

# I-405, Tukwila to I-90 Vicinity Express Toll Lanes Project (MP 0.0 to 11.9)

## Attachment H: Hazardous Materials Analysis







## **Title VI**

It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7090.

### **Americans with Disabilities Act (ADA) Information**

This material can be made available in an alternate format by emailing the Office of Equal Opportunity at [wsdotada@wsdot.wa.gov](mailto:wsdotada@wsdot.wa.gov) or by calling toll free, (855)-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.





## **Notificación de Título VI al Público**

Es la póliza de el Departamento de Transportes del Estado de Washington de asegurar que ninguna persona sea excluida de participación o sea negado los beneficios, o sea discriminado bajo cualquiera de sus programas y actividades financiado con fondos federales sobre la base de raza, color, origen nacional o sexo, como proveído por el Título VI de el Acto de Derechos Civiles de 1964. Cualquier persona que cree que sus protecciones de Título VI han sido violadas, puede hacer una queja con la Oficina de Igualdad de Oportunidades (OEO). Para información adicional con respecto a procedimientos de quejas de Título VI y/o información con respecto a nuestras obligaciones sin discriminación, por favor de comunicarse con el Coordinador de Título VI de la Oficina de Igualdad de Oportunidades (OEO) (360) 705-7090.

### **Información del Acta Americans with Disabilities Act (ADA)**

Este material es disponible en un formato alternative. Envíe su petición por correo electrónico al equipo de Oficina de Igualdad de Oportunidades (OEO) en [wslotada@wsdot.wa.gov](mailto:wslotada@wsdot.wa.gov) o llamando gratis, (855)-362-4ADA (4232). Personas sordas o con problemas de audición pueden solicitar llamando el relé de estado de Washington al 711.



## TABLE OF CONTENTS

---

<b>Section 1.0 Introduction</b> .....	<b>1-1</b>
1.1 Purpose of this Report.....	1-1
1.2 Project Description .....	1-1
1.3 Purpose and Need .....	1-2
1.4 Significant Assumptions .....	1-3
1.5 Limitations and Exceptions.....	1-3
1.6 Users Reliance.....	1-3
<b>Section 2.0 Site Description</b> .....	<b>2-1</b>
2.1 Location, Legal Description, And Setting .....	2-1
2.2 Geologic and Hydrologic Setting.....	2-1
2.3 Current Use of the Study Area .....	2-3
<b>Section 3.0 Study Area History</b> .....	<b>3-1</b>
3.1 Historical Resources.....	3-1
3.2 Historical Site Use Summary.....	3-1
<b>Section 4.0 Environmental Review</b> .....	<b>4-1</b>
4.1 Department of Ecology Website Database Review.....	4-1
4.2 Ecology Review Files.....	4-7
<b>Section 5.0 Proposed Property Acquisitions</b> .....	<b>5-1</b>
5.1 Acquisitions .....	5-1
<b>Section 6.0 Summary of findings and opinions</b> .....	<b>6-1</b>
<b>Section 7.0 Conclusions</b> .....	<b>7-1</b>
<b>Section 8.0 Recommendations</b> .....	<b>8-1</b>
<b>Section 9.0 References</b> .....	<b>9-1</b>

## **TABLES**

---

Table 1. Study Area General Information.....	2-1
Table 2. Historical Resources Reviewed.....	3-1
Table 3. ASTM E 1527-13 Standard Environmental Record Sources.....	4-1
Table 4. Sites with Recognized Environmental Conditions.....	4-4
Table 5. Properties Proposed for Acquisition.....	5-1

## **APPENDICES**

---

<b>Appendix A Acronyms and Abbreviations.....</b>	<b>A-1</b>
<b>Appendix B Exhibit 1 – Project Description Graphics.....</b>	<b>B-1</b>
<b>Appendix C Exhibit 2 – Detailed Project Description.....</b>	<b>C-1</b>
<b>Appendix D Exhibit 3 – Topographic Maps.....</b>	<b>D-1</b>
<b>Appendix E Exhibit 4 Mapped RECs.....</b>	<b>E-1</b>
<b>Appendix F Exhibit 5 REC Summary Table.....</b>	<b>F-1</b>

## SECTION 1.0 INTRODUCTION

---

### ***1.1 Purpose of this Report***

This report presents the results of a Corridor-Level Hazardous Materials Analysis (Analysis) prepared by the Washington State Department of Transportation (WSDOT) Headquarters Environmental Services Office at the request of Allison Hanson of the Interstate (I) 405 (I-405) Program Office. This is in support of the I-405, Tukwila to I-90 Vicinity Express Toll Lanes (MP 0.0 to 11.9) project (Project). The project limits and associated footprint is herein referred to as the (Study Area). Refer to Exhibit 1, sheets 1 through 8 for project description graphics of the Study Area.

The Study Area proposes to make several roadway, structural, drainage, and transit improvements to the I-405 corridor. The Project is part of a comprehensive strategy identified in the 2002 *I-405 Corridor Program Final Environmental Impact Statement (EIS)* and subsequent Record of Decision (ROD) to reduce traffic congestion and improve mobility along the state's second-busiest highway. The project is proposed because travelers on I-405 face one of the most congested routes in the state, particularly during peak travel times.

The Project would improve multimodal transportation choices on I-405 for single-occupant vehicle (SOVs), high-occupancy vehicle (HOVs), transit, bicyclists and pedestrians. The additional capacity would reduce congestion between Tukwila and Bellevue, improve overall safety performance, and improve trip reliability for transit, including new bus rapid transit (BRT) service. The addition of direct access ramps at NE 44th Street and 112th Avenue SE would improve access for travelers in the express toll lanes (ETLs), particularly transit and would support BRT development in the corridor. Moving the non-motorized trail from its existing location to the Eastside Rail Corridor Regional Trail would create a more contiguous trail and improved visual conditions for trail users. In addition, the Project would improve the quality of stormwater runoff from I-405. The Project would replace five existing culverts with fish-passable structures.

### ***1.2 Project Description***

In general, the Project proposes to add one lane to I-405 in each direction for about 9 miles beginning on I-405 near State Route (SR) 167 continuing approximately 1 mile north of Interstate 90 (I-90). The Project would also add a general purpose (GP) (auxiliary) lane to southbound I-405 between milepost (MP) 6.7 (north of N 30th Street) and 7.1 (south of NE 44th Street) and MP 9.4 (north of 112th Avenue SE) to 10.5 (north of Coal Creek Parkway). The existing HOV lane on I-405 and the additional lane would be operated as a two-lane ETL system. For a more comprehensive discussion on project descriptions and site-specific changes, please reference Exhibit 1 (sheets 1 through 8), which show the proposed improvements on a series of maps, and Exhibit 2, which describes in detail the improvements proposed with the Project.

WSDOT expects to construct the Project using a design-build contract. Design-build is a method of project delivery in which WSDOT executes a single contract with one entity for design and construction services to provide a finished product. With design-build projects, contractors have the flexibility to offer innovative and cost-effective alternatives to deliver the Project, improve project performance, and reduce project effects. Some design modifications that the contractor may propose could affect the Study Area and design details described in this EA; however, if the contractor proposes modifications not covered by this Analysis, additional environmental review would be conducted as needed.

### 1.3 Purpose and Need

The purpose of this Analysis is to evaluate the existence of Recognized Environmental Conditions<sup>[1]</sup> (RECs) resulting from past or present land use of the Study Area, or potential RECs in the Study Area that could potentially affect project design, construction, and the environment. Identifying hazardous material sites prior to construction decreases the possibility of exposing the public and the environment to hazardous substances that may be a threat to human health or the environment. The information from this survey may minimize cleanup costs and reduce unanticipated project delays. In addition, this Analysis provides information needed to determine whether any supplementary hazardous material investigations should be conducted to evaluate potential risk and liability to the Project.

The WSDOT Hazardous Materials (HazMat) Program conducted the Analysis in general accordance with Chapter 447 of WSDOT's *Environmental Manual* and specific sections of the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Assessment Process, Designation: E 1527-13* (ASTM 2017). This Analysis is considered a right-sized, low-level report and for National Environmental Policy Act (NEPA)/State Environmental Policy Act (SEPA) environmental documentation; the report provides the appropriate level of documentation and analysis necessary to identify potential contaminated sites that might pose a significant effect on the Study Area.

The following is the general agreed-upon scope of work for this analysis, which consisted of the following work tasks:

Reviewing the results of a federal, state, and tribal environmental database search accessed using the Environmental Data Resource, Inc. (EDR) and the Washington State Department of Ecology (Ecology) online databases for listings of sites with known or suspected environmental

---

<sup>[1]</sup> The term *Recognized Environmental Condition* is defined in ASTM E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions." Hazardous or dangerous wastes or substances and release reporting requirements are defined by the Washington State Model Toxics Control Act (MTCA), Washington Administrative Code (WAC) 173-340, and the Washington Dangerous Waste Regulations, WAC 173-303.

conditions in or near the Study Area within the recommended search distances specified by ASTM E 1527-13.

- Reviewing, if accessible, online regulatory agency files regarding listed sites of potential environmental concern relative to the Study Area.
- Reviewing, if accessible, historical aerial photographs, fire insurance maps, Sanborn maps, still photographs, and county assessor site and tax assessor records, to identify past development history on and adjacent to the Study Area relative to the possible use, generation, storage, release, or disposal of hazardous substances.
- Summarizing the results of the environmental analysis and identified RECs, including an opinion regarding the potential for encountering hazardous materials at the Study Area during construction, and a recommendation regarding further investigations.

### ***1.4 Significant Assumptions***

The conclusions of this Analysis are based on research of available current and historical information sources. The HazMat Program cannot and does not warrant or guarantee that the information provided by these sources is accurate or complete. Whenever possible, the program researched more than one information source to substantiate the findings and conclusions of this Analysis.

### ***1.5 Limitations and Exceptions***

This Analysis was prepared for the exclusive use of the WSDOT I-405 Program Office. It is intended to provide the authorized user with an understanding of the potential environmental liabilities associated with the properties as evaluated in this report. The opinions and conclusions set forth in this report are strictly limited to the scope of services at the time they were conducted. Determining whether environmental conditions defined in this report indicate the presence of contamination at levels of concern is a matter of judgment. Liabilities associated with contaminated sites are defined in part by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and for properties located in Washington State, by the Models Toxics Control Act (MTCA).

### ***1.6 Users Reliance***

No other party other than the WSDOT I-405 Program Office is entitled to rely on the information, conclusions, and recommendations included in this report without the express written consent of the HazMat Program. The reuse of the information, conclusions, and recommendations provided in this Analysis outside its intended purpose, and without review and authorization by the HazMat Program, shall be at the user's sole risk. No warranty or other conditions expressed or implied should be understood.

Any electronic form, facsimile, or hard copy of the original document, whether email, text, and/or exhibit, if provided, and any attachments are only a copy of the original document. The original document is stored by the HazMat Program and will serve as the official document of record.



## SECTION 2.0 SITE DESCRIPTION

### 2.1 Location, Legal Description, And Setting

General site information, including property use and environmental setting of the Study Area, is summarized in Table 1.

*Table 1. Study Area General Information*

Topographic Map	U.S. Geological Survey, 7.5 x 15-minute Bellevue South Quadrangle, Mercer Island Quadrangle, Des Moines Quadrangle, Washington topographic quadrangle map, dated 1983, 1983, 2017 respectively (www.geonames.usgs.gov)
Township, Range and Section	Township (T) 23N, Range (R) 5E, Sections (S) 8-10, 17-19, T23N, R 4E, S 22, 23, 24 and 26; and T24N, R5E, Sections 4, 5, 8-10, 16, 17, 20, 21, 28, 29, 31, and 32.
General Site Location	MP 0.0 to 11.9
Site Existing Use	State highway/right-of-way/ residential and commercial lands
Geologic Setting	Bellevue South Quadrangle, Mercer Island Quadrangle, Des Moines Quadrangle, See Section 2.2 for more detailed information of the geologic and hydrologic settings for the Study Area.
Nearest Major Water Bodies	Lake Washington is to the west and north. Cedar and Green/Duwamish River cross the Project
Approximate Surface Elevation	Surface elevation range up to 170 feet above mean sea level, depending on location.
Soil and Geologic Conditions	Subsurface conditions are described in Section 2.2.
Depth to Groundwater	Depth to groundwater in the vicinity generally ranges from approximately 3 to 40 feet below ground surface (bgs) <sup>1</sup> depending upon the location.
Inferred Direction of Shallow Ground Water Flow	Based on topography and site location, groundwater is inferred to flow either in a south to southwest direction towards Lake Washington above I-90, toward Lake Washington below I-90 and towards the major streams based upon topography.

The HazMat Program’s knowledge of the general physiographic setting, geology, and groundwater occurrence in the Study Area is based on their review of maps, reports, and our general experience in the area. The reference to “upgradient,” “downgradient,” and “cross-gradient,” with respect to the direction of groundwater flow, is inferred based on the information in Section 2.2, Geologic and Hydrologic Setting, and assumptions of the relative proximity of significant water bodies in the vicinity.

### 2.2 Geologic and Hydrologic Setting

This section describes the general geologic setting and subsurface conditions in the Study Area. The HazMat Program used this information to determine the potential for contamination to migrate through the soils and groundwater and impact the Study Area.

The I-405 project Study Area is located within the central Puget lowland bordered by the Cascade Mountains to the east and the Olympic Mountains to the west. The Puget lowland is a north-south trending trough consisting of Holocene period deposits generally overlying a sequence of relatively unweathered glacial and interglacial soil deposited during the ice ages of the Quaternary period. This region has experienced at least six glaciations in the past 2 million years. In the central Puget lowland, the most complete geologic record of the Quaternary period exists for the most recent glaciation, the Vashon stade of the Fraser glaciation. The advance and retreat of the Vashon age Puget glacial lobe, between roughly 13,000 to 18,000 years ago, deposited most of the near-surface materials and sculpted most of the present landforms within the Puget lowland. The deposits of this glacial episode reflect a wide range of glacial depositional environments. As the glacier advanced southward, streams deposited sediment that formed a broad plain in front of the advancing glacier. Gravel-size material was deposited close to the glacier, while silt and clay material was transported farther from the glacier. The advance deposits, therefore, grade from coarse to fine with increasing depth, with silts and clays (lake deposits) at the base, then coarse-grained sand and gravel at the top. Lodgement till, consisting of a non-stratified, well-graded deposit of particle sizes ranging from clay to large boulders, was deposited directly from the glacier itself. The most conspicuous aspect of glacial till is its consolidation, the result of being overridden by the glacial ice. The maximum ice thickness was roughly 3,000 feet in the project vicinity. As the glacier retreated, the depositional sequence was repeated in the reverse order of the glacial advance, with first coarse-grained gravel and sand, then fine-grained silts and clays. The retreat was rapid relative to the advance of the glacier, and the recessional deposits are generally not as thick as the advance deposits nor are they as densely compacted because they were not overridden by the glacial ice.

Following the Fraser glaciation, Holocene period sediments were deposited over the glacial soils. These deposits typically consist of alluvial soils in river valleys, beach and marine deposits along shorelines and colluvial deposits (landslide materials) along slopes. Peat and other organic soils occur in numerous depressional areas at the surface. Some of these Holocene period sediments have been modified by human activity, including over-excavation and replacement beneath portions of the Study Area (WSDOT 2006).

Generally, the Study Area is underlain by dense glacial soils. Notable exceptions include the alluvium (deposits from the streams and rivers) in the stream drainages that cross the project alignment, localized areas of artificial fill, lake and peat deposits, and recessional outwash (deposits of sand and gravel from glacial meltwater). The current topography of the Study Area consists primarily of Alderwood sandy loams with gravelly glaciofluvial deposits, along with minor amounts of Everett gravelly sandy loams and Indianola loamy sands as the result of glacial and fluvial processes. The majority of the bedrock in the Tukwila to Renton portion of the Study Area is Renton Formation sandstone. Engineered highway fill underlies much of the existing roadway in the Study Area. In the Green River valley portion of the Study Area, the bedrock is located at depths greater than 100 feet below the existing ground surface.

The Study Area is in the Cedar-Sammamish and Green River Water Resource Inventory Areas (WRIAs 8 & 9, respectively) and includes the following watersheds: Cedar River; Johns Creek; Clover Creek; May Creek; Gypsy Creek; Newport Hills; Coal Creek; Lake Washington/Mercer

Slough Wetland and Green/Duwamish River. There are many stream crossing the Study Area, the main streams crossing I-405 are Johns Creek, May Creek, Coal Creek, and Springbrook Creek. The main receiving waters for the project are the Cedar River, Green River/Duwamish River, Mercer Slough, and Lake Washington. The small tributaries are in the Study Area that drains to Lake Washington or the Green-Duwamish River.

There are two general aquifer systems that will be encountered along the Study Area: the “alluvial aquifers” and the Uplands Aquifer System. The aquifers are unconfined systems. The alluvial aquifer system includes alluvium deposits, alluvial fan deposits, and sediments along the various rivers, streams, and creeks.

The Cedar Valley Sole Source Aquifer, the source of the City of Renton’s ground water supply. The depth to groundwater in the Cedar River alluvium is generally less than 25 feet. Groundwater in the May Creek alluvial aquifer is around 15 feet below ground surface, and groundwater in the Coal Creek alluvium is around 15 feet below ground surface in the Study Area. The Upland Aquifer System is located in glacial and interglacial soils throughout much of the northern half of the Study Area. Groundwater flow in the North Upland Aquifer System is not well characterized; however, recharge is thought to be from infiltration of precipitation and septic drainage from residential development

The Green-Duwamish Alluvial Aquifer consists of interbedded loose to dense silty sand with organics and scattered gravel layers, soft peat, organic silt, soft to stiff silt, and clay. Thickness of these sediments varies but can be over 100 feet. Groundwater is shallow in this aquifer, often at less than 10 feet below ground surface, but varies considerably with surface topography and season. In many places, the water table is at or near land surface and is hydrologically connected to wetlands. The permeability of this aquifer is variable. Locally, where silt or clay-rich layers have accumulated, the aquifer has a low permeability and may not yield much groundwater. No groundwater supply wells are receiving water from this aquifer within 0.5 miles of the Study Area (WSDOT 2007).

The Study Area has designated special flood areas along May Creek, the Cedar River, Springbrook Creek, and the Green/Duwamish River.

### ***2.3 Current Use of the Study Area***

The Study Area consists of mixed use property including residential homes, commerce, industry, and transportation options. The segment of I-405 within the Study Area is currently a state highway both northbound and southbound, with intersecting arterial roadways.



## SECTION 3.0 STUDY AREA HISTORY

### 3.1 Historical Resources

The objective of reviewing historical documentation is to develop a history of previous land uses in the Study Area and to assess these uses for potential hazardous materials impacts that may constitute a REC. Our understanding of the history of the Study Area is based on a review of the information from the historical resources listed in Table 2.

*Table 2. Historical Resources Reviewed<sup>1</sup>*

Reference	Provider or Interviewee	Dates of Coverage or Dates of Site Knowledge	Date Reviewed or Contacted	Comment (See Section 4.2 for findings)
Historical City Directories (EDR 2018b)	EDR	1977, 1987, 1992, 1995, 2000, 2005, 2010, 2015	3/2018	City directories were identified that were readily accessible as part of this investigation/plan sheet review to support property purchases.
Sanborn/Metsker Maps (EDR 2018a)	EDR	1904, 1909, 1927, 1944, 1962	3/2018	Sanborn/Metsker maps were limited to portions within the city of the Renton area.
Historic Topographic Maps	geonames.usgs.gov	1950, 1969 and 1983	4/2018	See Section 3.2 for additional details regarding the topographic map review.
Historic Real Estate Maps/ Plan Sheets (King County 2018a)	King County Road Services Map Vault	1936, 1965, 2006, 2007, 2013, and 2014	10/2017	See Section 3.2 for additional details regarding the plan sheet review/real estate maps.
King County Tax Assessor Records (King County 2018b)	Online Review	Recent	10/2017	See Section 3.2 for additional details regarding the study area.

<sup>1</sup>The scale of the photographs reviewed allowed for an interpretation of general site development/configuration, such as identifying most structures, roadways, and clearings. However, the scale of the photographs and pictures did not always allow for identification of specific site features, such as fuel pumps, wells, or chemical storage areas on the sites, if any.

### 3.2 Historical Site Use Summary

Based upon a review of the topographic and historical photos, the area was primarily rural with some industries and residential homes. With the construction of I-405, the study area has become more congested and active and continues on that pathway to this present day. There has been increased numbers of residential homes, commercial industries, local roads, and shopping centers.

### 3.2.1 Historical Maps

Sanborn Maps provide large scaled lithographed street plans that provide details like businesses, schools, utility lines, and public buildings along specific roadways. The HazMat Team reviewed maps from 1927, 1944, and 1962 for a portion of Renton in the study area.

**1927 Map #11** - Renton between the area of Williams, 3<sup>rd</sup> Park, and 5th Avenue.

Service Laundry is located off of 4th on the south side between Wells and Main Street. A garage (assuming for automobile repair) was located on the south side of 4th, one parcel east of the Williams Street. A transformer station was located just north of Beacon Hill Boulevard and before 3rd Avenue. There are primarily residential homes and the Henry Ford Public School.

**1944 Map #14** - Renton Way and the old County Highway.

The map shows the Puget Sound Power and Light Division Services detail (Puget Sound Energy property today) and the Puget Sound Power and Light Coal Mine in the study area. There is a garage to the south of where the County highway and Grady Way connect. Atlas Concrete Pipe Company is approximately 400' south of the garage and off of County Highway just south the Renton/King County Line. The remaining area on this map is primarily single resident homes.

**1944 and 1962 Map #15** - Area between 8<sup>th</sup> Avenue, Main Street, 5<sup>th</sup> Avenue, and Renton Avenue.

The area is primarily residential homes. The Primary State Highway No. 1 was added in the 1962 Sanborn Map just east of Main Street. The 1944 map showed sixteen residential structures where the 1962 map shows the Primary State Highway No. 1.

### 3.2.2 Topographic Maps

Historical topographic maps provide an overview of the study area relative to previous land uses. The HazMat Program reviewed historical topographic maps dated 1968, 1973, and 2017. These maps were viewed from the U.S. Geological Survey's United States Board on Geographic Names website. All obtainable maps may be referenced in Exhibit 3.

**Mercer Island 1950 (photo revised in 1968 and 1973)**

The topographic map shows some commercial buildings along the SE intersection corner of the I-90 and I-405 intersection. East and up the hill, there is a drive-in theater with some residential structures to the south. The Newport Shores bordering Lake Washington has residential roads but limited number of residential structures with 4 piers into the water. The rail line is to the east of I-405. There are residential structures along the lowest points near the land bordering Lake Washington. To the west of I-405 there is a commercial area and piers about 0.5 mile north and south of where May Creek discharges into Lake Washington and between I-405. There are residential homes west of I-405 in homes in the Kennydale and Coleman Point communities. Residential homes shift more to the east side until Renton. A power plant is noted along the shoreline in Renton just south and approximately 400' west of Bryan Mawr.

**Mercer Island 2017**

The details of the previous topographic maps are not there. There are more local roads throughout the study area. There is an additional lane on each way of I-405 south of Bellevue to

112<sup>th</sup> Street. The N. 30<sup>th</sup> Street and I-405 have been modified. The I-405 NE Park Drive ramps have been modified.

#### **Renton 1949 (photo revised 1968)**

The downtown Renton area to the west and north of I-405 is primarily commercial near Lake Washington. Renton Municipal Airport is to the north of I-405. There are additional rail lines coming to I-405 from the Maplewood area where it appears to merge into the existing rail line to the west and north of I-405. There is an underground aqueduct line that appear to go under I-405 about ¼ mile north of the Ford School. A tank is noted on the about 100' west of I-405 on the south just before crossing the Cedar River (baseball fields are on the opposite end across the Cedar River). Along Maple Valley Highway (SR 169) and to the east of I-405 there is a gravel pit. A sewage and disposal facility is located just north of the rail line, which (the rail line) is north of I-405 and the Longacres Race Track (between the Black and Green River). To the north of the sewage and disposal facility is a golf course.

#### **Renton 2017**

Less detail exists as the aqueduct line, tank and Longacres Race Track are no longer on the map. There has been a modification to the SR 167 and I-405 Interchange. The Plasma Medical Institute has been added to the north and west of the I405 and SR 167 Interchange.

#### **Des Moines 1949 (Revised 1995)**

Commercial buildings are in the SE portion of the SR 518/I-405/I-5 Interchange. The NW portion has commercial industry about ¼ mile north and slightly west. The SW portion of the interchange is primarily vegetation and residential roads up the hillside. Sea-Tac Airport is over a mile to the southwest of the interchange.

#### **Des Moines 2017**

Less detail exists in this area but commercial area in the SE portion appears to have expanded.

### **3.2.3 Aerial Photographs**

Historical photographs are valuable to review features on properties and areas over a period of time. The HazMat Program reviewed historical photos dated 1936, 1965, 2007, and 2013 and recorded from King County's Parcel Viewer (King County 2018b) and the King County Road Services Vault Map (King County 2018a). The photos will show that along I-405 in the study area, there was an expansion of residential homes, roads, and commercial industry (which was with both the construction of I-405 and I-90). The vegetation including trees around waterways appear to become sparser with more homes and roads.



## SECTION 4.0 ENVIRONMENTAL REVIEW

### 4.1 Department of Ecology Website Database Review

The HazMat Program conducted an EDR (EDR 2017) and online review of Ecology’s Facility/Site Database website<sup>2</sup> (Ecology 2018) to identify possible RECs. The federal, state, and tribal environmental databases that were searched, and their associated ASTM E 1527-13 minimum search distances, are set forth in Section 8.2.1 of ASTM E 1527-13 and described in Table 3.

*Table 3. ASTM E 1527-13 Standard Environmental Record Sources*

Record Source (Abbreviation)	Agency	Search Distances	Description
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	USEPA	1/2 mile	The CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and private persons and lists sites that are either proposed for or on the National Priorities List.
National Priorities List (NPL)	USEPA	1 mile	The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program.
CERCLIS No Further Remedial Action Planned (NFRAP)	USEPA	1/2 mile	The CERCLIS-NFRAP contains data on CERCLIS sites that have been listed for no further remedial action.
Resource Conservation and Recovery Act (RCRA)	USEPA	1 mile	The RCRA database includes selective information on large and small quantity (RCRASQG and RCRALQG) generators of hazardous waste as well as treatment, storage, and disposal facilities as defined by the RCRA. If a site is identified as a RCRA generator, it does not mean that a release of hazardous materials has occurred at the site; however, the presence of these materials at a site increases the potential that a release could occur.
RCRA Non-Corrective Action Report (CORRACTS) TSD (Transporter, Storage and Disposal)/RCRA-TSDF (RCRA- Treat, Store and Dispose)	USEPA	1/2 mile	RCRA Non-CORRACTS TSD database identifies sites which generate, transport, store, treat or dispose of hazardous waste as defined by RCRA.
RCRA CORRACTS	USEPA	1 mile	The CORRACTS database identifies hazardous waste handlers with RCRA corrective action activity.
US Institutional/Engineering Controls (US INST/ENG CONTROL)	USEPA	Property only	The US INST CONTROL or US ENG CONTROLS is the listing of sites with institutional or engineering controls in place.
Emergency Response Notification System (ERNS)	USEPA	Property only	The ERNS records and stores information on reported releases of oil and hazardous substances.

<sup>2</sup>The Facility/Site Database identifies Ecology-regulated facilities such as Washington State cleanup sites, federal Superfund sites, hazardous waste generators, solid waste facilities, underground storage tanks, and dairies.

Record Source (Abbreviation)	Agency	Search Distances	Description
Confirmed and Suspected Contaminated Sites List (CSCSL)/State Hazardous Waste Site (SHWS)	Ecology	1/2 mile	The CSCSL/SHWS is a listing of the State Hazardous Waste Sites, which is Washington's equivalent to the federal CERCLIS list. The sites have known or suspected contamination. The type of media affected and type of contaminant are typically listed in the database.
Landfill & Solid Waste Facilities (State Landfill)	Ecology	1/2 mile	The state landfill records contain an inventory of solid waste disposal facilities or landfills in Washington. These may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.
Underground Storage Tank (UST) Database	Ecology	Property & adjoining properties	USTs are regulated by Subtitle I of RCRA and most must be registered with Ecology. The UST database contains information on the site location, number of tanks present, materials stored, dates of installation and removal, and other pertinent information for registered USTs. Sites identified in this database include only those registered with Ecology as containing regulated substances. This database does not include underground residential heating fuel tanks or tanks used for farm applications.
Leaking Underground Storage Tank (LUST) Site List	Ecology	1/2 mile	The LUST list contains an inventory of reported leaking UST incidents. The LUST list may also identify the type of material released and the affected media (e.g., air, soil, or water).
Washington Independent Cleanup Report (WAICR) Voluntary Cleanup Program Sites (VCP)	Ecology	1/2 mile	The WA ICR lists sites that have submitted independent remedial action reports to Ecology. The VCP database includes sites that have entered into the state VCP or its predecessor Independent Remedial Action Program.
Brownfield sites	Ecology	1/2 mile	A listing of Brownfield sites included in the CSCSL/SHWS. Brownfield sites are abandoned, idle, or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination.

The HazMat Program evaluated for REC's within a 0.50-mile search radius of the Study Area where construction is anticipated to occur. The 0.50-mile radius was selected because it reasonably encompasses the areas from which contamination could be expected to migrate from known or suspected RECs into the Study Area based on topographic and hydrologic conditions.

The EDR and online Ecology database review identified 304 listed sites within the 0.50-mile radius search of the Study Area that potentially qualified as a REC and that could affect the Project during construction. A site map and listed sites identified as potential RECs are shown in Exhibit 3. In addition, the HazMat Program also evaluated the Burlington Northern Railroad as a potential REC because of its proximity to the Study Area and historical land use.

Based on the historical records, land use, and regulatory database review, 272 of the 304 sites were deemed unlikely to affect the Project and were immediately eliminated from further consideration due to one or more of the following reasons:

- Sites listed exclusively on the RCRA Facility Index System/Facility Registry System (FINDS), Facility Site Identification System (FSIS), and National Pollutant Discharge Elimination System (NPDES) databases were eliminated. Sites that are listed on these databases, generate regulated materials but provide no indication of hazardous materials releases.
- Sites listed exclusively on the Spills Prevention, Preparedness, and Response Division (SPILLS) database were eliminated. Sites listed on this database have a documented one-time spill that was either remediated or was de minimus in nature requiring no further action (NFA). These sites are not included on other lists that indicate soil or groundwater contamination.
- Sites listed exclusively on the Underground Storage Tank (UST) database and are not anticipated to be acquired and/or are not located immediately adjacent to the Study Area.
- Sites located greater than 0.50-mile away were eliminated due to the low likelihood of contamination migrating onto the Study Area, due to their relative distance and concentrations below MTCA cleanup levels.
- Sites that have been remediated below MTCA cleanup levels and issued a NFA, or sites that were listed with only contaminated soil not immediately adjacent to the Study Area.
- Sites that did not appear to pose a significant potential for hazardous material-related risks (i.e., UST closure/removal, or RCRA-hazardous materials generators with no documented spills or leaks).

The remaining 32 sites qualified as RECs, and were further evaluated using risk analysis to determine the level of potential impact on the Study Area and potential for cleanup liability during construction.

**Table 4. Sites with Recognized Environmental Conditions**

Sites	
Factoria Shell	USAMinimart
Cleaner One Bellevue	Chevron
Barbee Mill Company, Inc.	Thrifty Car Rental
Rossie, Inc.	Family Fun Center
J&M Machine	Group Health Cooperative
Renton Daily Grow	Tukwila Gull 240
Sunset Cars	Daniel Boone Paints
Tire Store	Puget Sound Energy (3X)
Stoneway Concrete	WA Pacific Car and Foundry
Qwest Corporation	Renton Junction Landfill
Taylor Auto Body	Renton Sand and Gravel
Service Linen Supply	Southend Arco
LTS Trucking	Factoria Shell
Gull	Pan Adobe
Sound Ford	Quendall Terminal Loading Racks
Renton Village	BNSF Railroad

The HazMat Program assigned each site as a Low, Low to Moderate, Moderate, Moderate to High, or High impact ranking. These sites, which the HazMat Program reviewed on Ecology’s Toxics Cleanup Program Web Reporting website (Ecology 2018) and mapped on Exhibit 4 (sheets 1 and 2), are listed in Exhibit 5.

**4.1.1 Low Impact**

This risk level identifies RECs where the likelihood for the site to affect the Study Area is low because there was no evidence to suggest that groundwater from the REC, or the contamination from off-site migration is not expected to affect the Study Area. Low-risk sites may also include potentially contaminated sites where remediation has previously occurred, but limited excavation is anticipated near the site and/or disposal of excavated soils or groundwater is considered relatively straightforward. Low impact sites details are shown in Exhibit 4 as they are not discussed further below.

**4.1.2 Low to Moderate Impact**

The risk level identifies RECs where the likelihood for the site to affect the Study Area is low because the limited evidence to suggest that soils and groundwater from the REC has affected, or the contamination from off-site migration is not expected to affect to affect the Study Area. Low to moderate risk sites may include sites that are awaiting site characterization and also include sites that have the potential to be acquired, but the remediation of the site, based upon WSDOT potential impact should be relatively straightforward.

### 4.1.3 Moderate Impact

This risk level identifies RECs where the likelihood for the site to affect the Study Area is moderate due to the type or extent of contaminant, groundwater from the REC is affected and has the potential to affect the Study Area from off-site migration, but there is no conclusive evidence. Moderate risk sites may also include sites that have the potential to be contaminated and would be acquired by WSDOT, but remediation of contamination, if present, is considered relatively straightforward.

### 4.1.4 Moderate to High Impact

The risk level identifies RECs where the likelihood for the site to affect the Study Area was moderate due to the type or extent of contaminant, groundwater from the REC is affected and has the potential to affect the Study Area from off-site migration, but the evidence is conclusive but not extensive. Sites may also have a moderate to high risk if WSDOT anticipates acquiring property where the source of the contamination has been documented or was located.

### 4.1.5 High Impact

This risk level identifies RECs where the likelihood for the site to affect the Study Area is high, contamination is known to be extensive, and conclusive evidence has indicated that the REC has directly affected the project. Sites may also have a high risk if WSDOT anticipates acquiring all of the property or the specific portion where the source of contamination is or was located.

Based on the risk analyses the HazMat Program performed for the 32 potential RECs, 22 sites were assigned a Low impact ranking and are shown in Exhibit 4. The remaining 10 (8 were assigned a Low-Moderate ranking, 1 was assigned Moderate-High ranking, and 1 was assigned High ranking that could affect the Study Area) are discussed below.

- **Quendall Terminal Loading Racks, Facility Site (FS) Identification (ID) Number (#) 61436398/2045 - High Risk**

The site is located at 4500 Seahawk Way in Renton. The Quendall Terminal Loading Racks site is awaiting cleanup. WSDOT proposes a purchase of a parcel to construct in the area for the Project. The Quendall Terminal site was used in the early 1900's to off-load sludge from the surrounding gas to coal operations. Industrial use continued there until 1971. A log yard with other operations were there until 2001. Ecology oversaw studies and early cleanups until 2006, when the site was listed on the federal superfund project list<sup>3</sup>. The EPA is now overseeing the cleanup efforts (EPA 2017). Based on the history of the Quendall loading racks, a sampling event was completed in the summer of 2017 in the area for purchase. The sampling event identified petroleum hydrocarbons in soil from 10 to 12 feet below ground surface (bgs); carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and/or naphthalenes were detected above cleanup level in the shallow soil fill. It may be associated with the black fill soil debris that was encountered

---

<sup>3</sup> JH Baxter was found to be a potential liability person. JH Baxter had been listed in previous reports as a substantially contaminated facility. The facility is located at 5015 Lake Washington Boulevard facility. The facility is now delisted from the National Priority List and is listed as a NFA under Ecology's facility site database which is why it is not included as a REC. Please note that there are still environmental covenants and restrictions that must be met at this facility.

from approximately 10.5 to 15.5 feet bgs. Groundwater levels varied throughout the site ranging from 5.5 to 18 feet bgs. Total arsenic was detected in the groundwater samples, and total chromium and lead were detected above cleanup levels in the groundwater samples (GeoEngineers 2018a and 2018b).

- **Pan Adobe, FS ID # 91368749** - Moderate to high ranking

The site is located at 4350 Lake Washington Boulevard in Newcastle/Renton. The Pan Adobe site is listed in EDR and Ecology's database for having USTs on site. Previous WSDOT reports indicate the two USTs along with documented contamination exists on the site. The two USTs contained leaded and diesel fuel. However, Ecology's database also indicates that the USTs may have been removed. There is no supporting documentation to confirm the USTs have been removed. WSDOT has requested information from Ecology's archives as this is a full parcel purchase. In addition, the King County Assessor's review of the parcel indicated two structures on site; a drive-by noted five structures on the site. Additional investigation is recommended.

- **Washington Pacific Car and Foundry, FS ID #2065** - Low to moderate

The site, a Superfund site, is located at 1400 North 4<sup>th</sup> Street in Renton. The site is listed for confirmed conventional contaminants, inorganics, metals, metal priority pollutants, non-halogenated solvents, petroleum products, phenolic compounds, polychlorinated biphenyls, and carcinogenic polynuclear aromatic hydrocarbons (cPAH) in the soil. Site is also listed for confirmed halogenated organics and metals in groundwater. Nearest anticipated project excavations to this site are for the NE Park and Sunset Boulevard Bridges. Groundwater flow and waste migration should not be towards these excavation activities.

- **Stoneway Concrete, FS ID # 62244377** - Low to moderate

The site, is located at 1915 SE Maple Valley in Renton. The site is a concrete producing facility. The site is listed for contamination in the soil and groundwater. The soil contains petroleum, diesel, heavy oil products, and formaldehyde. The groundwater contains formaldehyde, arsenic, and high alkaline PH. There is also a soil vapor that contains formaldehyde. The groundwater is dependent upon the Cedar River for recharge, not vice versa. The potential migration pathways for the contamination is northwest but may be limited in distance by the hydrology. The Project proposes a stormwater feature northwest of this facility.

- **Renton Junction Landfill, FS ID # 2168** - Low to moderate

The site is located at 1800 Monster Road in Renton. The site is listed for suspect halogenated organics in the soil, surface water, and groundwater. No site assessment has been completed. Historical landfills without site assessments can be a risk for any excavations near the area. The existing rail lines and river add to the complexity of the project if excavation happens in this area. Although not highly anticipated, any excavation for tolling gantries near this area would move the risk from low to moderate.

- **BNSF Railroad** - Low to moderate

WSDOT is proposing to purchase a strip of the BNSF Railroad right of way that is now part of the Lake Washington trail system. Rail lines have historically been known to have petroleum, creosote, and heavy metals contamination in and along the rail lines. Although contamination should have been addressed during the construction of the trail, there may still be residual contamination present.

- **Puget Sound Energy (Three Parcels), FS ID # 16479184584, # 86541136, and # 21349929** - Low to moderate

Puget Sound Energy (which now is Sam's Club) address is 915 Grady Way in Renton. The site has three parcels listed with documented polychlorinated biphenyls (PCBs), petroleum, and metals contamination in the soil and/or groundwater. WSDOT intends to purchase property in the SE ¼ of the NE ¼ of Park Drive west of Sunset Boulevard. Ross Fenton from the I-405 Team wrote a memo to Ecology in 2007 that the portions of the properties WSDOT intends to purchase will not affect the remedial actions that are to be completed at the site. Existing contamination still exists in the south end of the property and the potential for any utility relocates in this area would increase the risk to a moderate impact.

- **Southend Arco, FS ID # 11572949** - Low to moderate

The site is located at 5800 Southcenter Boulevard in Tukwila. The site is listed on Ecology's/EDR's database for petroleum contamination in the soil and groundwater. According to the June 2017 groundwater monitoring report, cleanup levels were exceeded for total petroleum hydrocarbons, benzene, total xylenes, ethylbenzene, ethylene, dibromide, and total lead. Although the risk is currently considered low, it may increase to a moderate impact if the extension of the inside lanes being proposed near this facility will require excavations to the groundwater level.

## 4.2 Ecology Review Files

The HazMat Program conducted a file review for the Puget Sound Energy and Pan Adobe sites. No additional file reviews were completed due to the following:

- Site was not listed on Ecology's database
- Additional information was already researched online
- Previous reports contained the necessary information
- The initial investigation determined there was no further information available to review



## SECTION 5.0 PROPOSED PROPERTY ACQUISITIONS

### 5.1 Acquisitions

The Project proposes partial or full acquisitions of 53 properties, as shown in Table 5. Four of the 53 sites proposed for acquisitions qualify as potential RECs are listed below and are discussed in further detail in Section 4.1:

- Quendall Terminal Loading Racks
- Pan Adobe
- BNSF
- Puget Sound Energy

*Table 5. Properties Proposed for Acquisition*

WSDOT Parcel Number	Property Name	Property Address
1-24330	Tasca, James G	3804 Meadow Ave N Renton
1-24331	Kullmann, Christopher G	3820 Meadow Ave N Renton
1-24332	Chuang, Sengchanh & Oudanonh, Jasmine	3904 Meadow Ave N Renton
1-24334	Williams, George B.	3908 Meadow Ave N Renton
1-24335	Stoudamire, Alegria Cyprian & Washington, Christopher L.	3922 Meadow Ave N Renton
1-24336	Lee, Donald	3926 Meadow Ave N Renton
1-24339	Bowen, Jeremy M & Monica J	3932 Meadow Ave N Renton
1-24340	Richter, Gary H Jr & Kristina L	3940 Meadow Ave N Renton
1-24341	Meadow Partners LLC	4008 Meadow Ave N Renton
1-24391	Singh, Rupinder & Amandeep Gill	5467 Lake Wa Blvd SE Bellevue
1-24392	Garcia, Erik R & Voelbel, Kathleen	5449 Lake Wa Blvd SE Bellevue
1-24393	Cannon, George	Vacant
1-24321	Puget Sound Energy	SE of NE Park Dr West of Sunset Blvd NE Renton
1-24355	Kim, Kay Yuri & Barone Garden	2151 Lake Wa Blvd NE Renton
1-24356	4904 Lake Wash Blvd LLC	4904 Lake Wa Blvd NE Renton
1-24372	Koch, Theodore A & Kristine A	6615 109TH PL SE Newcastle
1-24373	Shapiro, Daniel Benjamin & Delarosa, Sina	6607 109TH PL SE Newcastle
1-24374	Nguyen, Anne N	6601 109TH PL SE Newcastle
1-24378	Quendall Terminals	4503 Lake Wa Blvd N Renton
1-24375	Alper, Gabriel	10900 SE 66th St Newcastle
1-24376	Sharp, Fred R.	nextdoor to 10900 SE 66th St

DESKTOP CORRIDOR-LEVEL HAZARDOUS MATERIALS ANALYSIS  
I-405, TUKWILA TO I-90 VICINITY EXPRESS TOLL LANES PROJECT (MP 0.0 TO 11.9)

WSDOT Parcel Number	Property Name	Property Address
1-24362	Dire, Angela L	6945 Lake Wa Blvd SE Newcastle
1-24363	Balmer, Jody S & Kari L	6941 Lake Wa Blvd SE Newcastle
1-24364	Brown, Ronald J & Karen Shiver	6929 Lake Wa Blvd SE Newcastle
1-24365	Nguyen, Tri Duy & Le, Phu Thi-Thanh	6841 Lake Wa Blvd SE Newcastle
1-24366	Hong, Jiang fka <i>Tran, Anthony &amp; Hue T</i>	Vacant nextdoor to 6815 Lake Wa Blvd SE Renton
1-24367	Gambini, Harold	6821 Lake Wa Blvd SE Renton
1-24368	Chan, Kwok Chun & Tong, Irene Wai Yi	6819 Lake Wa Blvd SE Newcastle
1-24369	Kassam, Faizel M, Trustee for The Faizel M. Kassam Trustand Kassam, Zahirra	Vacant Nextdoor to 6841 Lake Wa Blvd SE Renton
1-24370	Andrade, Julie & Robert G	6633 Lake Wa Blvd SE Newcastle
1-24359	City of Newcastle	064-005 (SE Appraisal District) Newcastle
1-24344	Port Quendall Company Vulcan	Pan Abode Site
1-24345	City of Renton	Lake Washington Blvd N Renton
1-24358	Nguyen, Kenneth H	5101 Lake Wa Blvd NE Renton
1-24347	McDonald's Real Estate Company	1705 NE 44th St Renton
1-24349	Exit 7 Inc Starbucks, The Wine Shop	1785 NE 44th St Renton
1-24350	L J Investment Properties LLC, Newcastle Veterinary	1700 NE 44th St Renton
1-24351	DWO LLC, Denny's	4750 Lake Wa Blvd NE Renton
1-24352	Deitch, Michael J	1800 NE 44th St Renton
1-24354	Public Storage	1755 NE 48th St Renton
1-24320	BNSF Parcels C & D	strip on Houser Way / 405
1-24317	City of Renton Parcel A	strip on Houser Way / 405
1-24316	City of Renton Parcel B	strip on Houser Way / 405
1-24322	RI Renton Land Acquisition (BGC) LLC, Residence Inn by Marriott	900 Houser Way N Renton
1-24319	Puget Sound Energy Operating Property	900 Lake WA Blvd N Renton
1-24420	Chandler, Marsha and Newman, Albert E.	3705 120th AVE SE 98006
1-24421	Renton, Grace L, Trustee Grace L. Renton Irrevocable Income Only Trust	3563 120th AVE SE 98006
1-24422	Houvener, Paul R. & Gale A.	3553 120th AVE SE 98006 mailing: PO Box 13155 Mill Creek 98082
1-24423	Scott, Leamon & Katie D.	3529 120th AVE SE 98006 mailing: 6132 125th Ave SE, Bellevue 98006
1-24424	McIvor, John C. & McIntyre, Julie	3533 120th AVE SE 98006
1-24431	Randhawa, Manjoyt Kaur	3525 120th AVE SE 98006

DESKTOP CORRIDOR-LEVEL HAZARDOUS MATERIALS ANALYSIS  
I-405, TUKWILA TO I-90 VICINITY EXPRESS TOLL LANES PROJECT (MP 0.0 TO 11.9)

WSDOT Parcel Number	Property Name	Property Address
1-24432	Keeran, Ramamani	3515 120th AVE SE 98006 mailing: 2115 8th Ave N Seattle 98109
1-24490	King County (Parks)	Part of the Eastside Rail Corridor



## SECTION 6.0 SUMMARY OF FINDINGS AND OPINIONS

---

Based on the search results provided by EDR and Ecology's (Ecology) online Facility Site Database, and the current proposed project description, 304 sites were identified as potential RECs for the Study Area. Out of these 304 sites, 272 sites were eliminated from further consideration as presented in Sections 4 and 5, as they are unlikely to have a negative impact on the Study Area during construction. The remaining 32 sites (including the BNSF Railroad) qualify as RECs because of historical land use, confirmed or suspected past releases that have the potential of being encountered during construction, and/or properties proposed to be acquired that are known or suspected of having contamination.

Based on the risk analyses performed for the 32 sites, 22 sites have a low anticipated level of impact. Eight sites were designated a low to moderate level of impact. One site was assigned a moderate to high level of impact, and another site was assigned a high level of impact.

The sites designated as moderate to high impact are proposed for acquisitions as part of the Study Area. These sites may have the potential to negatively impact the Study Area if excavations occur within or near the said sites. Based on the limited amount of planned excavation near the previously described sites, impacts to the Study Area are anticipated to be minimal.

Soil and groundwater contamination have been documented on adjacent sites at specific locations throughout the Study Area. Environmental impacts during construction may include potential impacts on sensitive receptors such as wetlands, groundwater, public drinking water systems, and surface waters, all requiring special protection against spills and releases and alteration of contaminant migration. With the exception of drilled shafts, the majority of excavations associated with project construction are expected to be no greater than 15 feet bgs. Areas around natural gas lines, soft soils and sediment (spoils) under structures like bridge piers, and utility lines may contain unknown or unreported contamination. Natural gas lines present the potential for releasing or emitting radioactive (radium and radon) gases and heavy metals in the soil. Spoils and sediment can contain contamination depending on structure type, materials used, and location of the structure (for example, wooden bridge with creosote still may contain creosote in the soft soils underneath the pole).

Direct construction impacts may include impacts on construction due to site-specific hazardous materials such as contaminated soil and/or groundwater, asbestos-containing material, lead-based paint, and liabilities associated with property acquisition. Potential contaminants that may be found in the soil or groundwater include, but are not limited to, arsenic, petroleum hydrocarbons, heavy metals, cPAHs, and solvents. The potential effects of the identified RECs on the construction activities are mostly unknown but would likely be minor, based on the amount of planned excavation.

WSDOT can implement mitigation measures during different stages of project development and construction to help avoid or reduce impacts on the project associated with environmental concerns, construction issues, and/or potential property acquisition. The Project may use WSDOT's standard impact and mitigation measures, as referenced online in the *Guidance & Standard Methodology for WSDOT Hazardous Material Discipline Reports* (WSDOT 2016). The Project may need a special provision for those sites that are complex.



## SECTION 7.0 CONCLUSIONS

---

The following conclusions are based on the summary findings of the investigation, opinions provided above, and the proposed project description. No significant, unavoidable adverse effects are anticipated during construction, due to the limited potential of encountering contaminated soil and/or groundwater that could be otherwise avoided by design decisions, or mitigated through proper remediation.

No further investigation is warranted at this time for the Study Area, except for the Pan Adobe site which is anticipated for full acquisition. The costs to conduct additional investigations for the remaining sites within the Study Area to better define the level and extent of contamination typically are far greater than those associated with change orders or potential delays associated with encountering contamination during project construction. Previous documentation and the Ecology files are inconsistent on the status of the USTs at this site. The primary contaminants of concern at the Pan Adobe site are petroleum hydrocarbons and their associated metals and solvents. These constituents are easily identifiable during construction using general field screening techniques, which consist of visual observations and olfactory detection for the presence of contamination, water sheen testing, and organic vapor monitoring using a photoionization detector.



## SECTION 8.0 RECOMMENDATIONS

---

- The following recommendations are provided as a result of the findings and conclusions of this assessment.
- The HazMat Program recommends that the construction contract include specifications advising the contractor of the appropriate handling and disposal of identified or suspected contamination that may be encountered during excavations or soil disturbances near or on the Study Area. Specifically, for the proposed construction activities between MP 7.3 and 7.5 adjacent to the existing southbound lane. WSDOT routinely uses General Special Provisions or Special Provisions to account for uncertainties of hazardous materials, such as the removal and disposal of unanticipated hazardous materials. (An example of a provision would be to stockpile suspected contaminated soils for laboratory analysis prior to reuse or disposal.) The HazMat Program can assist in creating these contract provisions, if necessary.
- A Phase II Environmental Site Assessment to include a magnetometer survey for the Pan Adobe site may be necessary prior to any property acquisition.
- For all structures and/or facilities that will be renovated or demolished within the Study Area prior to construction, WSDOT will conduct a Good Faith Asbestos Survey completed by an Asbestos Hazard Emergency Response Act (AHERA) certified building inspector.
- The HazMat Program recommends that an environmental reevaluation be conducted if subsequent changes are made to the Project, such as project realignment or changes to the proposed property acquisitions, which could alter the conclusions made in this investigation.



## SECTION 9.0 REFERENCES

---

American Society for Testing and Materials (ASTM). 2017. *Standard Practice for Environmental Site Assessments: Phase I Environmental Assessment Process, Designation: E 1527-13*.

Ecology (Washington State Department of Ecology). 2018. Ecology Facility Site Atlas and Ecology Toxic Web Page accessed on March 15-23, 2018 to obtain associated reports per facility listed. Reports include initial assessment/field reports by Ecology, periodic review reports, cancellation of site hazard assessments by Ecology, Consultant annual reports, Phase I and Phase II reports, Ecology opinions on cleanups, and monthly monitoring reports.

Environmental Data Resources (EDR). 2017. EDR Report Inquiry Number 4516017.4s. King County. January 21.

EDR. 2018a. Environmental Data Resources Certified Sanborn Map Report 2018, Inquiry Number 5207945.10, March 05, 2018.

EDR. 2018b. Environmental Data Resources City Image Report 2018, Inquiry Number 5212265.1, March 12, 2018.

Environmental Protection Agency (EPA). 2017. EPA documentation related to Quendall site via CH2M. Retrieved in March 2017 from <https://ch2m.box.com/s/hni8twfxntvh8ye14xm7du1rxsc6eqig>.

GeoEngineers. 2018a. *Phase I Environmental Assessment, I-405 Renton to Bellevue Express Toll Lanes Project Sites A and B*. January 12.

GeoEngineers. 2018b. *Phase II Environmental Assessment, I-405 Renton to Bellevue Express Toll Lanes Project Sites A and B*. January 12.

King County. 2018a. King County Road Service Vault Map, accessed on March 20, 2018.

King County. 2018b. King County Parcel Viewer. Retrieved in March 2018 from <http://www.kingcounty.gov/services/gis/Maps/parcel-viewer.aspx>.

WSDOT. 2006. *I-405, SR 169 to I-90, Renton to Bellevue Project Environmental Assessment*. March.

WSDOT. 2007. *I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Water Resources Discipline Report*. December.

WSDOT. 2016. *WSDOT Guidance and Standard Methodology for WSDOT Hazardous Material Discipline Reports*.

I-405, TUKWILA TO I-90 VICINITY EXPRESS TOLL LANES PROJECT (MP 0.0 TO 11.9)  
ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

WSDOT. 2017. *Environmental Manual*. <http://www.wsdot.wa.gov/Publications/Manuals/M31-11.htm>. June.

## APPENDIX A ACRONYMS AND ABBREVIATIONS

---

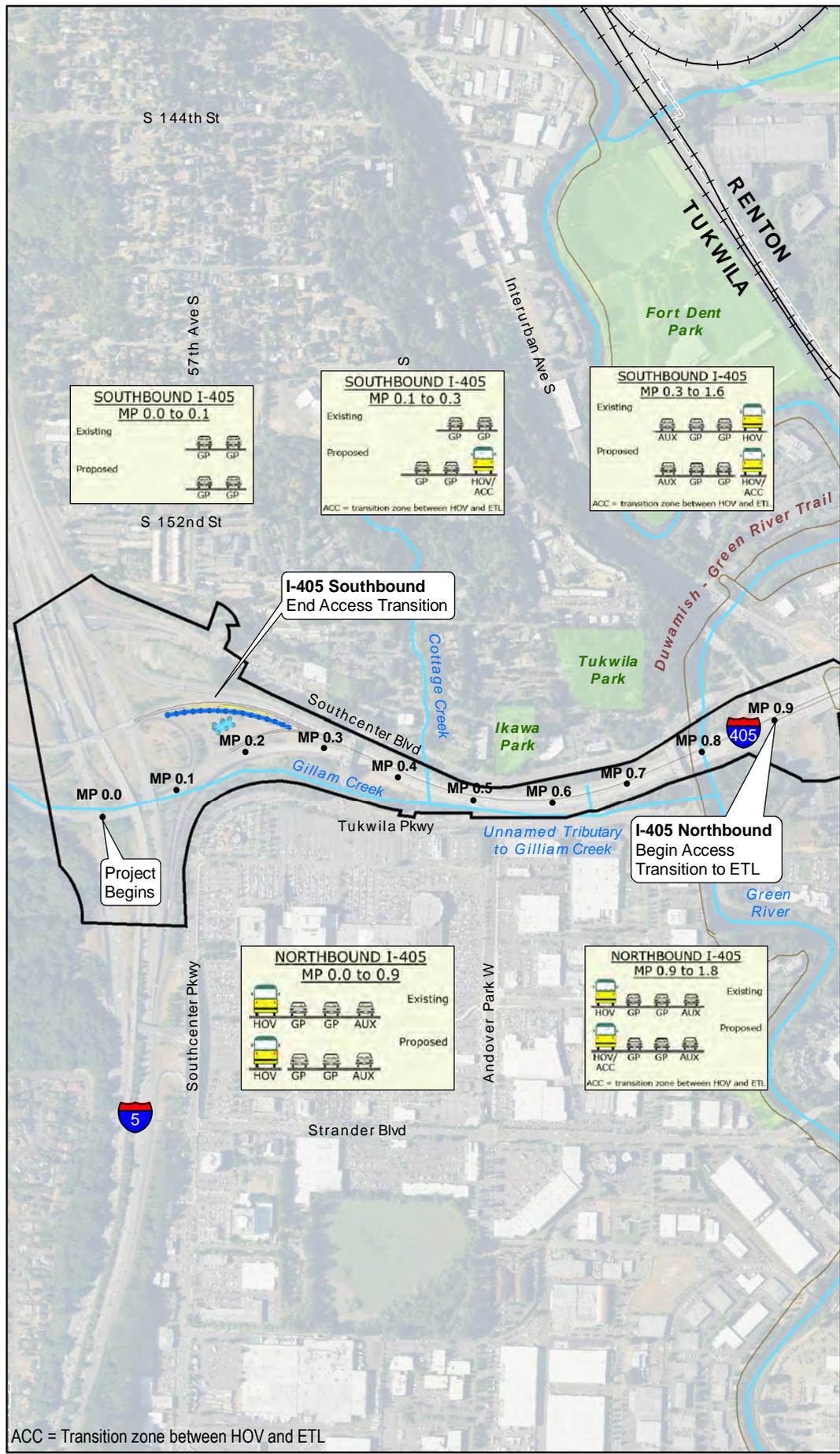
<b>Acronym</b>	<b>Meaning</b>
AHERA	Asbestos Hazard Emergency Response Act
bgs	below ground surface
BRT	bus rapid transit
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
EA	Environmental Assessment
Ecology	Washington State Department of Ecology
EDR	Environmental Data Resource, Inc.
EIS	Environmental Impact Statement
ETL	express toll lane
FHWA	Federal Highway Administration
FINDS	Facility Index System/Facility Registry System
FS	facility site
GP	general purpose
HazMat	Hazardous Materials
HOV	high-occupancy vehicle
I-405	Interstate 405
I-5	Interstate 5
I-90	Interstate 90
ID	identification
MP	milepost
MTCA	Models Toxics Control Act
NEPA	National Environmental Policy Act

---

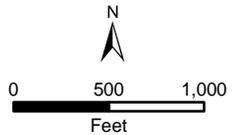
<b>Acronym</b>	<b>Meaning</b>
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NPL	National Priorities List
PCBs	polychlorinated biphenyls
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
ROD	Record of Decision
SEPA	State Environmental Policy Act
SOV	single-occupant vehicle
SPILLS	Spills Prevention, Preparedness, and Response [Program]
SR	State Route
TSD	transporter, storage, and disposal
UST	underground storage tank
WAC	Washington Administrative Code
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation

## **APPENDIX B EXHIBIT 1 – PROJECT DESCRIPTION GRAPHICS**

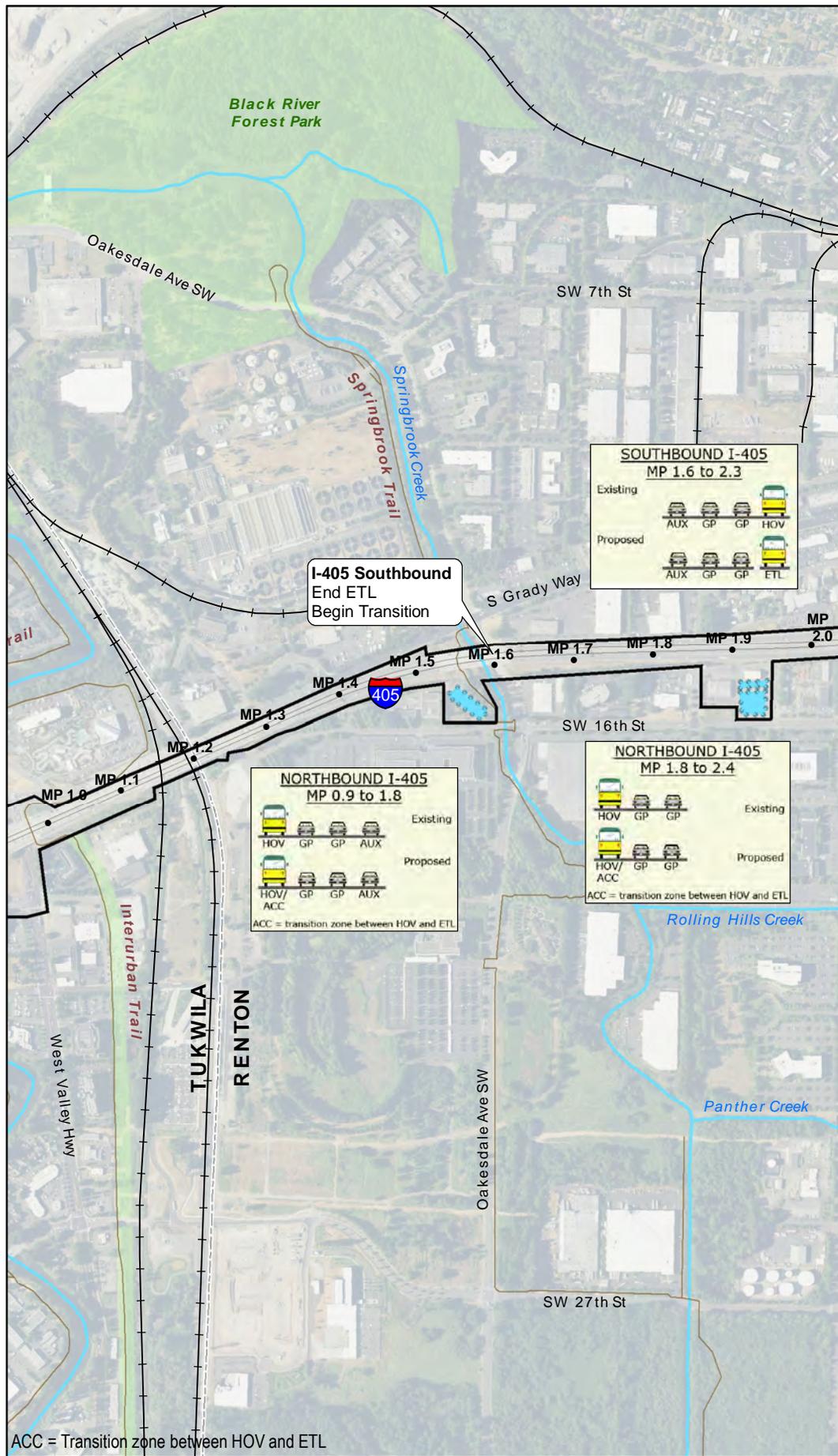




- Legend**
- Mile Post (MP)
  - Proposed Lane Striping
  - Proposed Additional Pavement
  - Proposed Bridge
  - Proposed Retaining Wall
  - ▨ Proposed Noise Wall
  - ▨ Relocated Noise Wall
  - Trail
  - Railroad
  - Proposed Water Treatment Facility
  - Existing Water Treatment Facility
  - Proposed Water Conveyance
  - Stream or Natural Drainage
  - Proposed Right of Way
  - Existing Right of Way
  - Park
  - Municipality
  - Direct Connector Project**
  - Lane Striping
  - Stream Realignment

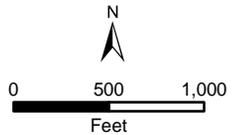


ACC = Transition zone between HOV and ETL

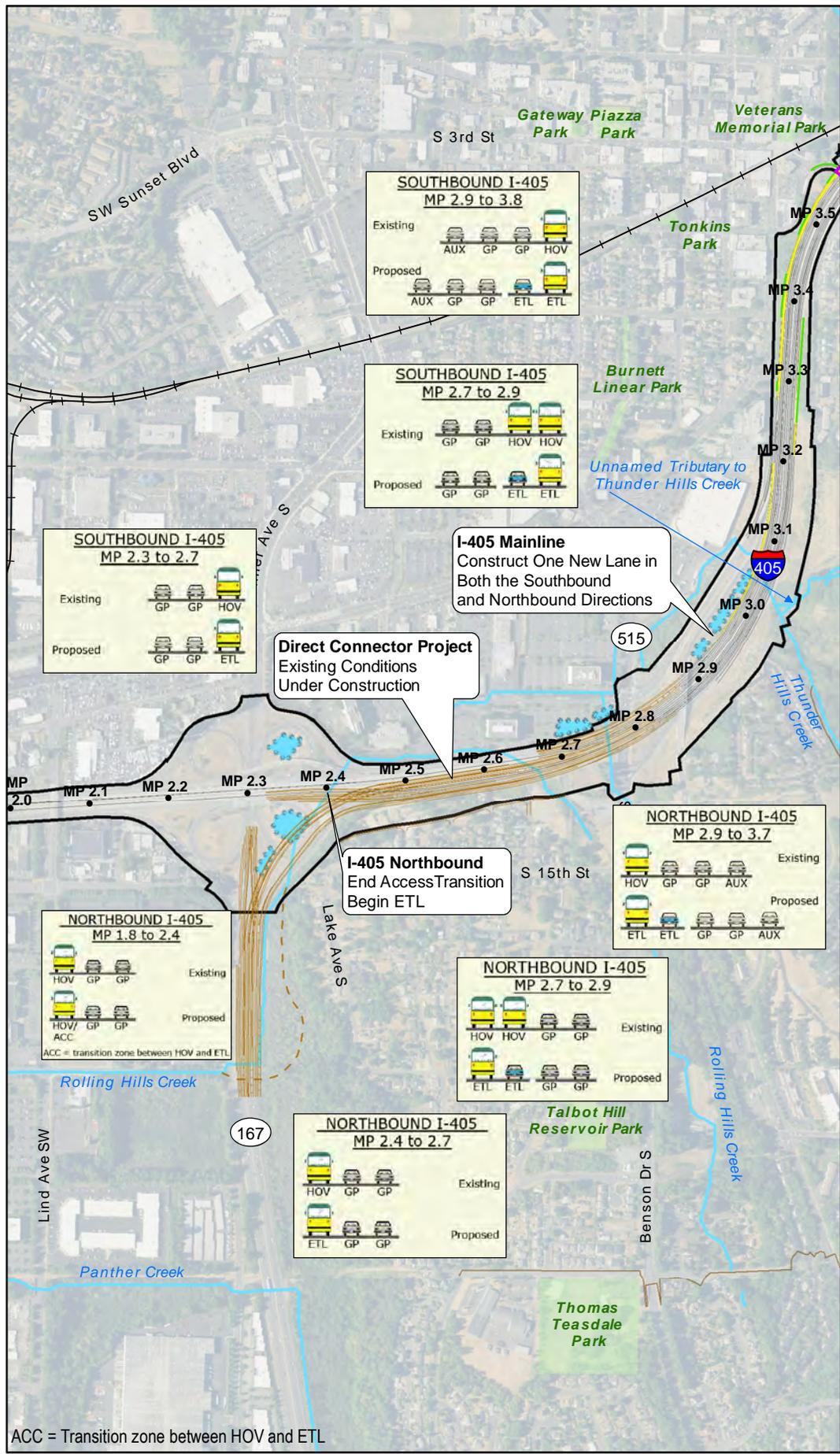


**Legend**

- Mile Post (MP)
  - Proposed Lane Striping
  - Proposed Additional Pavement
  - Proposed Bridge
  - Proposed Retaining Wall
  - ▨ Proposed Noise Wall
  - ▨ Relocated Noise Wall
  - Trail
  - Railroad
  - Proposed Water Treatment Facility
  - Existing Water Treatment Facility
  - Proposed Water Conveyance
  - Stream or Natural Drainage
  - Proposed Right of Way
  - Existing Right of Way
  - Park
  - Municipality
- Direct Connector Project**
- Lane Striping
  - Stream Realignment

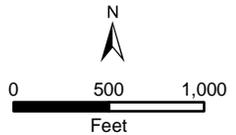


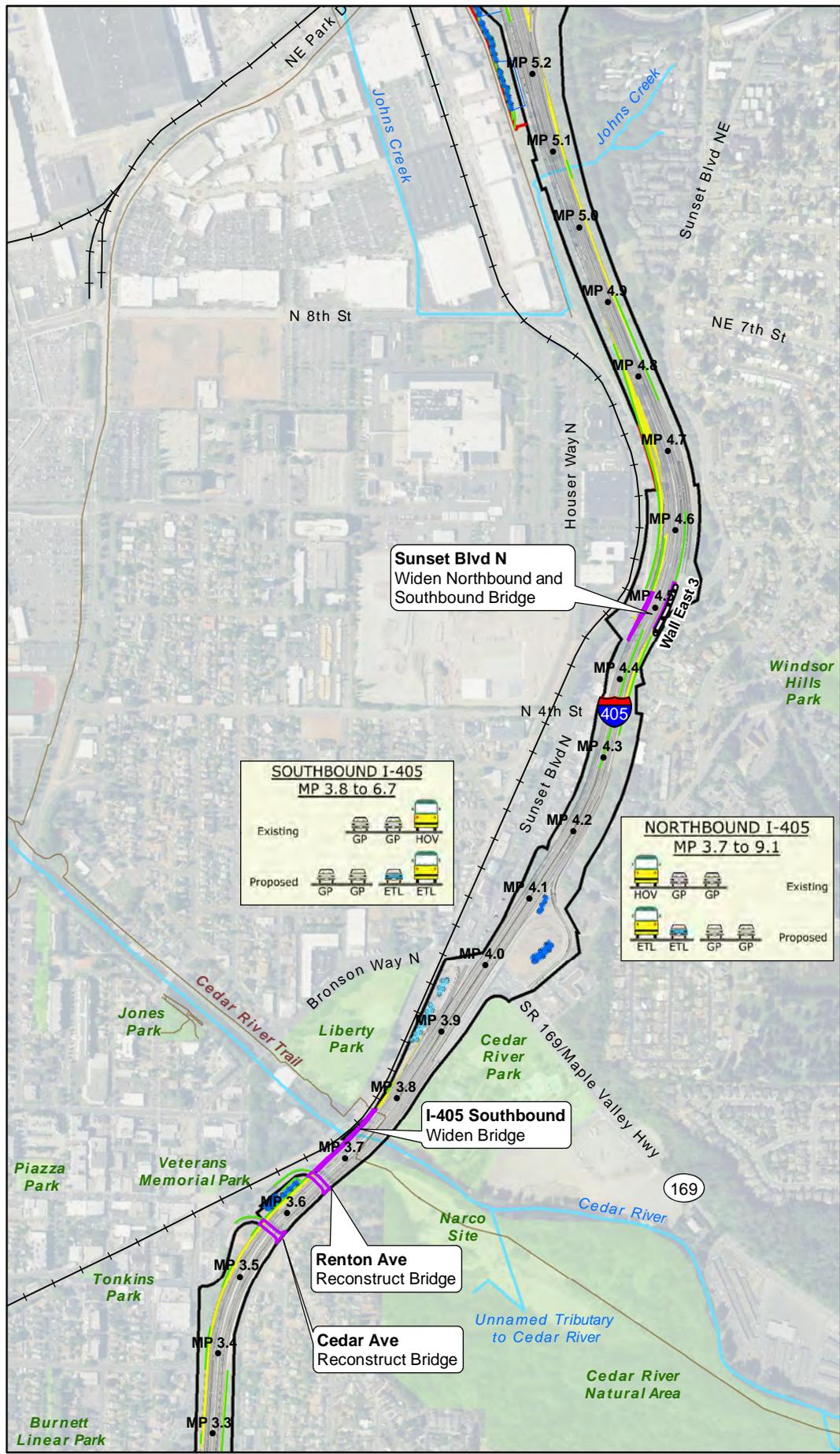
ACC = Transition zone between HOV and ETL



**Legend**

- Mile Post (MP)
- Proposed Lane Striping
- Proposed Additional Pavement
- ▭ Proposed Bridge
- Proposed Retaining Wall
- ▨ Proposed Noise Wall
- ▨ Relocated Noise Wall
- Trail
- Railroad
- Proposed Water Treatment Facility
- Existing Water Treatment Facility
- Proposed Water Conveyance
- Stream or Natural Drainage
- ▭ Proposed Right of Way
- ▭ Existing Right of Way
- Park
- ▭ Municipality
- Direct Connector Project Lane Striping
- Direct Connector Project Stream Realignment





**SOUTHBOUND I-405**  
MP 3.8 to 6.7

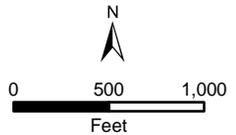
Existing	GP	GP	HOV
Proposed	GP	GP	ETL

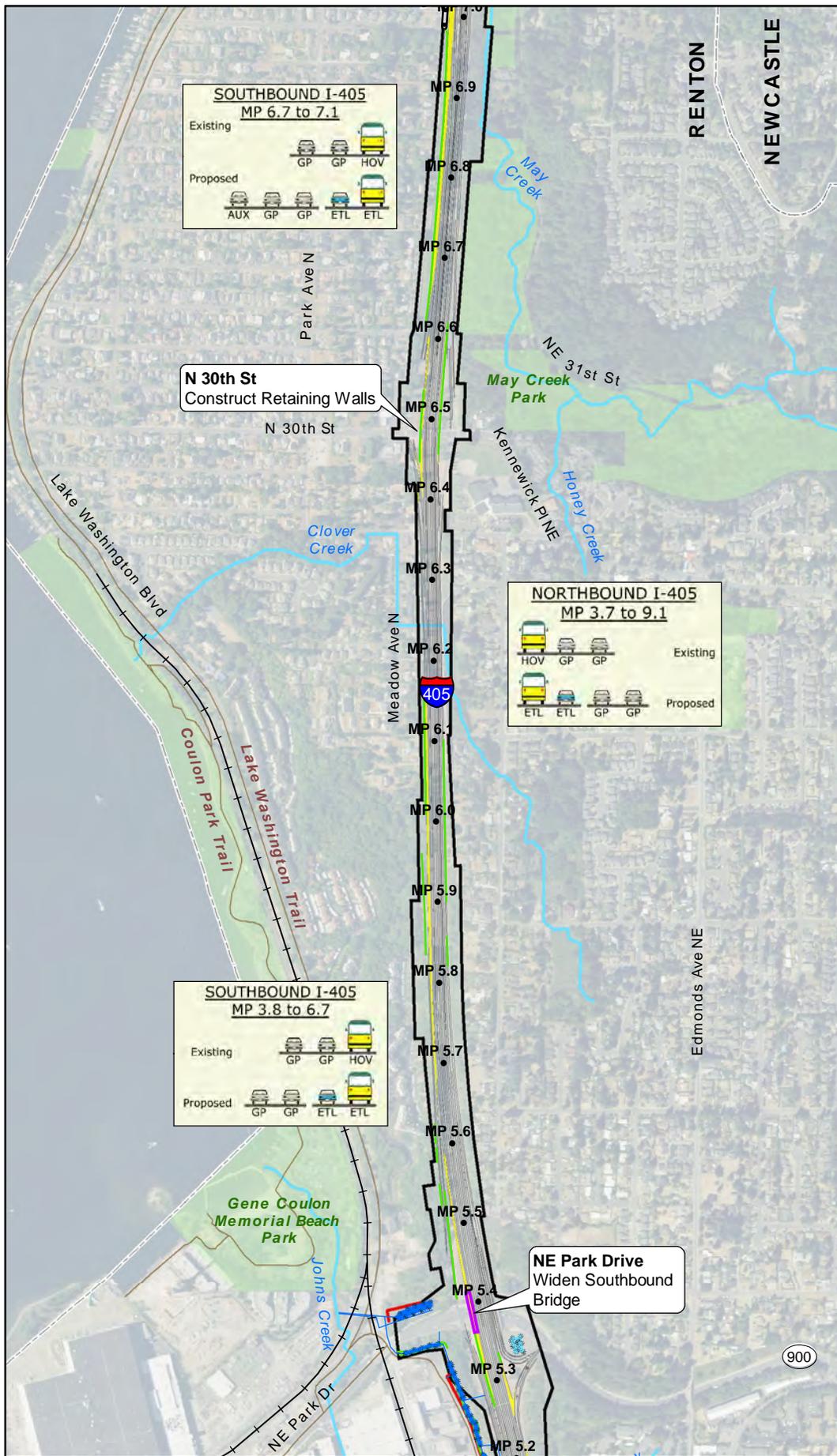
**NORTHBOUND I-405**  
MP 3.7 to 9.1

Existing	HOV	GP	GP
Proposed	ETL	ETL	GP

**Legend**

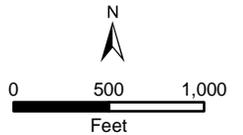
- Mile Post (MP)
- Proposed Lane Striping
- Proposed Additional Pavement
- ▭ Proposed Bridge
- Proposed Retaining Wall
- ▨ Proposed Noise Wall
- ▨ Relocated Noise Wall
- Trail
- +— Railroad
- Proposed Water Treatment Facility
- Existing Water Treatment Facility
- Proposed Water Conveyance
- Stream or Natural Drainage
- ▭ Proposed Right of Way
- ▭ Existing Right of Way
- Park
- ▭ Municipality
- Direct Connector Project**
- Lane Striping
- Stream Realignment



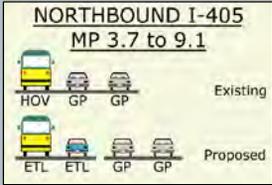
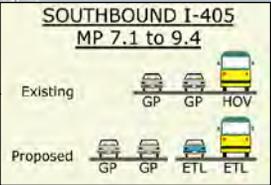


**Legend**

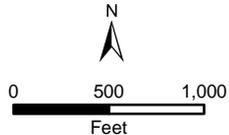
- Mile Post (MP)
- Proposed Lane Striping
- Proposed Additional Pavement
- Proposed Bridge
- Proposed Retaining Wall
- ▨ Proposed Noise Wall
- ▩ Relocated Noise Wall
- Trail
- Railroad
- Proposed Water Treatment Facility
- Existing Water Treatment Facility
- Proposed Water Conveyance
- Stream or Natural Drainage
- Proposed Right of Way
- Existing Right of Way
- Park
- Municipality
- Direct Connector Project**
- Lane Striping
- Stream Realignment



**Lake Washington Trail**  
Realign and Reconstruct to West



- Legend**
- Mile Post (MP)
  - Proposed Lane Striping
  - Proposed Additional Pavement
  - Proposed Bridge
  - Proposed Retaining Wall
  - ▨ Proposed Noise Wall
  - ▩ Relocated Noise Wall
  - ▭ Eastside Rail Corridor (portion to be constructed by WSDOT)
  - ▭ Lake Washington Trail (portion to be relocated onto the Eastside Rail Corridor)
  - Trail
  - ⊕ Railroad
  - Proposed Water Treatment Facility
  - Existing Water Treatment Facility
  - Proposed Water Conveyance
  - ~ Stream or Natural Drainage
  - ▭ Proposed Right of Way
  - ▭ Existing Right of Way
  - Park
  - ▭ Municipality
  - Direct Connector Project**
  - Lane Striping
  - Stream Realignment



**LAKE WASHINGTON**

**Lake Washington Blvd**  
Construct Park-and-Ride Lot

**NE 44th St**  
Reconstruct Interchange;  
Replace Bridge Structure;  
Add Direct-Access and  
inline transit stations

**NE 44th St Southbound Offramp**  
Construct Bridge to Provide  
Open Channel Habitat

**I-405**  
Construct Fish  
Passage Crossing

**I-405**  
Construct Fish  
Passage Crossing

**I-405 Northbound**  
Realign Onramp

**Lake Washington Blvd NE**  
Construct Fish Passage Crossing

**Lake Washington Blvd NE**  
Reconstruct and Realign

**NE 44th St**  
Construct Fish  
Passage Crossing

**May Creek**  
Replace Bridge

**RENTON**  
**NEWCASTLE**

**UNINCORPORATED**  
**KING COUNTY**

**NEWCASTLE**  
**BELLEVUE**

SE 64th St

East 101A

Wall West 5

Wall West 4

Ripley Lane

NE 44th St

May Creek

Little Rhody Park

Stream 8.7

Stream 8.55

Stream 8.31

Stream 8.22

Stream 8.15

Stream 8.12

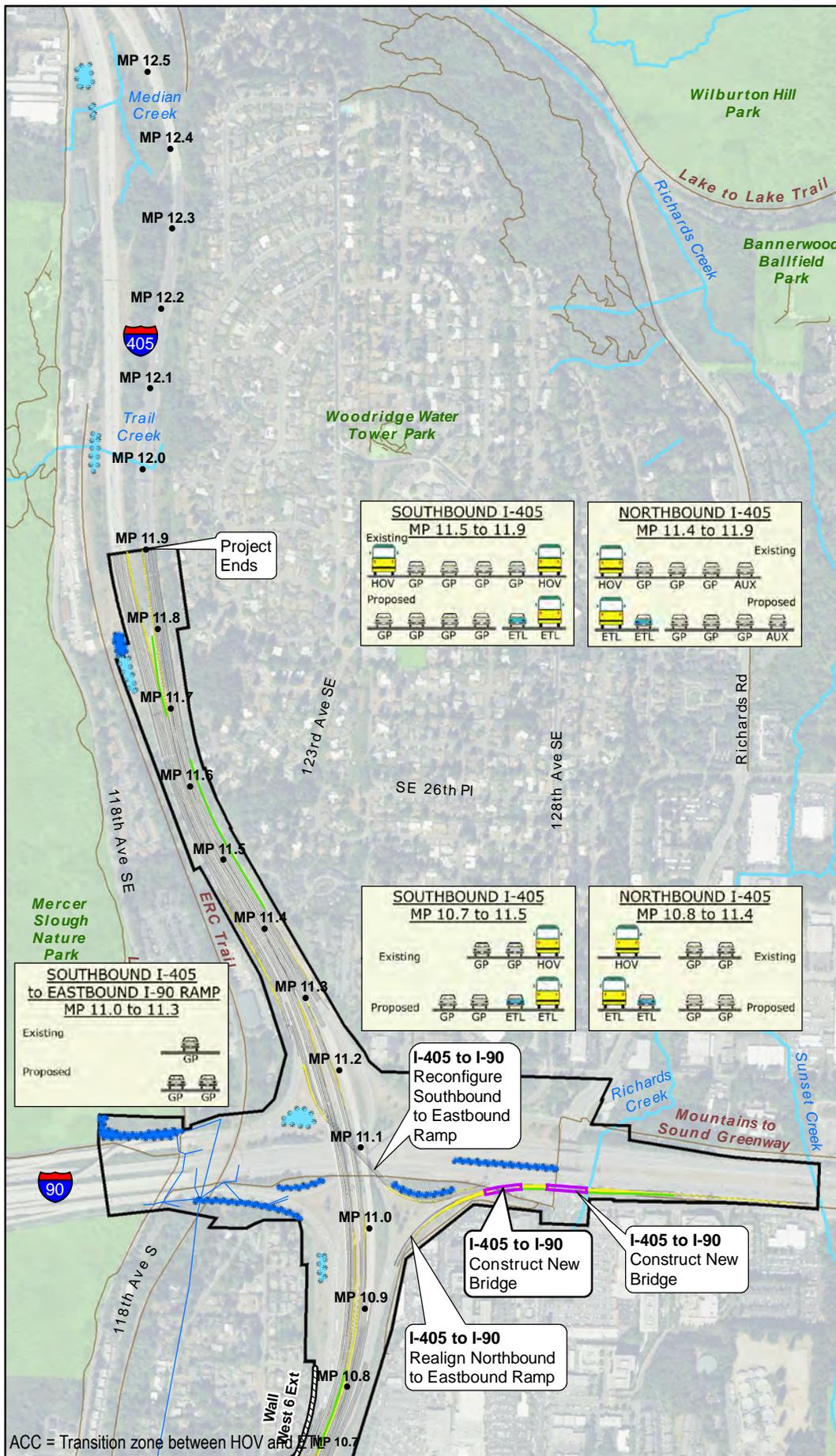
Stream 8.05

Stream 8.0



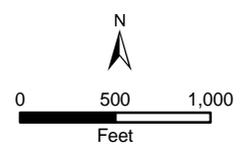
- Legend**
- Mile Post (MP)
  - Proposed Lane Striping
  - Proposed Additional Pavement
  - Proposed Bridge
  - Proposed Retaining Wall
  - ▨ Proposed Noise Wall
  - ▩ Relocated Noise Wall
  - Eastside Rail Corridor (portion to be constructed by WSDOT)
  - Lake Washington Trail (portion to be relocated onto the Eastside Rail Corridor)
  - Trail
  - +— Railroad
  - Proposed Water Treatment Facility
  - Existing Water Treatment Facility
  - Proposed Water Conveyance
  - Stream or Natural Drainage
  - Proposed Right of Way
  - Existing Right of Way
  - Park
  - Municipality
- Direct Connector Project**
- Lane Striping
  - Stream Realignment
- 0 500 1,000 Feet





**Legend**

- Mile Post (MP)
- Proposed Lane Striping
- Proposed Additional Pavement
- Proposed Bridge
- Proposed Retaining Wall
- ▨ Proposed Noise Wall
- ▨ Relocated Noise Wall
- Trail
- ++ Railroad
- Proposed Water Treatment Facility
- Existing Water Treatment Facility
- Proposed Water Conveyance
- ~ Stream or Natural Drainage
- Proposed Right of Way
- Existing Right of Way
- Park
- Municipality
- Direct Connector Project**
- Lane Striping
- Stream Realignment



## **APPENDIX C EXHIBIT 2 – DETAILED PROJECT DESCRIPTION**



Project Element	I-405, Tukwila to I-90 Vicinity Express Toll Lanes Project
I-405/I-5 Interchange	<ul style="list-style-type: none"> <li>– Extend the southbound left lane at the I-5 interchange west for approximately 500 feet to provide additional merge distance.</li> </ul>
I-405 Lanes and Shoulders from SR 167 to north of I-90	<ul style="list-style-type: none"> <li>– Create a dual ETL system from MP 2.9 (northeast of the I-405/SR 167 interchange) and MP 11.9 (north of the I-405/I-90 interchange) by adding one new lane in each direction and converting the existing HOV lane to an ETL.</li> <li>– Convert the existing HOV lane to a single ETL from MP 2.4 (at the I-405/SR 167 interchange) to MP 2.9 on northbound I-405 and from MP 1.6 (in Renton over Springbrook Creek) to MP 2.9 on southbound I-405.</li> <li>– Add an additional GP (auxiliary) lane on southbound I-405 between MP 6.7 (north of 30th Street) and MP 7.1 (south of NE 44th Street) and MP 9.4 (north of 112th Avenue SE) to MP 10.5 (north of Coal Creek Parkway).</li> <li>– Bring I-405 up to current freeway standards where feasible.</li> </ul>
I-405 Tolling from SR 167 to north of I-90	<ul style="list-style-type: none"> <li>– Construct tolling gantries to collect the tolls for the ETL system (see description in the row above).</li> </ul>
Cedar Avenue	<ul style="list-style-type: none"> <li>– Reconstruct the bridge over I-405 to widen southbound I-405.</li> </ul>
Renton Avenue	<ul style="list-style-type: none"> <li>– Reconstruct the bridge over I-405 to widen southbound I-405.</li> </ul>
Cedar River Bridge	<ul style="list-style-type: none"> <li>– Widen the southbound I-405 bridge over the Cedar River.</li> </ul>
Sunset Boulevard N Interchange Area	<ul style="list-style-type: none"> <li>– Widen the I-405 northbound and southbound bridges over Sunset Boulevard N.</li> </ul>
NE Park Drive Interchange Area	<ul style="list-style-type: none"> <li>– Widen the I-405 southbound bridge over NE Park Drive.</li> </ul>
N 30th Street Interchange Area	<ul style="list-style-type: none"> <li>– Replace the local road overpass abutment slopes with retaining walls on both sides of I-405 and lower the southbound I-405 roadway by approximately one foot.</li> </ul>

Project Element	I-405, Tukwila to I-90 Vicinity Express Toll Lanes Project
NE 44th Street Interchange Area	<ul style="list-style-type: none"> <li>– Replace the northbound and southbound I-405 bridges over May Creek with two new single span bridges and provide habitat improvements.</li> <li>– Replace the NE 44th Street bridge over I-405. Construct new direct access ramps and two inline transit stations (one for each direction) in the I-405 median. Transit stations would include station platforms, signage, artwork, lighting, fare machines (ORCA), and site furnishings such as shelters, lean rails, benches, bollards, bicycle parking, and trash receptacles.</li> <li>– Realign and reconstruct the northbound access to I-405 from a loop ramp to a new on-ramp from Lake Washington Boulevard NE.</li> <li>– Build four roundabouts along local arterials.</li> <li>– Construct an at-grade park-and-ride lot at Lake Washington Boulevard N and N 43rd Street with a minimum of 200 parking stalls and a roundabout (improvements would be built, but may be built by Sound Transit or others).</li> </ul>
112th Avenue SE Interchange Area	<ul style="list-style-type: none"> <li>– Replace the 112th Avenue SE bridge over I-405.</li> <li>– Construct new direct access ramps, two inline transit stations (one for each direction) in the I-405 median. Transit stations would include station platforms, signage, artwork, lighting, fare machines (ORCA), and site furnishings such as shelters, lean rails, benches, bollards, bicycle parking, and trash receptacles.</li> <li>– Construct a roundabout on 112th Avenue SE.</li> <li>– Reconfigure the Newport Hills Park-and-Ride.</li> </ul>
Coal Creek Parkway Interchange Area	<ul style="list-style-type: none"> <li>– Construct a new southbound I-405 bridge on a new alignment. Convert the existing southbound I-405 bridge to northbound ETLs.</li> <li>– Convert the four local road intersections on Coal Creek Parkway SE to roundabouts.</li> </ul>
I-405/I-90 Interchange Area	<ul style="list-style-type: none"> <li>– Reconfigure the I-405 southbound to I-90 eastbound ramp from one to two lanes.</li> <li>– Realign the I-405 northbound to I-90 eastbound ramp. As part of this work, construct two new bridges over the eastbound I-90 ramp to Factoria Boulevard and over Factoria Boulevard.</li> </ul>
Fish Passage	<ul style="list-style-type: none"> <li>– Construct four fish passage crossings for unnamed tributary (UNT) 08.LW.0283 (formerly Gypsy Creek).</li> <li>– Construct a fish passage crossing under I-405 mainline for Stream UNT 08.LW.7.7A<sup>a</sup>.</li> <li>– Construct a fish passage crossing under I-405 mainline for Stream UNT 08.LW.7.8<sup>a</sup>.</li> </ul>
Lake Washington Trail	<ul style="list-style-type: none"> <li>– Realign and reconstruct the existing trail west of its current location to reside in the King County's Eastside Rail Corridor property between Ripley Lane in Renton (MP 7.7) and Coal Creek Parkway in Bellevue (MP 10.2). As part of this work, widen a portion of the King County's Eastside Rail Corridor Regional Trail.</li> </ul>
Noise Walls	<ul style="list-style-type: none"> <li>– Construct 4 new noise walls.</li> </ul>

Project Element	I-405, Tukwila to I-90 Vicinity Express Toll Lanes Project
	<ul style="list-style-type: none"> <li>– Relocate 2 existing noise walls.</li> </ul>
Stormwater Management	<ul style="list-style-type: none"> <li>– Add 46.92 acres of new PGIS and 5.7 acres of non-PGIS.</li> <li>– Provide enhanced treatment for 100 percent of new impervious surfaces.</li> <li>– Retrofit 51 percent (111.5 acres) of existing untreated PGIS and continue to treat stormwater from the 21.27 acres of PGIS that currently receives treatment.</li> <li>– Treat a total of 179.69 acres of PGIS.</li> </ul>
Construction Duration	<ul style="list-style-type: none"> <li>– 5 years of construction is expected from 2019 through 2024.</li> <li>– The direct access ramps and associated transit improvements at 112th Avenue SE, reconfiguring the Newport Hills Park-and-Ride lot, and building four roundabouts on Coal Creek Parkway SE may be constructed after 2024, depending on when allocated funds for these elements become available.</li> </ul>

ETL = express toll lane GP = general purpose; HOV = high-occupancy vehicle; PGIS = pollutant generating impervious surfaces  
a. For these culverts, a restrictor plate will be put in place to prevent flooding until a downstream barrier is removed, at which time the restrictor plate will be removed.



## **APPENDIX D EXHIBIT 3 – TOPOGRAPHIC MAPS**

---





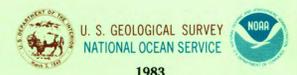
science for a changing world

1:25 000-scale metric topographic-bathymetric map of Bellevue South WASHINGTON



7.5 X 15 MINUTE QUADRANGLE SHOWING

- Contours and elevations in meters
- Highways, roads and other manmade structures
- Water features
- Woodland areas
- Geographic names
- Bathymetric contours in meters



1983

Produced by the United States Geological Survey and the National Ocean Service  
 Control by USGS, NOS/NOAA, USCE and King County Engineer Office  
 Compiled by photogrammetric methods from aerial photographs taken 1977. Field checked 1979. Map edited 1983.  
 Supersedes Mercer Island and Issaquah 1:25 000-scale maps dated 1950.  
 Bathymetry compiled by the National Ocean Service from tide-coordinated hydrographic surveys. This information is not intended for navigational purposes.  
 Mean low water (dotted) line and mean high water (heavy solid) line compiled by NOS from tide-coordinated aerial photographs.  
 Projection and 1000-meter grid, zone 10, Universal Transverse Mercator 18,000-foot grid ticks based on Washington coordinate system, north zone 1927 North American Datum.  
 To place on the predicted North American Datum 1983 move the projection lines 22 meters north and 93 meters east.  
 Grey tint indicates areas in which only landmark buildings are shown.  
 There may be private inholdings within the boundaries of the National or State Reservations shown on this map.

CONTOUR INTERVAL 5 METERS  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929  
 BATHYMETRIC CONTOUR INTERVAL 2 METERS WITH SUPPLEMENTARY 1 METER CONTOURS-DATUM IS LOW WATER OF LAKE WHICH IS 20 FEET ABOVE THE PLANE OF MEAN LOWER LOW WATER IN PUGET SOUND  
 THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE  
 CONTROL ELEVATIONS SHOWN TO THE NEAREST 0.1 METER  
 OTHER ELEVATIONS SHOWN TO THE NEAREST METER  
 BASE MAP COMPLETES WITH NATIONAL MAP ACCURACY STANDARDS. BATHYMETRIC SURVEY DATA COMPLETES WITH INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO) SPECIAL PUBLICATION 44 ACCURACY STANDARDS AND/OR STANDARDS USED AS OF THE DATE OF THE SURVEYS.

Meters	Feet
1	3.2808
2	6.5617
3	9.8425
4	13.1234
5	16.4043
6	19.6852
7	22.9661
8	26.2470
9	29.5279
10	32.8088

To convert meters to feet multiply by 3.2808  
 To convert feet to meters multiply by 0.3048

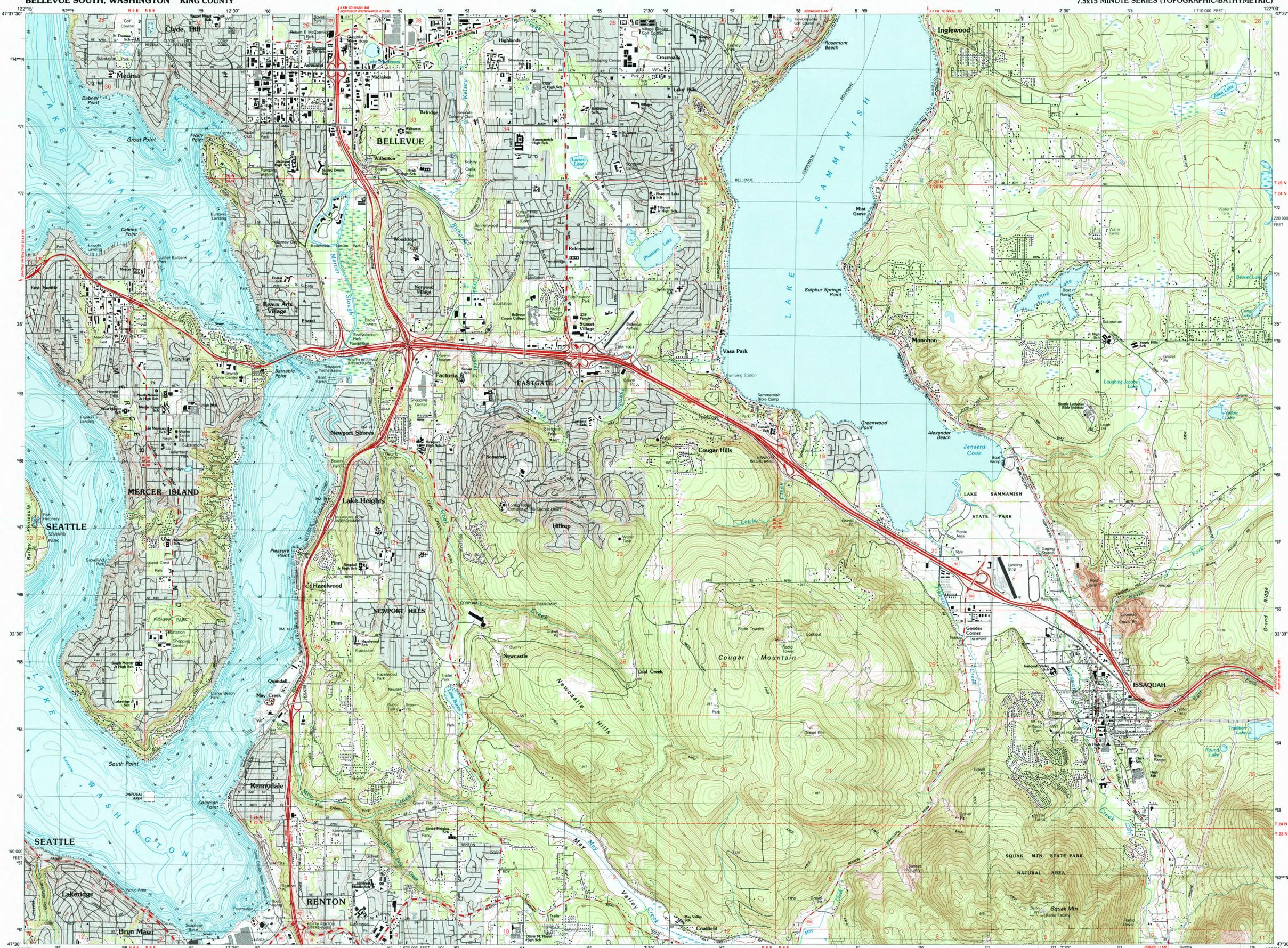
UTM grid convergence (GN) and IHO Special Publication 44 accuracy standards (declination (DS))  
 Diagram is approximate

FOR SALE BY U.S. GEOLOGICAL SURVEY AND NATIONAL OCEAN SERVICE, ROCKVILLE, MARYLAND 20852  
 ISBN 0-107-57912-9  
 9 780607 579123

Topographic Map Symbols

- Primary highway, hard surface
- Secondary highway, hard surface
- Light-city road, hard or improved surface
- Unimproved road, trail
- Route marker: Interstate; U. S. State
- Railroad: standard gage; narrow gage
- Bridge: drawbridge
- Footbridge; overpass; underpass
- Built-up area: only selected landmark buildings shown
- House: barn; church; school; large structure
- Boundary
- National, with monument
- State
- County, parish
- Civil township, precinct, district
- Incorporated city, village, town
- National or State reservation; small park
- Land grant with monument; found section corner
- U. S. public lands survey: range, township; section
- Range, township; section line: location approximate
- Fence or field line
- Power transmission line, located tower
- Dam; dam with lock
- Cemetery; grave
- Campground; picnic area; U. S. location monument
- Wellhead; water well; spring
- Mine shaft; prospect; adit or cave
- Control: horizontal station; vertical station; spot elevation
- Contours: index; intermediate; supplementary; depression
- Distorted surface: strip mine, lava, sand
- Bathymetric contours: index; intermediate
- Parental lake and stream; intermittent lake and stream
- Rapids, large and small; falls, large and small
- Swamp; marsh
- Submerged marsh; land subject to controlled inundation
- Woodland; scattered trees
- Scrub; mangrove
- Orchard; vineyard

A pamphlet describing topographic maps is available on request

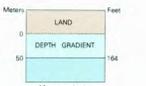
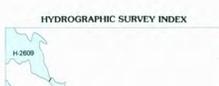


SCALE 1:25 000  
 1 CENTIMETER ON THE MAP REPRESENTS 250 METERS ON THE GROUND  
 CONTOUR INTERVAL 5 METERS

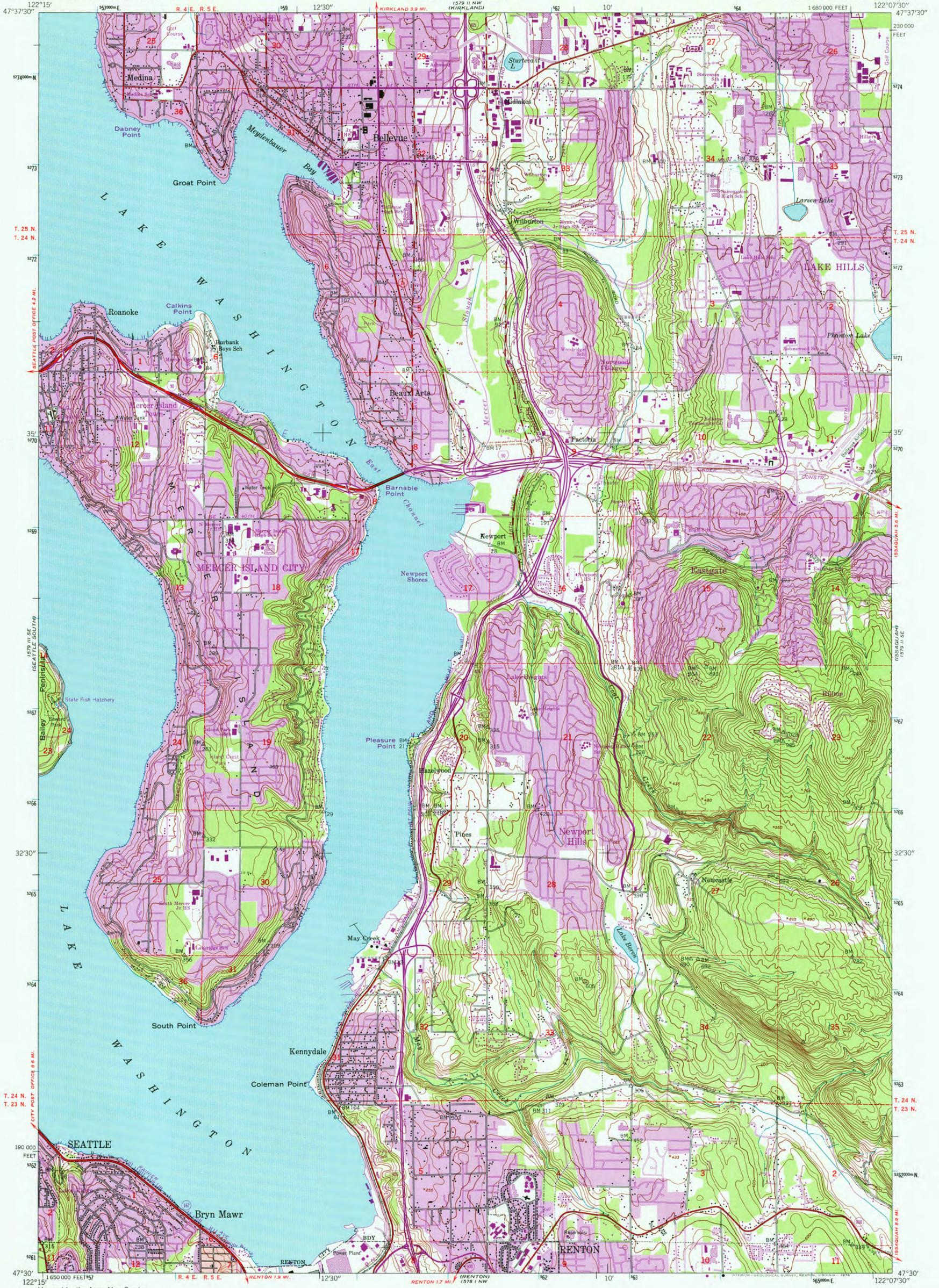
BELLEVUE SOUTH, WASHINGTON N4730—W12200/7.5X15 1983

RECEIVED  
 MAY 3 1 2001  
 USGS NWU  
 HISTORICAL MAP ARCHIVES

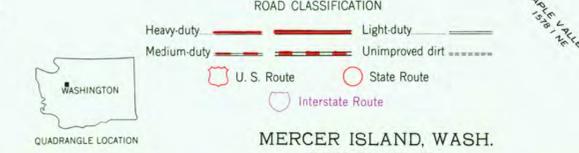
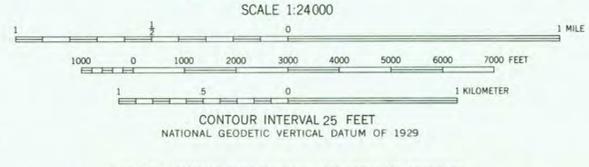
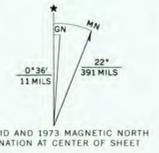
HYDROGRAPHIC SURVEY INFORMATION			
SURVEY NUMBER	SURVEY DATE	SURVEY SCALE	SURVEY LINE SPACING (NAUTICAL MILES)
H-3609	1902	1:10,000	06-25
H-3810	1903	1:10,000	06-22
H-8211	1956	1:10,000	02-04



Photographic copies of the above and prior surveys may be obtained at the cost of reproduction by addressing the Director, USGS National Ocean Service, National Oceanic and Atmospheric Administration, Rockville, Maryland 20852

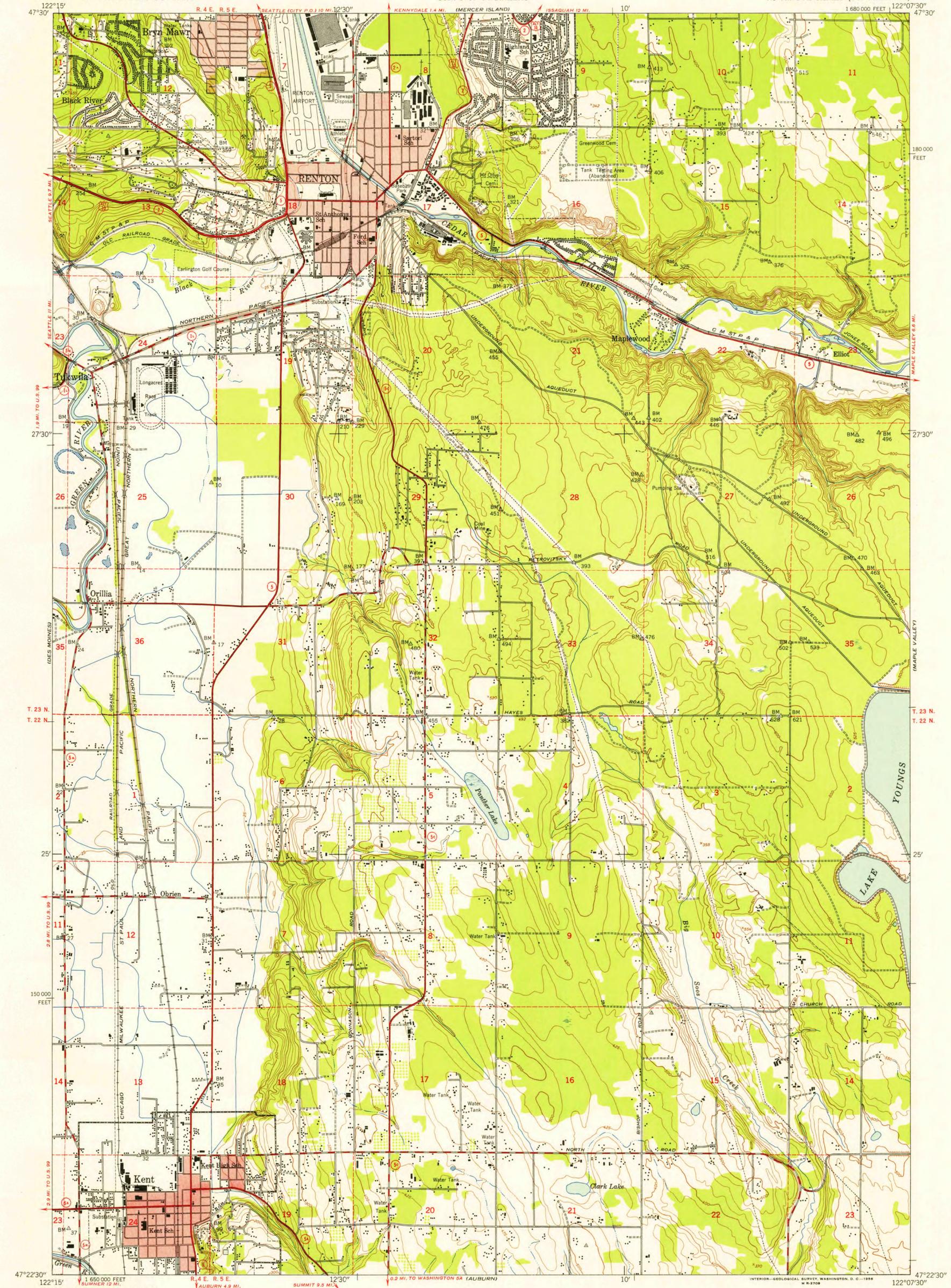


Maped by the Army Map Service  
Published for civil use by the Geological Survey  
Control by USC&GS, USCE, and King County Engineer office  
Topography from aerial photographs by multiplex methods  
Aerial photographs taken 1943. Field check 1950  
Polyconic projection. 1927 North American datum  
10,000-foot grid based on Washington coordinate system,  
north zone  
Red tint indicates area in which only  
landmark buildings are shown  
No distinction is made between barns, dwellings,  
commercial and industrial buildings  
Unchecked elevations are shown in brown  
Dashed land lines indicate approximate locations  
1000-meter Universal Transverse Mercator grid ticks,  
zone 10, shown in blue



QUADRANGLE LOCATION  
WASHINGTON  
MERCER ISLAND, WASH.  
N4730-W12207 5/7.5  
1950  
PHOTOREVISED 1968 AND 1973  
AMS 1579 II SW—SERIES V881  
USGS  
Historical File  
Topographic Division  
APR 14 1976

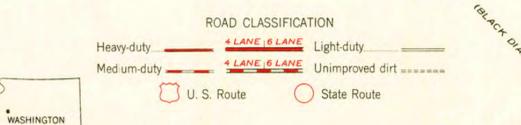
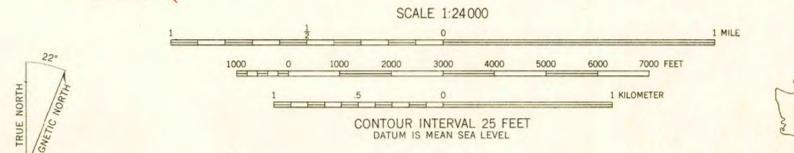
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST  
Revisions shown in purple compiled by the Geological Survey from aerial  
photographs taken 1968 and 1973. This information not field checked  
Purple tint indicates extension of urban areas



U.S.G.S.  
FILE COPY  
TOPOGRAPHIC DIVISION

U.S.G.S.  
FILE COPY  
TOPOGRAPHIC DIVISION

Maped by the Army Map Service  
Published for civil use by the Geological Survey  
Control by USGS, USC&GS, and USCE  
Topography from aerial photographs by multiplex methods  
Aerial photographs taken 1943. Field check 1949  
Polyconic projection. 1927 North American datum  
10,000-foot grid based on Washington coordinate system,  
north zone  
Red tint indicates areas in which only  
landmark buildings are shown  
No distinction is made between dwellings, barns,  
commercial and industrial buildings  
Unchecked elevations are shown in brown  
Dashed land lines indicate approximate locations

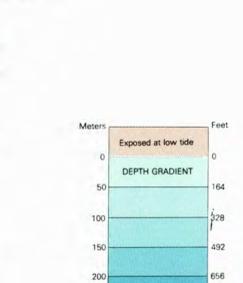
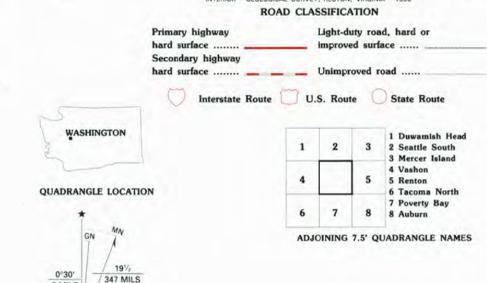
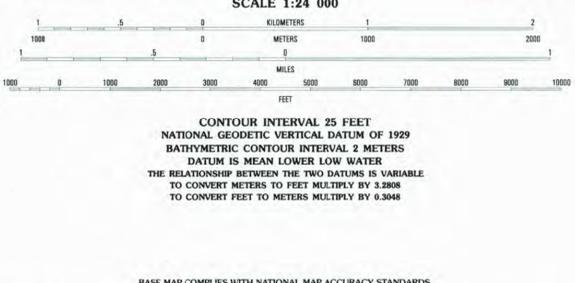
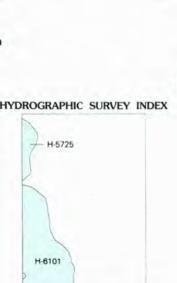


USGS  
Historical File  
Topographic Division  
RENTON, WASH.  
N4722.5-W12207.5/7.5  
1949

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D. C.  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



Produced by the United States Geological Survey  
Control by NOS/NOAA  
Compiled from aerial photographs taken 1943. Field checked 1949  
Revised from aerial photographs taken 1990 and other sources  
Map edited 1995. Contours and land elevations have not been  
revised and may conflict with other content.  
Bathymetry compiled by the National Ocean Service from  
tide-coordinated hydrographic surveys. This information  
is not intended for navigational purposes.  
Mean lower low water (dotted) line and mean high water  
(heavy solid) line compiled by NOS from tide-coordinated  
aerial photographs.  
North American Datum of 1927 (NAD 27). Projection and blue  
1000-meter ticks: Universal Transverse Mercator, zone 10  
10 000-foot ticks: Washington Transverse Mercator, north zone  
North American Datum of 1983 (NAD 83) is shown by dashed  
corner ticks. The values of the shift between NAD 27 and  
NAD 83 for 7.5-minute intersections are obtainable from  
National Geodetic Survey NADCON Software.  
There may be private inholdings within the boundaries  
of the National or State reservations shown on this map.  
Gray tint indicates areas in which only landmark buildings are  
shown.



RECEIVED  
NOV 3 0 2001  
U.S. GEOLOGICAL SURVEY  
HISTORICAL MAP ARCHIVES

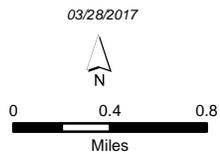


## **APPENDIX E EXHIBIT 4 MAPPED RECS**

---



**I-405 Tukwila to I-90 Vicinity Evaluated Sites**



- Potential Impact
- Park
- Waterbodies
- Rivers & Streams
- State Routes
- Local Road
- Railroad**
- Abandoned
- Active
- Rail Bank

**I-405 Tukwila to I-90 Vicinity Evaluated Sites**



**Site Map Number 19**  
Sound Ford  
Facility Site Number 58499353

**Site Map Number 13**  
Qwest Corporation WO  
Facility Site Number 96588161

**Site Map Number 29**  
Tukwila Gull 240  
Facility Site Number 79233831

**Site Map Number 21**  
USA Minimart  
Facility Site Number 94569877

**Site Map Number 11**  
Tire Store  
Facility Site Number 24009

**Site Map Number 2**  
WA Pacific Car and Foundry  
Facility Site Number 2065

**Site Map Number 10**  
Sunset Cars  
Facility Site Number 5366

**Site Map Number 12**  
Stoneway Concrete  
Facility Site Number 62244377

**Site Map Number 27**  
Renton Sand and Gravel  
Facility Site Number 2589

**Site Map Number 17**  
LTS Trucking  
Facility Site Number 71914167

**Site Map Number 14**  
Taylor Auto Body  
Facility Site Number 54887792

**Site Map Number 23**  
Renton Junction Landfill  
Facility Site Number 2168

**Site Map Number 15**  
Service Linen Supply  
Facility Site Number 12593698

**Southern Project Limit**  
MP: 0.00

**Site Map Number 20**  
Renton Village  
Facility Site Number 4484368

**Site Map Number 16**  
Puget Sound Energy  
Facility Site Number 47918484, 21349929, 86541136

**Site Map Number 28**  
Southend Arco  
Facility Site Number 11572949

**Site Map Number 24**  
Thrifty Car Rental  
Facility Site Number 52815133

**Site Map Number 26**  
Group Health Cooperate  
Facility Site Number 16471336

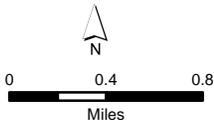
**Site Map Number 18**  
Gull 1201  
Facility Site Number 3238112

**Site Map Number 30**  
Daniel Boone Paints  
Facility Site Number 32873432

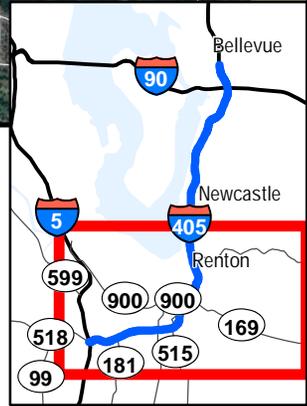
**Site Map Number 25**  
Family Fun Center  
Facility Site Number 18434384

**Site Map Number 22**  
Chevron 99144  
Facility Site Number 77287947

03/28/2017



- Potential Impact
- Park
- Waterbodies
- Rivers & Streams
- State Routes
- Local Road
- Railroad**
- Abandoned
- Active
- Rail Bank



## **APPENDIX F EXHIBIT 5 REC SUMMARY TABLE**

---



Site (Facility Site ID)/Map #	Address	Media Affected/Type of Contamination	Status	Likely Risk to Affect Construction
Factoria Shell (98614262)/1	3204 Richards Road, Bellevue	Confirmed benzene, lead, diesel, gasoline, and other petroleum in the soil and groundwater. Confirmed petroleum in the surface water.	Cleanup Started	Low risk. Straightforward. Ecology has issued a termination for the voluntary cleanup action. Ecology will be completing a site assessment and may be issuing a consent decree in the future. No contamination was observed in the South Bellevue Widening project, so it is highly unlikely contamination has migrated into the project area. Contamination is likely localized in the area surrounding the facility.
WA Pacific Car and Foundry (2065)/2	1400 N 4th Street, Renton	Confirmed conventional contaminants-inorganic, halogenated organics, metals, metal priority pollutants, non-halogenated solvents, petroleum products, phenolic compounds, polychlorinated biphenyls, and cPAHs in soil. Confirmed halogenated organics and metals in groundwater.	Superfund site – Construction complete; ongoing monitoring	Low to moderate risk. Complex. This would become complex property were acquired from this site. Prior to acquiring property from this site, requirements of the restrictive covenant, including notification of Ecology, will need to be met.
Quendall Terminals Loading Rack (61436398)/(2045)/3	4500 Seahawk Way, Renton	Suspect base/neutral/acid organics, non-halogenated solvents, and	Superfund Site -Awaiting cleanup	High risk. Straightforward. Part of this facility is within or adjacent to a parcel identified for project construction. Sampling was completed on the adjacent parcel and has been identified as contaminated.

		cPAHs in the soil and groundwater.		
Cleaner one Bellevue (42148291)/4	12817 38 <sup>th</sup> SE Bellevue	Tetrachloroethene (TCE) to the soil and groundwater.	Cleanup has started.	Low risk. Straightforward. Location is highly unlikely as it appears north of planned excavation and groundwater appears to be deeper than 25' bgs.
Pan Abode (see Figure 2D)/5	4350 Lake Washington Boulevard N, New Castle	Two former USTs previously on site. One contained leaded gasoline and the second contained diesel.	Listed on UST list.	Moderate to High. Straightforward. WSDOT is aware of USTs on site. WSDOT will conduct due diligence as needed as part of the acquisition process.
Barbee Mill Company Incorporated (767167221)/6	4101 Lake Washington Boulevard N, Renton	Petroleum and metals in the groundwater	Cleanup has started	Low risk. Straightforward. The area is south of the Quendall property and GH20 flow is likely towards Lake Washington. Bridge replacement activity appears upgradient from contamination.
Rossie Incorporated in Bellevue (17786296)/7	3625 128th Ave, Bellevue	Diesel-range hydrocarbons in groundwater.	Awaiting cleanup	Low risk. Straightforward. The maximum excavation depth in this area is 12 feet, and groundwater depths in the area appear to be deeper than 25 feet.
J&M Machine (9560)/8	1703 NE 43rd Street Renton	Confirmed diesel and petroleum products in soil. Suspect in groundwater.	Cleanup Started	Low risk. Straightforward. Soil contamination is likely localized. If suspect in water is confirmed, it would likely be in excavations near the north side of May Creek.
Renton Daily Grow (17426998)/9	401 Park Avenue, Renton	Confirmed benzene and petroleum gasoline in soil and groundwater	Cleanup started	Low Risk. Straightforward. North end of site still has contamination in the soil and groundwater. Up-gradient as flow is likely towards Cedar River.
Sunset Cars (5366)/10	330 Sunset Blvd, Renton	Confirmed benzene, lead, petroleum, and gasoline in the soil.	Cleanup started	Low Risk. Straightforward. Operating used car dealership. According to Ecology files, three old USTs were being removed with approximately 2 tons of contaminated soil. No documentation that states USTs and soils were ultimately removed. USTs at the site, and the potential presence of ACM and LBP in the building on site.

Tire Store (24009)/11	205 Logan Avenue South, Renton	Confirmed diesel and petroleum products in the soil	Cleanup started	Low risk. Straightforward. Diesel and heavy oil left in place and is inaccessible.
Stoneway Concrete (62244377)/12	1915 SE Maple Valley, Renton	Petroleum, diesel, heavy oil products, and formaldehyde in the soil. Formaldehyde, arsenic, and high alkaline PH in groundwater. Formaldehyde in soil vapor	Cleanup Started	Low to moderate risk. Complex. There is formaldehyde, arsenic, and high PH in the groundwater. Groundwater is dependent upon the Cedar River for recharge. Thus contamination will remain in the groundwater which will limit the potential migration pathways (northwest of the concrete facility). This should not affect the potential stormwater feature which is currently proposed.
Qwest Corporation WO (96588161)/13	225 Williams Avenue South, Renton	Petroleum in the soil and groundwater.	Cleanup Started	Low risk. Straightforward. A 6000 gallon UST was removed and 1100 UST was closed in place. Contaminated appears to have localized under the building and impervious road.
Taylor Auto Body (54887792)/14	330 Main Avenue South, Renton	Total Petroleum hydrocarbons in soil and groundwater.	Cleanup Started	Low risk. Straightforward. TPH for oil range organics in the groundwater exceeded cleanup levels in one well based on 2013 subsurface assessment.
Service Linen Supply (12593698)/15	903 South 4 <sup>th</sup> Street Renton	Organic conventional contaminants, LUST – other, non-halogenated solvents, and petroleum gasoline in the soil and groundwater.	Cleanup Started	Low risk. Complex as there are TPH-Gx in both soil and groundwater. Total Xylenes in the soil. Tetrachloroethylene (TCE) in groundwater. Ecology indicates groundwater flow is north to northwest which appears to flow away from planned excavation locations.
Puget Sound Energy 16(47918484/21349929/86541136)/16	915 Grady Way, Renton	Metals in soil and groundwater, PCB in soil. Petroleum in the groundwater	Cleanup started	Low to moderate. Straightforward. Will not affect parcel purchase. Contamination remains in south part of property which has potential with any utility relocate in the area.

				submitted to Ecology on any additional information. If not, a phase 2 assessment may be recommended.
LTS Trucking (71914167)/17	423 South 7 <sup>th</sup> Street Renton	Metals and petroleum in soil and groundwater. Polychlorinated biPhenyls (PCB) in soil and suspect in groundwater.	Cleanup completed on-site. Awaiting cleanup for off property.	Low risk. Straightforward. Groundwater flows generally north.
Gull 1201 (3238112)/18	509 South Grady Way, Renton	Benzene, lead, and petroleum in soil and groundwater. Pesticides in Soil. Metals in groundwater.	Cleanup started	Low risk. Straightforward. There is a surface water body between facility and I-405.
Sound Ford (58499353)/19	750 Rainier Avenue Renton	Benzene, gasoline, and petroleum other in soil. Gasoline in groundwater.	Cleanup started	Low risk. Straightforward. Concern was odor was noted in groundwater in 2008 and no representative sampling was completed.
Renton Village (4484368)/20	601 South Grady Way, Renton	Halogenated organics in soil and groundwater.	Cleanup started	Low risk. Complex. Not much detail since 2013.
USA Minimart (94569877)/21	765 Rainier Avenue, Renton	Petroleum hydrocarbons in soil and groundwater	Cleanup started	Low risk. Straightforward. Monitoring data indicates the contamination is centralized around the facility.
Chevron 99144 (77287947)/22	301 South Grady Way Renton	Benzene and petroleum gasoline in soil and groundwater	Cleanup started	Low risk. Straightforward. There has been construction area since 1995 and would have likely encountered contamination if it migrated.
Renton Junction Landfill (2168)/23	1800 Monster Road Renton	Suspect halogenated organics in groundwater,	Awaiting Cleanup	Low – moderate risk. Complex. Historical landfills can have many undetermined contaminants. Site assessment has not been completed. If Design build process decides excavation or project features located

		surface water, and soil		around migratory routes, this would increase the risk to encounter contamination. Appears to be a historical waste water and landfill site
Thrifty Car Rental (52815133)/24	316 SW 16 <sup>th</sup> Street Renton	Benzene, petroleum gasoline, and heavy oils in soil and groundwater. Diesel in soil.	Cleanup started	Low risk. Straightforward. Soil and groundwater concentrations are likely localized as they remain above cleanup levels there.
Family Fun Center (18434384)/25	15031 South Grady Way Tukwila	Metals and Petroleum products in soil and groundwater.	Cleanup started	Low risk. Straightforward. Site assessment was cancelled as site has been on CSCSL since 1997.
Group Health Cooperate (16471336)/26	801 SE 16 <sup>th</sup> Street	Benzene, non-halogenated solvents, and petroleum gasoline in the soil and groundwater.	Cleanup started	Low risk. Straightforward. There appears to be a residual source up-gradient from one of the monitoring wells that has recalcitrant benzene just above cleanup levels.
Renton Sand and Gravel (2589)/27	15031 & 15034 Monster Road, Renton.	Suspect metals, priority pollutants, and unspecified petroleum products in the soil.	Awaiting Cleanup	Low to moderate risk. Complex. Site Assessment cancelled in 9/2015. Unknown contamination.
Southend Arco (11572949)/28	5800 Southcenter Boulevard, Tukwila	Petroleum and petroleum products in the soil and groundwater	Cleanup Started	Low to moderate risk. Straightforward. Groundwater flow is southwest. 6/2017 groundwater monitoring noted cleanup levels that exceed MTCA for TPH, benzene, total xylenes, ethylbenzene, ethylene dibromide, and total lead.
Tukwila Gull 240 (79233831)/29	15640 West Valley Highway, Renton	Benzene and petroleum gasoline in soil and groundwater	Cleanup Started	Low risk. Straightforward. upon location – Site Assessment cancelled in 9/2015
Daniel Boone Paints (32873432)/30	15701 Nelsen Place, Tukwila	Benzene, non-halogenated solvents, and petroleum	Cleanup Started	Low risk. Straightforward. Location and groundwater flow unlikely to affect the project. Site Assessment cancelled in 9/2015

		gasoline in soil and groundwater		
BNSF (not on map as a REC)	Throughout the study area	Petroleum, creosote, heavy metals in the soil	Awaiting cleanup	Low to Moderate risk Straightforward. Based upon history of rail lines, any work in and around rail lines can encounter contamination.