline Community College or stops on N Innis Arden Way.

Non-Motorized Transportation Facilities

Pedestrians

All streets in the project vicinity provide sidewalks on one or both sides of the roadway. Marked crosswalks and curb ramps exists at all signalized study intersections.

Bicycles

Bicycle facilities within the vicinity of the project include the Interurban Trail that runs along Aurora Avenue N. In addition, bicycle lanes are located along N 125th Street between Aurora Ave N and Densmore Ave N and along Meridian Ave N south of N Northgate Way.

Traffic Volumes

Existing weekday AM and PM peak hour traffic volumes at the study intersections are shown on **Figure 2.8-3**. Traffic counts were collected at the study intersections in September 2019. An annual growth rate of 1 percent per year was applied to the counts to account for general background traffic growth between the 2019 count year and 2020 existing conditions. Detailed intersection traffic counts are provided in Appendix D-1. Traffic volumes were rounded to the nearest five vehicles as weekday volumes fluctuate day-to-day due to various conditions.

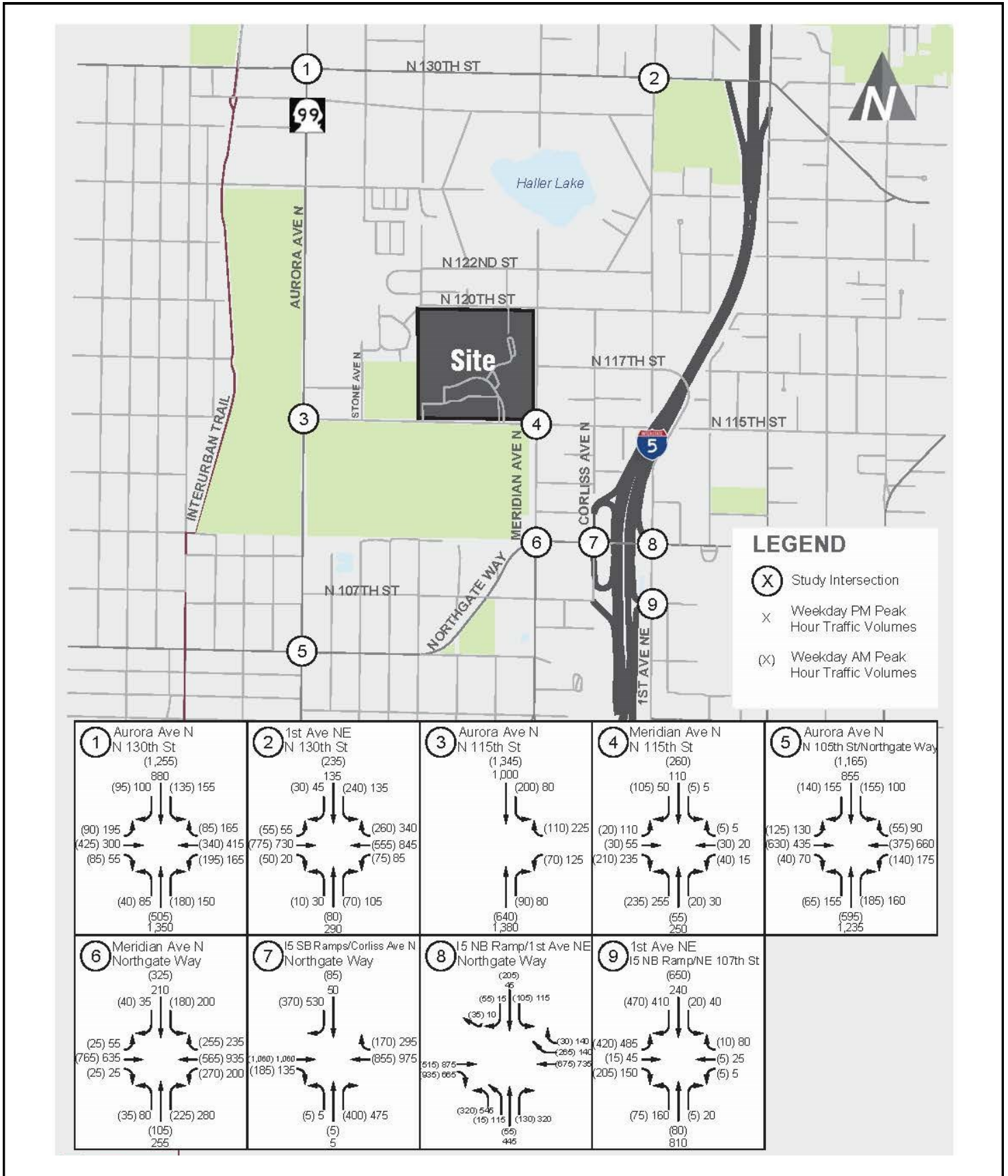
Traffic Operations

The operational characteristics of an intersection are determined by calculating the intersection level of service (LOS). For signalized locations, LOS is measured in average delay per vehicle and is reported for the intersections as a whole. At stop-controlled intersections LOS is measured in average delay per vehicle during the peak hour of traffic and is reported for the worst operating approach of the intersection. Traffic operations for an intersection can be described alphabetically with a range of levels of service (LOS A through F), with LOS A indicating free-flowing traffic and LOS F indicating extreme congestion and long vehicle delays. Appendix D-2 contains a detailed explanation of LOS criteria and definitions.

Weekday AM and PM peak hour traffic operations for existing and future without-project conditions were evaluated at the study intersections based on the procedures identified in the *Highway Capacity Manual (HCM) 6th Edition* (2016) and were evaluated using the *Synchro 10* software program. Pedestrian and bicycle volumes were considered when evaluating the operations of the intersections. Existing signal timing was provided by the City of Seattle and timings were kept consistent between existing and future conditions.

The City of Seattle does not define a LOS standard for individual intersections; however, the City generally recognizes LOS E and F as poor operations for signalized locations and LOS F for unsignalized locations. Intersection operations for existing and future (2023) without-project weekday peak hour conditions are summarized in **Table 2.8-3**. Detailed LOS worksheets for each study intersection are included in Appendix D-3.

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Source: Transpo Group, 2020.

Figure 2.8-3
Existing Weekday Peak Hour Traffic Volumes

**TABLE 2.8-3
EXISTING WEEKDAY PEAK HOUR INTERSECTION LOS SUMMARY**

Intersection	Traffic Control	Existing		
		LOS ¹	Delay ²	WM ³
<i>AM Peak Hour</i>				
1. Aurora Avenue N/N 130th Street	Signal	D	44	-
2. 1st Avenue NE/N 130th Street	Signal	D	36	-
3. Aurora Avenue N/N 115th Street	Signal	A	9	-
4. Meridian Avenue N/N 115th Street	AWSC	B	15	-
5. Aurora Avenue N/N 105th Street/N Northgate Way	Signal	D	48	-
6. Meridian Avenue N/N Northgate Way	Signal	D	40	-
7. I-5 Southbound Ramps/Corliss Avenue N/N Northgate Way	Signal	A	10	-
8. I-5 Northbound Ramp/1st Avenue NE/N Northgate Way	Signal ⁴	C	31	-
9. 1st Avenue NE/I-5 Northbound Ramp/NE 107th Street	Signal	C	27	-
A. West Site Access/N 115th Street	TWSC	C	18	SBL
B. East Site Access/N 115th Street	TWSC	C	22	SBL
<i>PM Peak Hour</i>				
1. Aurora Avenue N/N 130th Street	Signal	D	48	-
2. 1st Avenue NE/N 130th Street	Signal	D	42	-
3. Aurora Avenue N/N 115th Street	Signal	C	22	-
4. Meridian Avenue N/N 115th Street	AWSC	C	17	-
5. Aurora Avenue N/N 105th Street/N Northgate Way	Signal	E	56	-
6. Meridian Avenue N/N Northgate Way	Signal	C	35	-
7. I-5 Southbound Ramps/Corliss Avenue N/N Northgate Way	Signal	B	13	-
8. I-5 Northbound Ramp/1st Avenue NE/N Northgate Way	Signal ⁴	C	31	-
9. 1st Avenue NE/I-5 Northbound Ramp/NE 107th Street	Signal	D	36	-
A. West Site Access/N 115th Street	TWSC	C	16	SBL
B. East Site Access/N 115th Street	TWSC	C	20	SBL

Note: AWSC = all-way stop-controlled, TWSC = two-way stop-controlled

1. Level of Service (A – F) as defined by the Highway Capacity Manual (HCM) 6th Edition, Transportation Research Board.
2. Average delay per vehicle in seconds.
3. Worst movement reported for unsignalized two-way stop-controlled intersections.
4. Evaluated with HCM 2000 methodology due to HCM 6th Edition limitations.

As shown in **Table 2.8-3**, the study intersections currently operate at LOS D or better during the weekday AM and PM peak hours, with the exception of the Aurora Avenue N/N 105th Street/N Northgate Way intersection which currently operates at LOS E during the PM peak hour.

Traffic Safety

Recent collision records were reviewed within the study area to identify existing traffic safety issues at the study intersections. The most recent three-year summary of accident data from the Washington State Department of Transportation (WSDOT) is for the period between January 1, 2016 and December 31, 2018. A summary of collision data in the study area is provided in **Table 2.8-4**.

TABLE 2.8-4
THREE YEAR COLLISION SUMMARY – 2016 TO 2018

Intersection	Traffic Control	Number of Collisions			Annual Average
		2016	2017	2018	
1. Aurora Avenue N/N 130th Street	Signal	10	19	17	46
2. 1st Avenue NE/N 130th Street	Signal	6	3	1	10
3. Aurora Avenue N/N 115th Street	Signal	5	8	13	26
4. Meridian Avenue N/N 115th Street	AWSC	1	3	2	6
5. Aurora Avenue N/N 105th Street/N Northgate Way	Signal	17	23	11	51
6. Meridian Avenue N/N Northgate Way	Signal	10	4	7	21
7. I-5 Southbound Ramps/Corliss Avenue N/N Northgate Way	Signal	21	18	7	46
8. I-5 Northbound Ramp/1st Avenue NE/N Northgate Way	Signal	8	9	11	28
9. 1st Avenue NE/I-5 Northbound Ramp/NE 107th Street	Signal	8	10	4	22
A. West Site Access/N 115th Street	TWSC	0	0	0	0
B. East Site Access/N 115th Street	TWSC	2	1	2	5

Source: WSDOT and Transpo Group, 2019

Note: AWSC = all-way stop-controlled, TWSC = two-way stop-controlled

Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

As shown in **Table 2.8-4**, the study intersections experienced an average of nine collisions or less, with the exception of the Aurora Avenue N/N 130th Street, I-5 Southbound Ramps/Corliss Avenue NE/N Northgate Way, and Aurora Avenue N/N 105th Street/N Northgate Way intersections, which experienced an average of 15 and 17 collisions, respectively. The most common collision type at these locations was rear-end collisions, which are typically due to stop-and-go traffic along congested corridors such as Aurora

Avenue N. Two fatalities occurred at the study intersections, one at the Aurora Avenue N/N 130th Street intersection and one at the Aurora Avenue N/N 105th Street/N Northgate Way intersection. Both were pedestrian collisions, with one resulting from the failure to use the crosswalk and one resulting from other unidentified causes.

SDOT defines high collision locations (HCL) at signalized intersections with 10 or more collisions in the previous year, unsignalized intersections with 5 or more collisions in the previous year, mid-block locations with 10 or more collisions in the previous year, and locations with 5 or more pedestrian or bike collisions in the previous three years. As shown in **Table 2.8-4**, the Aurora Avenue N/N 130th Street, Aurora Avenue N/N 115th Street, Aurora Avenue N/N 105th Street/N Northgate Way, and the I-5 Northbound Ramp/1st Avenue NE/N Northgate Way intersections meet the HCL criteria with 10 or more collisions in the most recent full year of data available (2018). In addition, the Aurora Avenue NE/N 130th Street and Aurora Avenue N/N 105th Street/N Northgate Way intersections meet this criteria with 5 or more pedestrian or bike collisions in the previous three year period of available data (2016-2018). Planned safety improvements include WSDOT Vision Zero pedestrian improvements to include leading pedestrian intervals at multiple signalized intersections citywide.

2.8.2 Environmental Impacts

Roadway Network

Based on a review of the City of Seattle *2019 – 2024 Adopted Capital Improvement Program* (CIP), one transportation improvement is located in the project vicinity. New sidewalk installation is planned and currently under construction at Meridian Avenue N between NE 115th Street and NE 117th Street as well as at NE 117th Street between Meridian Avenue N and 1st Avenue NE. This construction is projected to be completed by the end of January 2020.

Transit Service

Future planned transit improvements include the Sound Transit Link Light Rail Northgate Link Extension. Sound Transit is extending light rail from the University of Washington to Northgate and adding three stations in the U District, Roosevelt, and Northgate neighborhoods. The Northgate Station is located approximately 1.3 miles southeast of the UW Medical Center – Northwest. The Northgate Link Extension is due to open in 2021.

Non-Motorized Transportation Facilities

Pedestrians

Crossing upgrade evaluations are planned for the Aurora Avenue N/Northgate Way and 1st Avenue NE/1-5 Northbound Ramp intersections and are anticipated to be completed in 2023. Sidewalk or walkway installations are planned for the following locations anticipated to be completed by 2022:

- N 117th Street between Meridian Avenue N and 1st Avenue NE
- N 115th Street between Meridian Avenue N and Corliss Avenue N
- Interlake Avenue N between N 100th Street and N 107th Street
- Midvale Ave N between N Northgate Way and N 107th Street
- N 128th Street between Aurora Avenue N and Stone Avenue N

In addition, the project is anticipated to add sidewalk frontage improvements along the south side of N 120th Street. Frontage improvements are anticipated to be constructed per SMC 23.53.006 and 23.53.015 requirements.

Bicycles

Based on a review of the *Seattle Bicycle Master Plan 2019-2024 Implementation Plan*, three bicycle facility improvements are located in the area surrounding the project:

- Project #30, SRTS (Ingraham HS Connection Ph 1) – This project includes the construction of a 1.25-mile neighborhood greenway on Ashworth Avenue N, N 120th Street, and Corliss Ave N.
- Project #45, Northgate Light Rail- 1st Ave NE Multi-Use Path – This project includes the construction of a 0.38-mile multi-use trail on 1st Ave N south of N Northgate Way.
- Project #46, Northgate Light Rail - Northgate Pedestrian and Bicycle Bridge – This project includes the construction of a 0.27-mile pedestrian and bike bridge over I-5 landing at North Seattle college on the west side and at 1st Avenue NE and NE 100th Street on the east side.

All three projects are funded through construction and have a target year of 2021.

Traffic Volumes

Future Without-Project Volumes

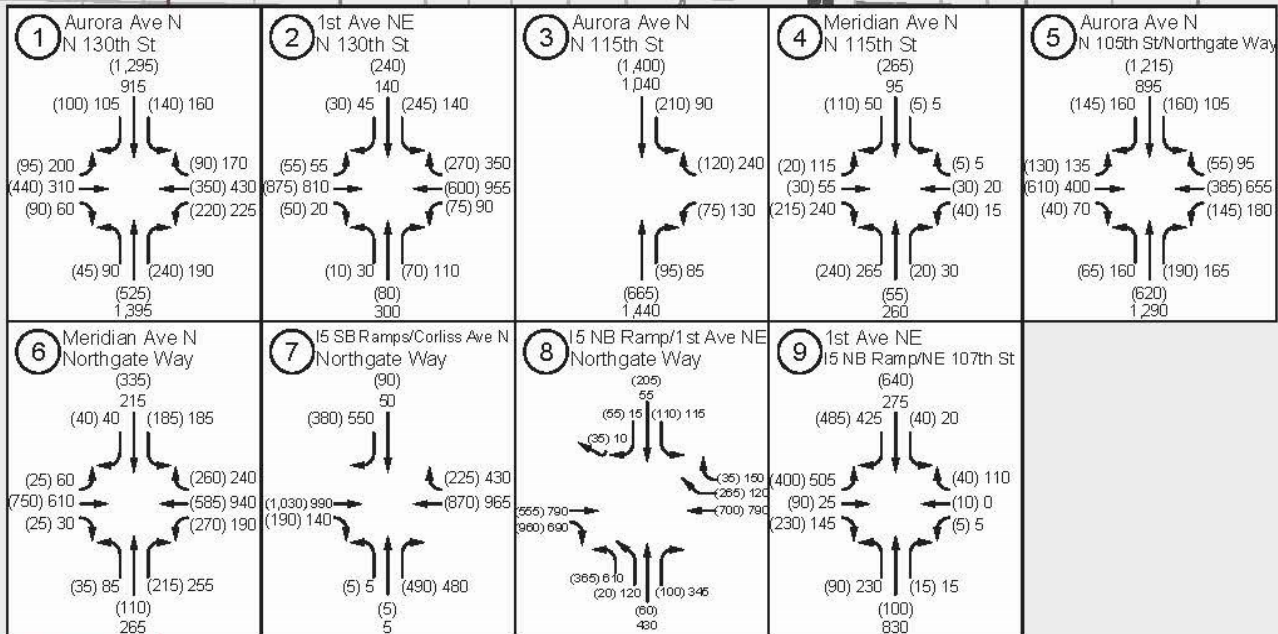
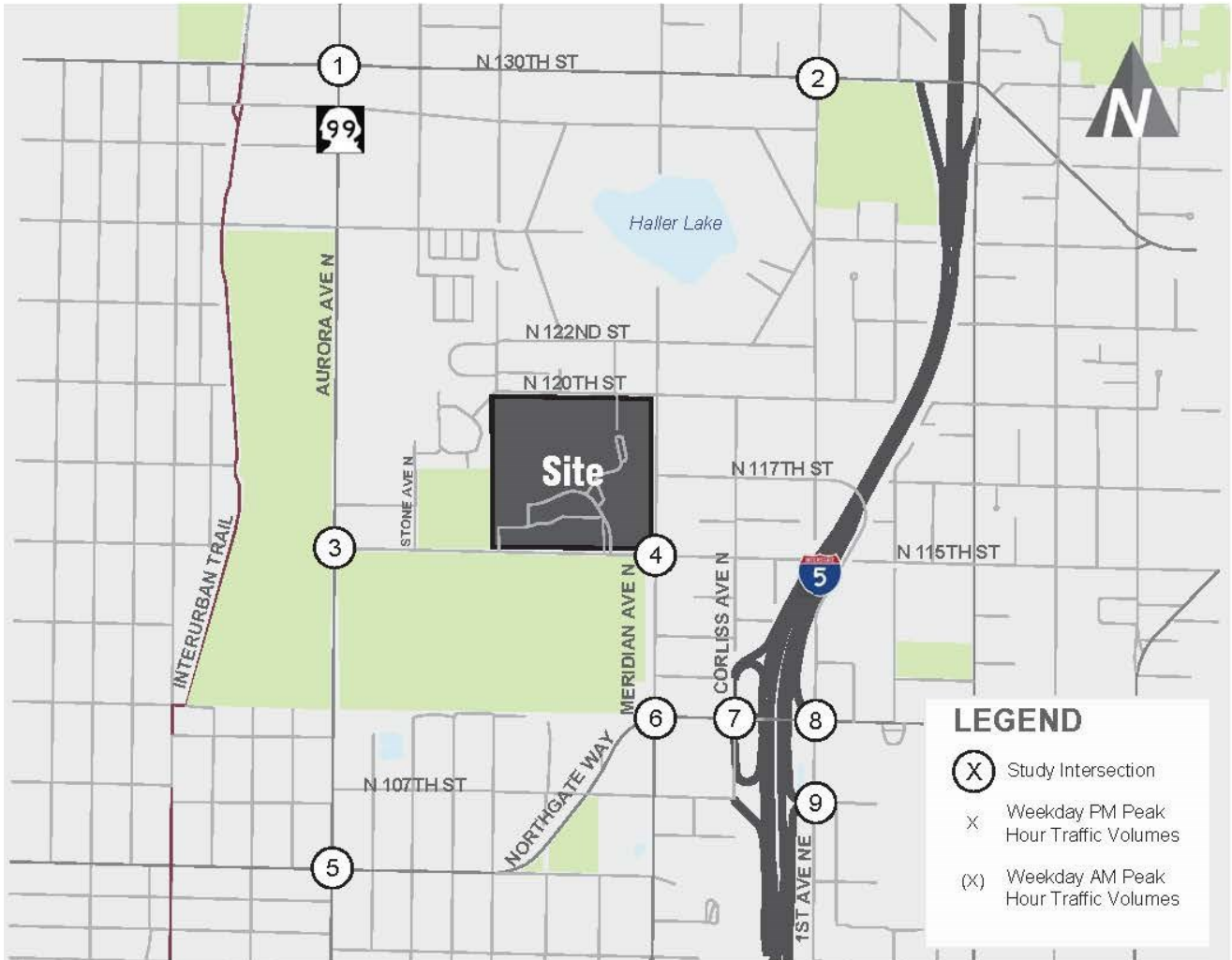
Future horizon year (2023) without-project volumes were estimated by increasing the existing weekday PM peak hour traffic volumes by an annual growth rate and adding trips from previously approved “pipeline” developments that would increase background traffic at study intersections. Based on coordination with City staff, an annual growth rate of 1

percent per year was applied to the existing intersection traffic volumes to account for general background traffic growth in the study area. Six pipeline projects were included in the future without-project forecasts:

- Northgate Mall Redevelopment (SDCI #3031302-LU, #3031303-LU, #3031306-LU, #3031304-LU, #3031301-LU) – Multi-use phased development including 396,000 sf retail, up to 1,019,000 sf office, up to 1,100 multifamily residential units, two hotels with up to 340 rooms, 120,000 sf health club, and an NHL training facility with corporate offices. The future conditions of this analysis include traffic volumes associated with interim development through the 2023 horizon year.
- 12301 Stone Avenue N (SDCI #3029876-LU) – Residential development including 85 townhomes and 40 residential condominiums. The development is anticipated to be constructed by 2021.
- 1136 N 115th Street (SDCI #3035851-EG) – Residential development including 48 apartments and 43 on-site parking stalls.
- 10733 Meridian Avenue N (SDCI #3017071-LU) – Northgate Courtyard Marriott hotel development including 140 rooms and 149 on-site parking spaces.
- 11762 Aurora Avenue N (SDCI #3036031-EG) – Residential development including 236 multifamily units and 283 on-site parking spaces.
- 11224 Meridian Avenue N (SDCI #3032771-LU) – Park Meridian Apartments residential development including 57 apartments and 40 on-site garage parking spaces.
- Childbirth Center Expansion—The UWMC-Northwest is constructing a 2,670 square foot expansion of the existing Childbirth Center. Trips associated with the expansion based on rates developed from counts collected at the site accesses are included in the forecasts.

Future (2023) without-project traffic volumes reflecting the projected background growth and traffic from pipeline projects are shown on **Figure 2.8-4**.

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Source: Transpo Group, 2020.



Figure 2.8-4
Future (2023) Without-Project Weekday Peak Hour Traffic Volumes

Future With-Project Volumes

Trip Generation

The proposed project includes approximately 210,000 square feet of building area. Project trip generation estimates have been prepared based on programmatic estimates of the facility with detailed information provided by the project team. Trip generation was estimated based on the anticipated shift schedules of all possible user groups of the facility, including doctors, nurses, Certified Nursing Assistants (CNAs), administrative staff, and students. Patient visitors were also assigned based on the set visiting hours and capacity of the visitation rooms. The trip generation forecasts were based on the following operational parameters:

- The BHTF includes 50 medical surgery beds and 100 behavioral health beds
- Nurse staffing levels include 1 nurse per 4 medical surgery beds and 1 nurse per 6 behavioral health beds
- CNA staffing levels include 1 CNA per 4 medical surgery beds and 1 CNA per 6 behavioral health beds
- 100 total medical staff members will be on-site at peak times, including 9 doctors, 29 nurses, 29 CNAs, and 33 students
- 80 patient visitors are anticipated at peak times based on visitation room capacity and visiting hours of 8:00 a.m. to 5:00 p.m.
- It is anticipated that 75 percent of nurses and CNAs at the BHTF will work 12-hour shifts, and 25 percent will work 8-hour shifts
- 30 administrative staff members (front desk, custodial, etc.) are anticipated to be on-site from 8:00 a.m. to 5:00 p.m.
- 33 students are anticipated to be on-site from 8:00 a.m. to 5:00 p.m.
- All day and evening shift employees are anticipated to follow the most recent Commute Trip Reduction (CTR) survey with 74.7% within the single occupied vehicle (SOV) mode
- All night shift employees and visitors are anticipated to travel to with 100% SOV
- Students are anticipated to travel with 50% SOV

The anticipated shift times, population, and SOV mode split for each user group is summarized in **Table 2.8-5**.

**TABLE 2.8-5
KEY USER GROUP CHARACTERISTICS**

User Group	Approximate Shift Time	Population	SOV Mode Split
Doctors	7:00 am - 7:00 pm	9	74.7%
	7:00 pm - 7:00 am	3	100.0%
Nurses	7:00 am - 7:00 pm	22	74.7%
	7:00 pm - 7:00 am	22	100.0%
	7:00 am - 3:00 pm	7	74.7%
	3:00 pm - 11:00 pm	7	74.7%
CNAs	11:00 pm - 7:00 am	7	100.0%
	7:00 am - 7:00 pm	22	74.7%
	7:00 pm - 7:00 am	22	100.0%
	7:00 am - 3:00 pm	7	74.7%
Administrative Staff	3:00 pm - 11:00 pm	7	74.7%
	11:00 pm - 7:00 am	7	100.0%
	8:00 am - 5:00 pm	30	74.7%
	8:00 am - 5:00 pm	33	50.0%
Students	8:00 am - 5:00 pm	33	50.0%
Visitors	8:00 am - 5:00 pm	80	100.0%

Table 2.8-6 summarizes the estimated weekday hourly vehicle trip generation for the proposed project based on the assumptions outlined above. Detailed trip generation calculations for the proposed development are provided in Appendix D-4.

**TABLE 2.8-6
ESTIMATED WEEKDAY VEHICLE TRIP GENERATION**

Hour	Inbound trips	Outbound Trips	Total Vehicle Trips
12:00 AM	0	0	0
1:00 AM	0	0	0
2:00 AM	0	0	0
3:00 AM	0	0	0
4:00 AM	0	0	0
5:00 AM	0	0	0
6:00 AM	50	0	50
7:00 AM	99	54	153
8:00 AM	20	0	20
9:00 AM	0	0	0
10:00 AM	0	0	0
11:00 AM	0	0	0
12:00 PM	0	0	0
1:00 PM	0	0	0
2:00 PM	10	0	10
3:00 PM	0	10	10
4:00 PM	0	20	20
5:00 PM	0	99	99
6:00 PM	47	0	47
7:00 PM	0	40	40
8:00 PM	0	0	0
9:00 PM	0	0	0
10:00 PM	14	0	14
11:00 PM	0	10	10

As shown in **Table 2.8-6**, the AM peak hour of the Behavioral Health Teaching Facility, or the highest one-hour between 7 a.m. and 9 a.m., is from 7:00 a.m. to 8:00 a.m. and the PM peak hour of the facility, or the highest one-hour between 4 p.m. and 6p.m., is 5 p.m. to 6 p.m. Trip generation for the existing A summary of the net new trip generation of the facility is shown in **Table 2.8-7**.

**TABLE 2.8-7
TRIP GENERATION SUMMARY**

Land Use	Size	AM Peak Hour Trips				PM Peak Hour Trips			
		Rate ¹	In	Out	Total	Rate	In	Out	Total
UW Behavioral Health Teaching Facility	210,000 sf	NA	99	54	153	NA	0	99	99
Existing Site Demolition	-35,211 sf	0.94	-23	-10	-33	0.75	-6	-20	-26
Net New Vehicle Trips		-	76	44	120	-	-6	79	73

Note: sf = square feet.

1. Trip generation for the UW BHTF estimated programmatically as shown in Table 2.8-6. Trip generation rates and in/out percentages for the existing site demolition based on 3 days of weekday peak hour traffic counts collected at the site accesses in September 2019. Rates are per 1,000 sf.

As shown in **Table 2.8-7**, the proposed Behavioral Health Teaching Facility addition is anticipated to generate approximately 120 new vehicle trips during the weekday AM peak hour and 73 new vehicle trips during the weekday PM peak hour.

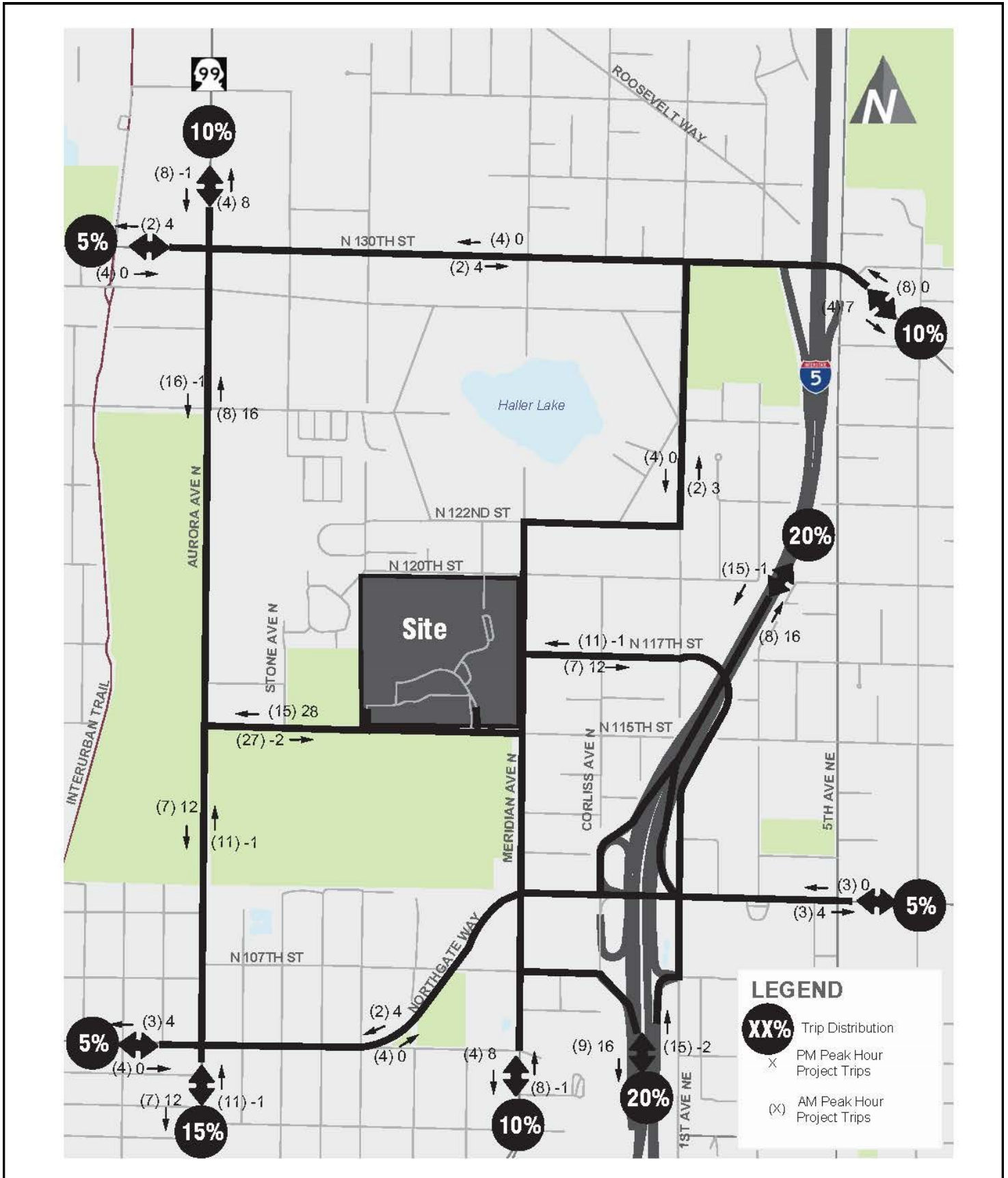
Trip Distribution & Assignment

Travel patterns for vehicular traffic to and from the proposed site were based on a review of existing travel patterns and planned improvements in the area and coordinated with City staff. **Figure 2.8-5** illustrates the project vehicle trip distribution and assignment to the surrounding local and regional street system. The project generated traffic was added to future without-project weekday AM and PM peak hour traffic volumes to form the basis of the with-project. The resulting 2023 with-project traffic volumes are shown on **Figure 2.8-6**.

Traffic Operations

A future without and with-project level-of-service analysis was conducted for the weekday AM and PM peak hour to analyze traffic impacts of the proposed project. The same methodologies were applied as described for existing conditions analysis. A comparison of 2023 without-project and future with-project weekday AM and PM peak hour traffic operations is summarized in **Table 2.8-8**. Detailed LOS worksheets are provided in Appendix D-3.

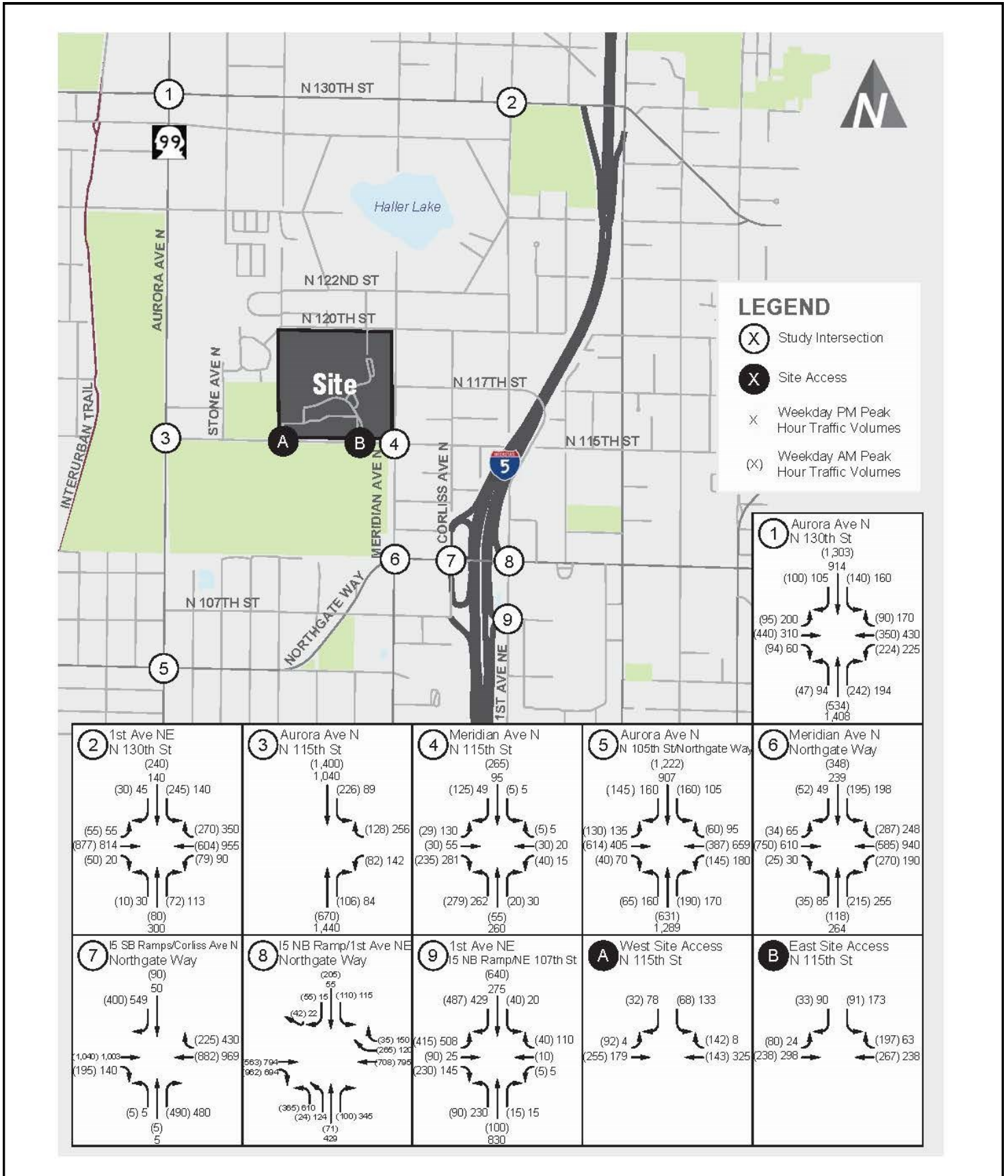
**UW Medical Center—Northwest BHTF Project
EIS Addendum**



Source: Transpo Group, 2020.

Figure 2.8-5
Project Trip Distribution and Assignment

UW Medical Center—Northwest BHTF Project EIS Addendum



Source: Transpo Group, 2020.

Figure 2.8-6
Future (2023) With-Project Weekday Peak Hour Traffic Volumes

**TABLE 2.8-8
FUTURE WEEKDAY PEAK HOUR INTERSECTION LOS SUMMARY**

Intersection	Traffic Control	Future 2023 Without-Project			Future 2023 With-Project		
		LOS ¹	Delay ²	WM ³	LOS ¹	Delay ²	WM ³
<u>AM Peak Hour</u>							
1. Aurora Avenue N/N 130th Street	Signal	D	48	-	D	49	-
2. 1st Avenue NE/N 130th Street	Signal	D	37	-	D	38	-
3. Aurora Avenue N/N 115th Street	Signal	A	10	-	B	10	-
4. Meridian Avenue N/N 115th Street	AWSC	C	15	-	C	18	-
5. Aurora Avenue N/N 105th Street/N Northgate Way	Signal	D	47	-	D	47	-
6. Meridian Avenue N/N Northgate Way	Signal	D	42	-	D	43	-
7. I-5 Southbound Ramps/Corliss Avenue N/N Northgate Way	Signal	A	10	-	B	11	-
8. I-5 Northbound Ramp/1st Avenue NE/N Northgate Way	Signal ⁴	C	31	-	C	30	-
9. 1st Avenue NE/I-5 Northbound Ramp/NE 107th Street	Signal	C	29	-	C	30	-
A. West Site Access/N 115th Street	TWSC	C	19	SBL	C	22	SBL
B. East Site Access/N 115th Street	TWSC	C	23	SBL	D	30	SBL
<u>PM Peak Hour</u>							
1. Aurora Avenue N/N 130th Street	Signal	D	50	-	D	51	-
2. 1st Avenue NE/N 130th Street	Signal	D	46	-	D	46	-
3. Aurora Avenue N/N 115th Street	Signal	C	24	-	C	26	-
4. Meridian Avenue N/N 115th Street	AWSC	C	18	-	C	21	-
5. Aurora Avenue N/N 105th Street/N Northgate Way	Signal	E	57	-	E	57	-
6. Meridian Avenue N/N Northgate Way	Signal	C	33	-	C	35	-
7. I-5 Southbound Ramps/Corliss Avenue N/N Northgate Way	Signal	B	14	-	B	14	-
8. I-5 Northbound Ramp/1st Avenue NE/N Northgate Way	Signal ⁴	C	31	-	C	30	-
9. 1st Avenue NE/I-5 Northbound Ramp/NE 107th Street	Signal	C	35	-	C	35	-
A. West Site Access/N 115th Street	TWSC	C	17	SBL	C	18	SBL
B. East Site Access/N 115th Street	TWSC	C	21	SBL	D	24	SBL

Note: AWSC = all-way stop-controlled, TWSC = two-way stop-controlled

1. Level of Service (A – F) as defined by the Highway Capacity Manual (HCM) 6th Edition, Transportation Research Board.
2. Average delay per vehicle in seconds.
3. Worst movement reported for unsignalized two-way stop-controlled intersections.
4. Evaluated with HCM 2000 methodology due to HCM 6th Edition limitations.

As indicated in **Table 2.8-8**, overall impacts to the off-site study intersections would generally be minimal with increases in calculated delay of 2 seconds or less during the AM and PM peak hours. No operational impacts are anticipated at the off-site study intersections with the addition of the UW Behavioral Health Teaching Facility.

Site Access Evaluation

As described previously, the site would maintain the two existing stop-controlled site accesses on N 115th Street. **Figure 2.8-6** shows the future (2023) with-project traffic volumes at the site accesses. Traffic operations were evaluated using the same methodology as the off-site study intersections. During the AM peak hour, the west site access is anticipated to operate at LOS C with a delay of 22 seconds while the east site access is anticipated to operate at LOS D with a delay of 30 seconds. Vehicle queues at the site accesses are anticipated to be approximately 2 vehicles or less during the AM peak hour. Detailed LOS worksheets are provided in Appendix D-3.

During the PM peak hour, the west site access is anticipated to operate at LOS C with a delay of 18 seconds while the east site access is anticipated to operate at LOS D with a delay of 24 seconds. Vehicle queues at the site accesses are anticipated to be approximately 3 vehicles or less during the PM peak hour. Detailed LOS worksheets are provided in Appendix D-3. No operational impacts are anticipated at the site accesses with the addition of the UW Behavioral Health Teaching Facility.

Non-Motorized Impacts

The existing UW Medical Center – Northwest includes an existing pedestrian network throughout campus with sidewalks, marked crosswalks, and curb ramps. The proposed Behavioral Health Teaching Facility addition is anticipated to connect to the existing nonmotorized network and will provide accessible routes to and from the facility. The project is anticipated to provide nonmotorized frontage improvements along the south side of N 120th Street.

Transit Impacts

The existing transit network includes on-site transit stops connecting to the surrounding King County Metro transit system. With the proposed campus addition, transit ridership will be promoted for all users, including potential connections to the planned Sound Transit Link Light Rail Northgate expansion approximately 1 mile southeast of the site.

Transportation Concurrency

The City of Seattle has implemented a Transportation Concurrency system to comply with one of the requirements of the Washington State Growth Management Act (GMA). The system, described in the Seattle Municipal Code (SMC) 23.52, is designed to provide a mechanism that determines the level of service (LOS) standards for locally owned arterials and transit routes to help evaluate performance of the transportation system.

The LOS identified by the City of Seattle encourages multi-modal transportation options and establishes a reduction in the proportion of single-occupant vehicles (SOV) as the standard. Based on SMC 23.52.004 Map A, the Northwest Seattle zone for the project site identifies a 2035 SOV Mode Share Target of 37 percent.

The proposed project is located in the Haller Lake neighborhood of Seattle within the Northgate Urban Center. The proposed project meets concurrency through its location within an Urban Center area, as identified in SMC 23.52.004.B. In addition, the UW Medical Center – Northwest maintains a Transportation Management Plan (TMP) with the City of Seattle and implements strategies identified in the TMP to reduce its campus-wide SOV mode share.

Parking Analysis

The following sections describe the proposed parking supply and estimated peak parking demand of the proposed addition of the UW Behavioral Health Teaching Facility. As noted in the project description, the parking analysis evaluates a base assumption that includes no additional parking and sensitivity analysis evaluating the impacts if up to 80 additional stalls are created on campus.

Parking Supply

Existing

The Northwest Hospital campus includes a total existing parking supply of 1,618 total stalls across 16 surface lots and one multi-level above grade garage. Of these stalls, 123 are designated for ADA use. The parking supply was confirmed through site counts conducted in September 2019 at the lots shown in **Figure 2.8-7**.

Figure 2.8-7 - Parking Data Collection Area



As shown in **Figure 2.8-7**, Lot C is designated as overflow parking for the Emergency Department and Lot D includes both permit parking and physician parking only areas. Lot L is divided into general parking and designated parking for the Proton Therapy Center. In addition, the ground floor of the parking garage is open to visitor and patient parking, while the top floors are reserved for employee and physician parking.

Future

With the addition of the UW Behavioral Health Teaching Facility, no additional parking or reduction in parking is proposed. The future parking supply of 1,618 stalls is consistent with existing supply counts.

Demand

Existing

Existing parking demand for the Northwest Hospital campus was evaluated hourly during 3 midweek days in September 2019 between 8:00 a.m. and 3:00 p.m. These hours were identified based on 24-hour counts at the two campus site accesses on N 115th Street.

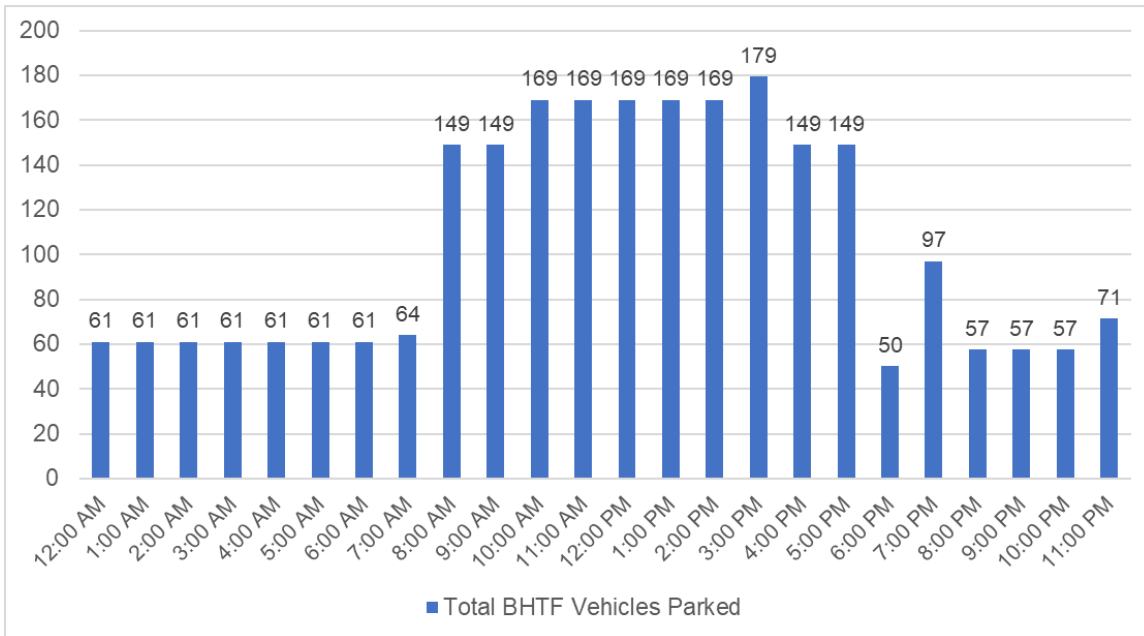
The existing 3-day average peak parking demand occurred during the 12:00 p.m. hour with an overall demand of 1,211 vehicles across all campus lots shown in **Figure 2.8-7**. Based on the existing total campus size of 581,834 sf, the peak parking demand rate of 2.08 vehicles per 1,000 sf was identified for the 12:00 p.m. hour.

Future

Using the programmatic information for the Behavioral Health Teaching Facility identified in **Table 2.8-5**, the peak parking demand for the facility is anticipated to be 179 vehicles. The anticipated hourly parking demand for the facility is summarized in **Figure 2.8-8**. Note that this table shows the total demand for this new facility.

The parking demands for this facility were estimated based on the parking rates calculated for the overall site. Based on existing hospital rates and the demolition of the existing uses, the net new increase in the overall campus parking demand is on the order of 44 vehicles during the peak of the BHTF project.

Figure 2.8-8 – Anticipated Hourly BHTF Parking Demand



Parking Utilization Study

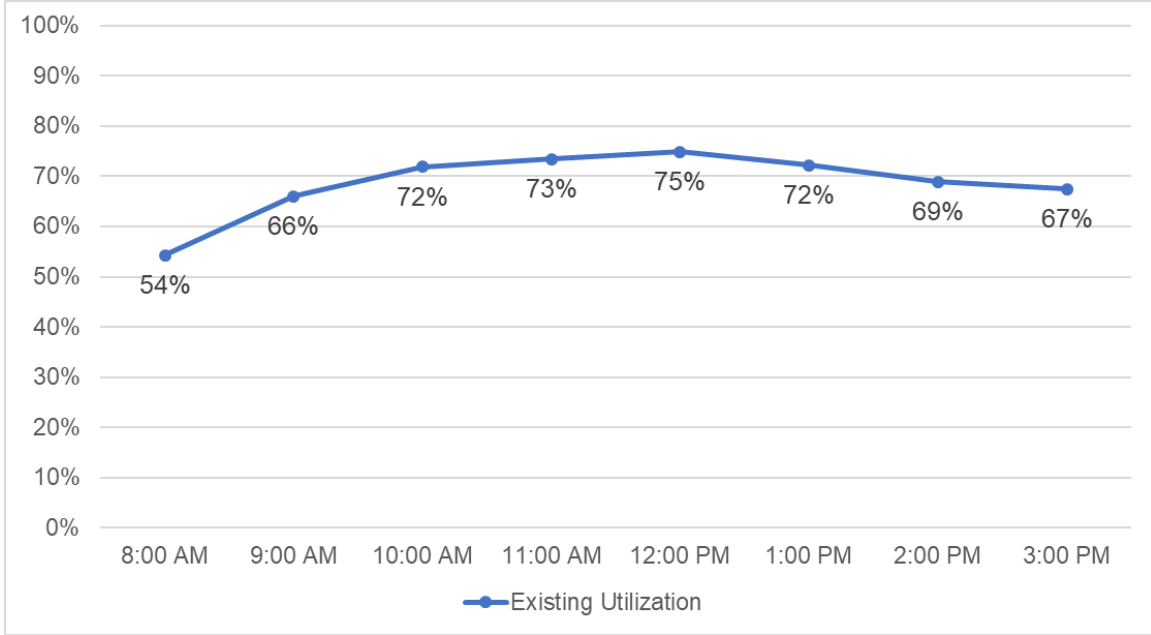
A parking utilization study was conducted to determine the availability of parking and occupancy at the individual Northwest Hospital lots and on campus overall. Hourly midweek parking demand between 8:00 a.m. and 3:00 p.m. was compared to the campus parking supply to determine the utilization. A summary of existing hourly parking utilization for each lot is shown in **Figure 2.8-9**.

Figure 2.8-9 - Midweek 3-Day Average Existing Parking Utilization Summary

Lot Number	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM
LOT A	43%	74%	81%	84%	78%	76%	86%	80%
LOT B	33%	49%	88%	91%	81%	83%	77%	78%
LOT C	63%	73%	82%	92%	94%	84%	82%	88%
LOT D1	48%	74%	71%	81%	69%	81%	83%	77%
LOT D2	27%	54%	67%	54%	50%	52%	63%	58%
LOT E	62%	78%	75%	78%	78%	77%	64%	57%
LOT F	67%	78%	85%	91%	90%	88%	81%	76%
LOT G	41%	48%	51%	51%	52%	61%	57%	33%
LOT H	48%	65%	79%	79%	81%	81%	78%	74%
LOT I	51%	56%	64%	63%	61%	63%	60%	55%
LOT J	13%	28%	67%	64%	42%	47%	53%	47%
LOT K	75%	90%	90%	90%	92%	92%	89%	93%
LOT L1	66%	76%	88%	86%	85%	92%	95%	89%
LOT L2	32%	50%	60%	68%	65%	68%	77%	68%
LOT M	56%	93%	94%	93%	90%	82%	87%	85%
GROUND FLOOR	45%	57%	65%	66%	60%	60%	58%	55%
TOP FLOORS	58%	64%	68%	69%	76%	70%	63%	66%
ER LOT	38%	44%	56%	58%	62%	62%	69%	69%
Total	54%	66%	72%	73%	75%	72%	69%	67%

As shown in **Figure 2.8-9**, parking utilization for the site peaks at 12:00 p.m. with 75 percent of the total campus parking supply occupied. Lots D (permit parking), G, I, J, and the parking garage are observed to have the most availability throughout the day while Lots A, B, F, K, L, and M are consistently at approximately 80 to 90 percent occupied. A summary of the total campus-wide existing parking utilization throughout the day is shown on **Figure 2.8-10**.

Figure 2.8-10 - Total Campus Existing Parking Utilization Over Time



As shown in **Figure 2.8-10**, the total existing parking utilization ranges from 54 percent to 75 percent and peaks during the 12:00 p.m. hour.

To estimate the campus-wide hourly parking utilization with the addition of the Behavioral Health Teaching Facility, the peak anticipated demand was calculated for each hour based on the hourly existing demand and anticipated demand of the facility. A summary of the estimated hourly future parking demand is summarized in **Table 2.8-9**.

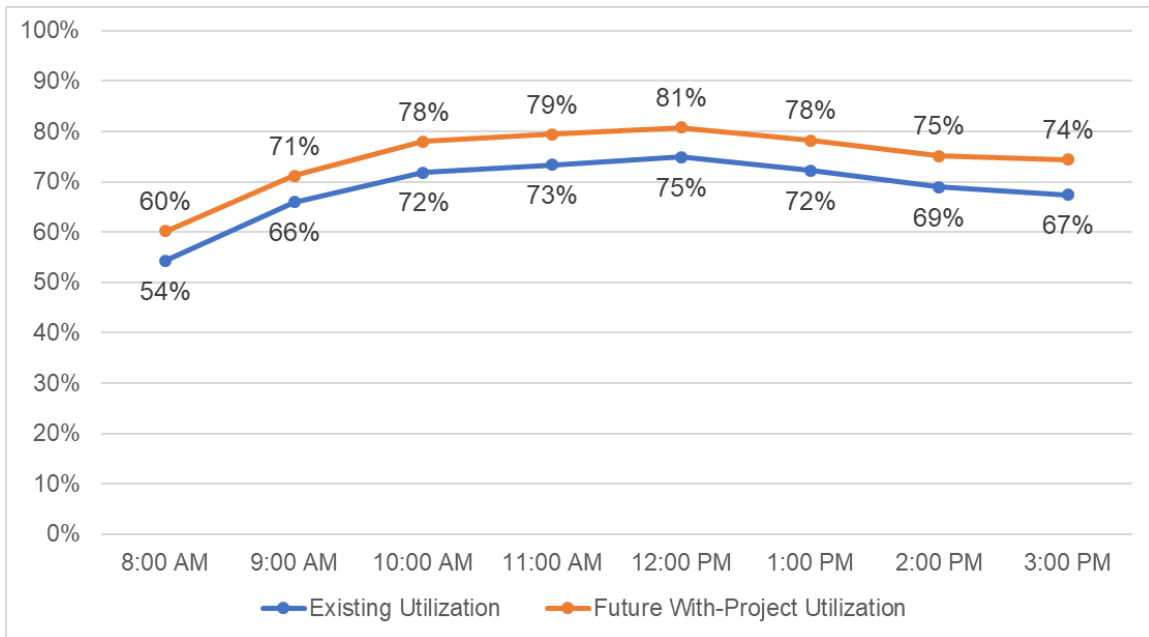
TABLE 2.8-9

FUTURE ESTIMATED HOURLY PARKING DEMAND

Time	Existing Parking Demand (3-Day Average) (veh)	Existing Parking Demand Rate (veh/1,000 sf)	BHTF Demand (veh)	Removal of Existing Demand (veh)	Total Future With-Project Demand (veh)	Future Utilization
8:00 AM	878	1.51	149	-53	974	60%
9:00 AM	1,068	1.84	149	-65	1152	71%
10:00 AM	1,162	2.00	169	-70	1261	78%
11:00 AM	1,188	2.04	169	-72	1284	79%
12:00 PM	1,211	2.08	169	-73	1307	81%
1:00 PM	1,168	2.01	169	-71	1266	78%
2:00 PM	1,115	1.92	169	-68	1216	75%
3:00 PM	1,091	1.87	179	-66	1204	74%

As shown in **Table 2.8-9**, with the 210,000 sf development of the project, the site utilization is anticipated to increase to 81 percent during the mid-day peak period. A summary of the total anticipated future utilization is shown in **Figure 2.8-11**.

Figure 2.8-11 - Total Campus Future Parking Utilization Over Time



As shown in **Table 2.8-9** and **Figure 2.8-11**, the total future parking utilization with the addition of the Behavioral Health Teaching Facility is anticipated to peak at 81 percent

during the 12:00 p.m. hour. The anticipated future peak parking demand could be accommodated by the existing parking supply with no additional parking proposed with the project.

Parking Utilization Study – Sensitivity Analysis

This section summarizes the future utilization should an additional 80 spaces be created on campus. With an additional 80 stalls the campus supply would increase to 1,698 stalls. Based on a future peak demand of 1,307 vehicles, the utilization would be 77 percent. This represents a decrease of 4 percent as compared to a no additional parking scenario.

Construction Impacts

Construction activity for the site is anticipated to occur over a 22-month period starting in third quarter of 2021. Construction traffic is expected to include material deliveries such as steel, concrete, and other building materials. Demolition of the existing structure and excavation for foundations will also create truck traffic in the area. Based on information for the contractor daily truck traffic to the site is anticipated to vary from a high of 41 per day to a low of 4 per day. The peak daily truck activity is expected to occur for approximately 5 months out of the construction schedule.

Construction access to the site is proposed via the northeast corner of the site. Construction activity will be limited to large vehicles only that would not fit under the pedestrian bridge located on campus. Examples of these vehicles include large semi deliveries, concrete trucks, and larger dump trucks. All other vehicles will utilize the main access on 115th Street.

Haul routes to/from the site will be coordinated with SDOT and SDCI through the Construction Management Plan (CMP) process. The CMP would outline work hours, communication strategy, and community protocols. Regardless of the access approved by the City, construction traffic along Meridian Avenue between N 115th Street and N 120th Street will be restricted per the MIMP requirements.

Limited parking will be provided on site for contractor parking. As such, parking for construction workers will occur off-site and workers will either access the site via walking or shuttles, depending on the proximity of off-site parking.

2.8.3 Conclusions

This section summarizes the transportation impacts associated with the proposed UW Behavioral Health Teaching Facility located on the UW Medical Center – Northwest campus in North Seattle. General findings and recommendations include:

- The additional 210,000 sf Behavioral Health Teaching Facility is anticipated to generate 120 new weekday AM peak hour trips and 73 new weekday PM peak hour trips.
- No operational impacts are anticipated at the off-site study intersections with the addition of the UW Behavioral Health Teaching Facility. All study intersection operate at LOS E or better with the proposed addition during the AM and PM peak hours, meeting City guidelines for acceptable LOS.
- Both site accesses are anticipated to operate at LOS D or better under future (2023) with-project conditions during the AM and PM peak hours. Both site accesses meet City guidelines for acceptable LOS and no operational impacts are anticipated with the addition of the project.
- The project would meet City’s transportation concurrency requirements.
- Parking demand for the proposed project would be accommodated on-site by the existing parking supply with no additional parking proposed with the project. With no additional parking provided with the project, the site-wide peak utilization would be 81 percent. With up to 80 spaces provided, the site-wide utilization would be 77 percent.

2.8.4 Mitigation Measures

No transportation related mitigation measures have been identified based on the findings of the Transportation Impact Analysis. Construction related impacts are a short-term impact that will be mitigated through the CMP. This CMP will be developed, reviewed, and approved by the City of Seattle.

2.8.5 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts have been identified with the development of the UW Behavioral Health Teaching Facility.

2.9 WATER AND STORMWATER

This section of the EIS Addendum provides a discussion on existing water and stormwater conditions, compares the probable significant impacts under the proposed BHTF Project on water and stormwater to those conditions identified in the 1991 EIS, indicates the applicability of mitigation measures identified in the 1991 EIS, and identifies applicable “best management practices” incorporated into the project design or new mitigation measures (if any).

2.9.1 Affected Environment

1991 EIS

Stormwater

The 1991 EIS indicates that stormwater from the Northwest Hospital campus (campus) was collected and passes through a stormwater detention pond located in the southwest corner of the campus. Runoff is collected in catch basins and other inlets and transported by drain lines to the detention pond. The site of the proposed BHTF Project currently contains the existing D-Wing building and impervious surface from this building is collected and transported to the detention pond as well. Water collected in the detention pond is released via a storm control manhole and flows through the Evergreen Washelli cemetery site to the south and eventually travels to Thornton Creek which outlets to Lake Washington near Matthews Beach. As part of the West Campus Medical Office Building and related parking lot modifications, the existing stormwater detention pond would be reconstructed and shifted to the west, but no change in storage capacity would be provided. In addition, the City of Seattle indicated that upgrades to N 115th Street would allow stormwater from the campus to travel eastward instead of southward.

No major flooding problems were observed in areas to the north of the campus. In areas to the south, Evergreen Washelli reported flooding issues on their site immediately south of the campus. Based on investigations, it was found that the maximum capacity of the stormwater system on the Evergreen Washelli site was limited by one link in the system that was substantially smaller than all others on the site, which the cemetery indicated they plan to repair the system to reduce the potential for flooding.

Water Supply

The 1991 EIS indicates that water service for the campus is provided by a Seattle Water Department distribution system in the north end of the City. The campus connections to the distribution system occur via an 8-inch diameter main pipe at the intersection of N 115th Street and Meridian Avenue N and in N 120th Street. Within the campus, water is distributed through a private 10-inch diameter supply line pipe and loop system. Nine fire hydrants are connected to the existing loop system to provide fire protection for the campus. The campus irrigation system is also connected directly to the main water supply line.

At the time of the 1991 EIS, there were no identified problems in the local water distribution system. However, fire flow capacity in the area was less than the ideal standard of 1,500 gpm. The overall annual water consumption for the campus was approximately 32.5 million gallons, including approximately 25.3 million gallons for domestic water use purposes and approximately 7.2 million gallons for irrigation. In drier, summer months, water use increases substantially due to irrigation needs (an increase of approximately 85 percent compared to winter months).

EIS Addendum

Stormwater

Stormwater facilities on the campus remain similar to those described in the 1991 EIS. Stormwater on the campus is collected in catch basins and other inlets and transported by drain lines to the detention pond. The existing D-Wing building is located on the site of the proposed BHTF Project and stormwater from the existing building is routed to the existing detention pond.

New development constructed subsequent to the issuance of the 1991 EIS (e.g., the Seattle Cancer Care Alliance Proton Therapy Building, the McMurray Medical Building, and the West Parking Garage) is also served by the existing detention pond. As part of previous new development on the campus, street improvements have been completed to N 115th Street including upgrades to the public stormwater drainage pipe and an extension of the existing water main. Stormwater from the campus continues to be routed to the south through the Evergreen Washelli cemetery. As part of the upgrades in N 115th Street, a flow control structure was installed at the downstream end of the campus stormwater system to regulate flows to not exceed the capacity of the downstream system which helped resolve flooding issues on the Evergreen Washelli site.

Water Supply

Water service for the UW Northwest campus continues to be provided by the City of Seattle. Campus buildings (including the existing D-Wing building) are served by a private 10-inch diameter supply line pipe and loop system that is connected to the existing City system at the intersection of N 115th Street and Meridian Avenue N and in N 120th Street.

Water demand on the campus has increased subsequent to the issuance of the 1991 EIS as a result of new development of the Seattle Cancer Care Alliance Proton Therapy Building, and the McMurray Medical Building. However, no issues with water supply and water service have been noted. As noted above, an extension of the existing water main in N 115th Street was also completed as part of street improvements to N 115th Street in conjunction with previous new development on the campus.

2.9.2 Environmental Impacts

1991 EIS

Stormwater

Development under the Master Plan as analyzed in the 1991 EIS would increase the amount of impervious surfaces on the campus and as a result an associated increase in the amount of stormwater from the campus would be anticipated. Based on City of Seattle requirements identified in the 1991 EIS, the size of the detention pond would need to be increased¹ in order to accommodate development under the Master Plan and a potential 25-year storm event. The allowable release rate from the detention pond would remain the same (4.0 cubic feet per second) and therefore, development under the Master Plan would not increase the intensity of flow conditions downstream from the campus. However, because additional water would be collected and released over time, there would be some increase in the duration of downstream flooding until previously identified improvements in N 115th Street² and on the Evergreen Washelli site are completed.

Water Supply

Increased water consumption and potential impacts on water supply were analyzed as part of the 1991 EIS. Increases in water use would be anticipated with new medical facility

¹ Increased to approximately 57,000 cubic feet of capacity (1991 Final EIS).

² Improvements to the stormwater systems in N 115th Street have been completed in association with previous development under the Master Plan.

development under the Master Plan; however, irrigation demands for the campus would be reduced due to the reduction in existing landscaping to accommodate new development³.

EIS Addendum - Proposed BHTF Project

Stormwater

The proposed BHTF Project would be located on the site of the existing D-Wing building and is not anticipated to substantially increase the amount of impervious surfaces given that the site is largely comprised of impervious surfaces. With the proposed project, stormwater for the site would be designed in accordance with the City of Seattle Stormwater and Drainage Code (SMC Title 22). Similar to the rest of the campus, it is anticipated that stormwater from the proposed BHTF Project site would continue to be collected in the detention pond and released via the storm control manhole to the City's stormwater conveyance facilities in N 115th Street. Development of the proposed BHTF Project would be within the range of development analyzed in the 1991 EIS and with compliance with existing code regulations and applicable mitigation measures, no significant stormwater-related impacts would be anticipated.

The reconfiguration of existing surface parking lots could increase the amount of impervious surfaces on the campus. Stormwater generated on any increased impervious surfaces would be collected and treated by the existing system and consistent with code regulations. No significant stormwater-related impacts under the reconfiguration of existing surface parking lots would be anticipated.

Water Supply

Water service for the campus and the proposed BHTF Project would continue to be provided by Seattle Public Utilities. It is anticipated that similar to other buildings on campus (including the existing D-Wing building), the proposed BHTF Project would connect to the existing private 10-inch diameter supply line pipe and loop system that is connected to the existing City system at the intersection of N 115th Street and Meridian Avenue N and in N 120th Street. Development of the proposed BHTF Project would be within the range of development analyzed for the campus in the 1991 EIS and with compliance with existing regulations and applicable mitigation measures, no significant water-related impacts would be anticipated.

³ Total annual campus water use in the 1991 Final EIS was estimated at approximately 47.4 million gallons for domestic water use purposes and approximately 7.2 million gallons for irrigation.

2.9.3 Conclusions

The potential water and stormwater-related impacts from the proposed BHTF Project would be similar to those identified in the 1991 EIS, and no additional significant impacts would be anticipated.

2.9.4 Mitigation Measures

Mitigation measures for potential water and stormwater-related impacts are identified in the 1991 EIS and are applicable to the proposed BHTF Project. Because no additional significant impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

2.9.5 Significant Unavoidable Adverse Impacts

As identified in the 1991 EIS, development on the campus (such as the proposed BHTF Project) would result in increased demand for water and an increase in stormwater generated from the campus; however, with the implementation of mitigation measures, these impacts would be minimized. No additional significant unavoidable adverse water or stormwater-related impacts would be anticipated.

2.10 SOLID WASTE

This section of the EIS Addendum provides a discussion on existing solid waste conditions, compares the probable significant impacts under the proposed BHTF Project on solid waste to those conditions identified in the 1991 EIS, indicates the applicability of mitigation measures identified in the 1991 EIS, and identifies applicable “best management practices” incorporated into the project design or new mitigation measures (if any).

2.10.1 Affected Environment

1991 EIS

The 1991 EIS indicates that solid waste streams and disposal methods include: incineration of hospital-generated infectious waste on-campus (including most materials from patient-care areas but excluding sharps); kitchen waste and general trash is incinerated on-campus; incineration ash is transferred to approved landfill; hazardous and infectious materials not suitable for incineration is transferred to approved off-campus area for disposal; materials suitable for recycling are transferred to recycling center; and, collection, storage and transfer once a month of materials not recycled, incinerated, or otherwise transferred from the campus.

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Subsequent to the issuance of the 1991 EIS, the incinerator was removed from campus and all solid waste is currently hauled from the campus to off-site locations. Solid waste collection for the campus continues to be provided by the City of Seattle via a contract with Waste Management. While the amount of solid waste generated by the campus has increased due to new development that is consistent with the Master Plan and the 1991 EIS, recycling efforts on the campus have also increased, thereby reducing the overall amount of solid waste that would be produced by recent development.

2.10.2 Environmental Impacts

1991 EIS

The output of solid waste is largely related to the inpatient capacity on campus as outpatient services typically generate very little waste (little to no meals and small amounts of infectious waste). Development under the Master Plan as analyzed in the 1991 EIS would result in an increase in inpatient bed capacity which would result in an associated increase in waste streams on the campus, including an increase in infectious waste.

Infectious waste was assumed to continue to be accommodated by the incinerator that was in place at the time of the 1991 EIS (and planned upgrades to the incinerator). Non-incinerated waste would continue to be handled as under current conditions. As recycling efforts continue to intensify on campus the amount of solid waste from the campus would be minimized even further.

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The development of the proposed BHTF Project would increase the amount of building space and inpatient capacity on the campus, which would result in an associated increase in solid waste and infectious waste. However, development of the proposed BHTF Project would be within the range of overall development and assumed solid waste generation for the campus analyzed in the 1991 EIS. With compliance with existing applicable code regulations and mitigation measures that were identified in the 1991 EIS, no significant solid waste-related impacts would be anticipated. It is anticipated that the campus would also continue to enhance recycling programs which would further minimize solid waste generation from the campus, including the proposed BHTF Project.

The reconfiguration of existing surface parking lots would not be anticipated to generate solid waste.

2.10.3 Conclusions

The potential solid waste disposal related impacts from the proposed BHTF Project would be similar to those identified in the 1991 EIS, and additional significant impacts would not be anticipated.

2.10.4 Mitigation Measures

Mitigation measures for potential solid waste-related impacts are identified in the 1991 EIS and are applicable to the proposed BHTF Project. Because no additional significant impacts are identified for the proposed BHTF Project, no additional mitigation measures are required.

2.10.5 Significant Unavoidable Adverse Impacts

As identified in the 1991 EIS, development on the campus (such as the proposed BHTF Project) would result in the increased generation of solid waste; however, with the implementation of mitigation measures, these impacts would be minimized. No additional significant unavoidable adverse solid waste-related impacts would be anticipated.