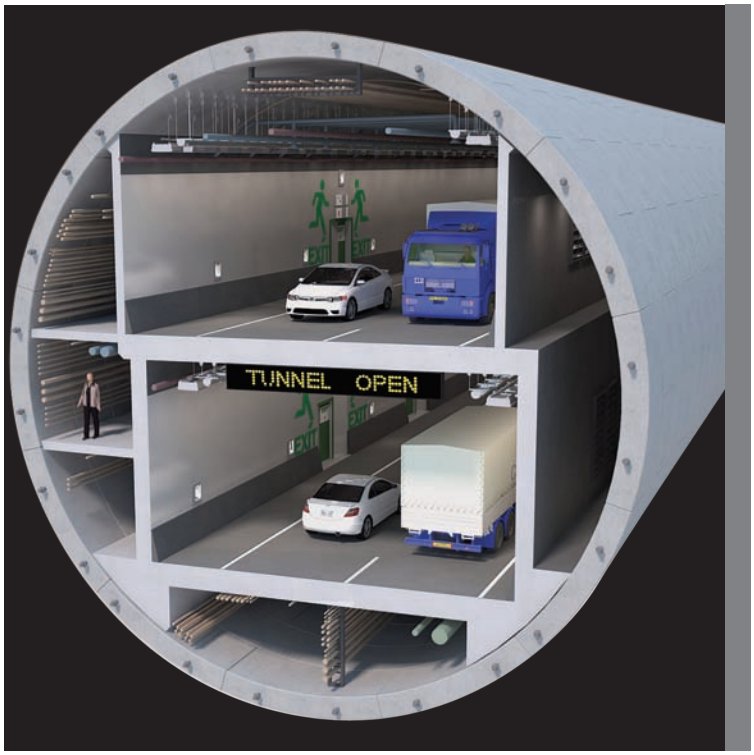
ALASKAN WAY VIADUCT REPLACEMENT PROJECT

2010 Supplemental Draft Environmental Impact Statement

APPENDIX I Section 106: Historic, Cultural, & Archaeological Resources Discipline Report



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U.S. Department of Transportation
Federal Highway Administration

Washington State Department of Transportation

City of Seattle

OCTOBER 2010

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Alaskan Way Viaduct Replacement Project

Supplemental Draft EIS
Section 106: Historic, Cultural, and Archaeological Resources Discipline Report

The Alaskan Way Viaduct Replacement Project is a joint effort between the Federal Highway Administration (FHWA), the Washington State Department of Transportation (WSDOT), and the City of Seattle. To conduct this project, WSDOT contracted with:

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999 Third Avenue, Suite 3200
Seattle, WA 98104

In association with:
Coughlin Porter Lundeen, Inc.
EnviroIssues, Inc.
GHD, Inc.
HDR Engineering, Inc.
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Prepared by:
WSDOT; Mimi Sheridan, AICP; and Statistical Research, Inc. (SRI); with contributions by Northwest Archaeological Associates, Inc. (NWAA).

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LIST OF ATTACHMENTS

LIST OF EXHIBITS

ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effects
BMP	best management practice
B.P.	before present
bpsl	below present sea level
CFR	Code of Federal Regulations
City	City of Seattle
DAHP	Washington State Department of Archaeology and Historic Preservation
DPD	Department of Planning and Development
EIS	Environmental Impact Statement
fbs	feet below the surface
FHWA	Federal Highway Administration
HAER	Historic American Engineering Record
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
NWAA	Northwest Archaeological Associates
Program	Alaskan Way Viaduct and Seawall Replacement Program
project	Alaskan Way Viaduct Replacement Project
RCW	Revised Code of Washington
SDOT	Seattle Department of Transportation
SEPA	Washington State Environmental Policy Act
SHPO	State Historic Preservation Officer
SLS&E	Seattle Lake Shore and Eastern Railroad
SMC	Seattle Municipal Code
TBM	tunnel boring machine
SR	State Route
USC	United States Code
WSDOT	Washington State Department of Transportation

The SR 99 Alaskan Way Viaduct Replacement Project - Historical, Cultural, and Archaeological Resources Discipline Report contains sensitive cultural resources information that is exempt from public disclosure pursuant to provisions of the Public Records Act (RCW 42.56.300). Because the sensitive information within this document has been redacted, the reader will find black bars that obscure information relating to resource locations.

Chapter 1 INTRODUCTION AND SUMMARY

1.1 Introduction

This discipline report evaluates the Bored Tunnel Alternative, the new alternative under consideration for replacing the Alaskan Way Viaduct. This report and the Alaskan Way Viaduct Replacement Project Supplemental Draft Environmental Impact Statement (EIS) that it supports are intended to provide new information and updated analyses to those presented in the March 2004 Alaskan Way Viaduct and Seawall Replacement Project Draft EIS and the July 2006 Alaskan Way Viaduct and Seawall Replacement Project Supplemental Draft EIS. The discipline reports present the detailed technical analyses of existing conditions and predicted effects of the Bored Tunnel Alternative. The results of these analyses are presented in the main volume of the Supplemental Draft EIS.

The Federal Highway Administration (FHWA) is the lead federal agency for this project, primarily responsible for compliance with the National Environmental Policy Act (NEPA) and other federal regulations, as well as distributing federal funding. As part of the NEPA process, FHWA is also responsible for selecting the preferred alternative. FHWA will base their decision on the information evaluated during the environmental review process, including information contained within the Supplemental Draft EIS and the subsequent Final EIS. FHWA can then issue their NEPA decision, called the Record of Decision (ROD).

The 2004 Draft EIS (WSDOT et al. 2004) evaluated five Build Alternatives and a No Build Alternative. In December 2004, the project proponents identified the cut-and-cover Tunnel Alternative as the preferred alternative and carried the Rebuild Alternative forward for analysis as well. The 2006 Supplemental Draft EIS (WSDOT et al. 2006) analyzed two alternatives—a refined cut-and-cover Tunnel Alternative and a modified rebuild alternative called the Elevated Structure Alternative. After continued public and agency debate, Governor Gregoire called for an advisory vote to be held in the city of Seattle. The March 2007 ballot included an elevated alternative and a surface-tunnel hybrid alternative. The citizens voted down both alternatives.

Following this election, the lead agencies committed to a collaborative process to find a solution to replace the viaduct along Seattle's central waterfront. This Partnership Process is described in Appendix S, the Project History Report. In January 2009, Governor Gregoire, King County Executive Sims, and Seattle Mayor Nickels announced that the agencies had reached a consensus and recommended replacing the aging viaduct with a bored tunnel.

The environmental review process for the Alaskan Way Viaduct Replacement Project (the project) builds on the five Build Alternatives evaluated in the 2004 Draft EIS and

the two Build Alternatives evaluated in the 2006 Supplemental Draft EIS. It also incorporates the work done during the Partnership Process. The bored tunnel was not studied as part of the previous environmental review process, and so it becomes the eighth alternative to be evaluated in detail.

The Bored Tunnel Alternative analyzed in this discipline report and in the Supplemental Draft EIS has been evaluated both quantitatively and qualitatively. The Bored Tunnel Alternative includes replacing State Route (SR) 99 with a bored tunnel and associated improvements, such as relocating utilities located on or under the viaduct, removing the viaduct, decommissioning the Battery Street Tunnel, and making improvements to the surface streets in the tunnel's south and north portal areas.

Improvements at the south portal area include full northbound and southbound access to and from SR 99 between S. Royal Brougham Way and S. King Street. Alaskan Way S. would be reconfigured with three lanes in each direction. Two options are being considered for new cross streets that would intersect with Alaskan Way S.:

- New Dearborn Intersection – Alaskan Way S. would have one new intersection and cross street at S. Dearborn Street.
- New Dearborn and Charles Intersections – Alaskan Way S. would have two new intersections and cross streets at S. Charles Street and S. Dearborn Street.

Improvements at the north portal area would include restoring Aurora Avenue and providing full northbound and southbound access to and from SR 99 near Harrison and Republican Streets. Aurora Avenue would be restored to grade level between Denny Way and John Street, and John, Thomas, and Harrison Streets would be connected as cross streets. This rebuilt section of Aurora Avenue would connect to the new SR 99 alignment via the ramps at Harrison Street. Mercer Street would be widened for two-way operation from Fifth Avenue N. to Dexter Avenue N. Broad Street would be filled and closed between Ninth Avenue N. and Taylor Avenue N. Two options are being considered for Sixth Avenue N. and the southbound on-ramp:

- The Curved Sixth Avenue option proposes to build a new roadway that would extend Sixth Avenue N. in a curved formation between Harrison and Mercer Streets. The new roadway would have a signalized intersection at Republican Street.
- The Straight Sixth Avenue option proposes to build a new roadway that would extend Sixth Avenue N. from Harrison Street to Mercer Street in a typical grid formation. The new roadway would have signalized intersections at Republican and Mercer Streets.

For these project elements, the analyses of effects and benefits have been quantified with supporting studies, and the resulting data are found in the discipline reports (Appendices A through R). These analyses focus on assessing the Bored Tunnel Alternative's potential effects for both construction and operation, and consider appropriate mitigation measures that could be employed. The Viaduct Closed (No Build Alternative) is also analyzed.

The Alaskan Way Viaduct Replacement Project is one of several independent projects that improve safety and mobility along SR 99 and the Seattle waterfront from the South of Downtown (SODO) area to Seattle Center. Collectively, these individual projects are often referred to as the Alaskan Way Viaduct and Seawall Replacement Program (the Program). This Supplemental Draft EIS evaluates the cumulative effects of all projects in the Program; however, direct and indirect environmental effects of these independent projects will be considered separately in independent environmental documents. This collection of independent projects is categorized into four groups: roadway elements, non-roadway elements, projects under construction, and completed projects.

Roadway Elements

- Alaskan Way Surface Street Improvements
- Elliott/Western Connector
- Mercer West Project (Mercer Street improvements from Fifth Avenue N. to Elliott Avenue)

Non-Roadway Elements

- First Avenue Streetcar Evaluation
- Transit Enhancements
- Elliott Bay Seawall Project
- Alaskan Way Promenade/Public Space

Projects Under Construction

- S. Holgate Street to S. King Street Viaduct Replacement
- Transportation Improvements to Minimize Traffic Effects During Construction

Completed Projects

- SR 99 Yesler Way Vicinity Foundation Stabilization (Column Safety Repairs)
- S. Massachusetts Street to Railroad Way S. Electrical Line Relocation Project (Electrical Line Relocation Along the Viaduct's South End)

1.2 Applicable Regulations and Guidelines

The environmental process for this project is governed by NEPA, which established the responsibility of the federal government to use all practicable means to preserve important historic, cultural, and natural aspects of the national heritage.

The National Historic Preservation Act established as federal policy that federal agencies act as responsible stewards of our nation's resources when their actions affect historic properties (United States Code, Title 16, Section 470 (16 USC 470). Section 106 of the act requires the agency to take into account the effect of an undertaking on historic properties. A historic property is any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP). Implementing regulations for Section 106 explicitly provide guidance on how the NEPA and Section 106 processes can be coordinated [Section 800.8(a)] and set forth the manner in which the NEPA process and documentation can be used to comply with Section 106 [Section 800.9(c)].

The identification of historic properties and assessment of effects of the undertaking in a manner consistent with existing regulations of the National Historic Preservation Act (Sections 800.4 through 800.5) are among the provisions. Eligible properties generally must be at least 50 years old; possess integrity of location, design, setting, materials, workmanship, feeling, and association; and meet at least one of the four criteria of significance:

a. Be associated with events that have made a significant contribution to the broad patterns of our history; or

b. Be associated with the lives of significant persons in our past; or

c. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. Have yielded or may be likely to yield information important in history or prehistory.

In addition, the following laws, ordinances, agreements, and guidelines address historic, cultural, and archaeological resources near the project:

- Section 4(f) of the Department of Transportation Act of 1966, as amended (49 USC 303).
- The Programmatic Agreement among Washington State Department of Transportation (WSDOT), FHWA, the Washington State Department of Archaeology and Historic Preservation (DAHP), and the Advisory Council on Historic Preservation.

- City of Seattle Landmarks Preservation Ordinance (Seattle Municipal Code, Chapter 25.12 [SMC 25.12]) and guidelines.
- Pioneer Square Preservation District Ordinance (SMC 23.66) and guidelines.
- Pike Place Market Historic District Ordinance (SMC 25.24) and guidelines.
- Interdepartmental Agreement on Review of Historic Buildings during State Environmental Policy Act (SEPA) Review, between the City of Seattle Department of Planning and Development (DPD) and the Department of Neighborhoods.
- Clarification of SEPA Historic Preservation Policy for Potential Archaeologically Significant Sites and Requirements for Archaeological Assessments (DPD Director's Rule 2-98).

This report also follows guidance provided by WSDOT's *Environmental Procedures Manual* (WSDOT 2010) and DAHP's *Washington State Standards for Cultural Resources Reporting.*

Several Washington state laws specifically address archaeological sites and Native American burials and could apply under special circumstances. The Archaeological Sites and Resources Act prohibits knowingly excavating or disturbing prehistoric and historical archaeological sites on public or private land without a permit from DAHP (Revised Code of Washington, Chapter 27.53 [RCW 27.53]). The Indian Graves and Records Act prohibits knowingly destroying American Indian graves and requires their inadvertent disturbance by construction or other activity to be followed by re-interment under supervision of the appropriate Indian tribe (RCW 27.44).

1.3 Summary

This report evaluates the historic, cultural, and archaeological resources near the proposed bored tunnel and discusses the potential effects of the construction and operation of the Bored Tunnel Alternative and Viaduct Closed (No Build Alternative), as well as suggesting measures for mitigating the potential adverse effects. This study has determined that the project would have an adverse effect on these historic properties:

- Alaskan Way Viaduct/Battery Street Tunnel
- Western Building
- Polson Building
- The Dearborn South Tideland Site (45KI924)

Effects are considered adverse if they are severe enough to damage the characteristics that make the resource eligible for listing in the NRHP. One resource (the Alaskan Way Viaduct/Battery Street Tunnel) would be demolished/decommissioned, and another one (the Western Building) may be demolished.

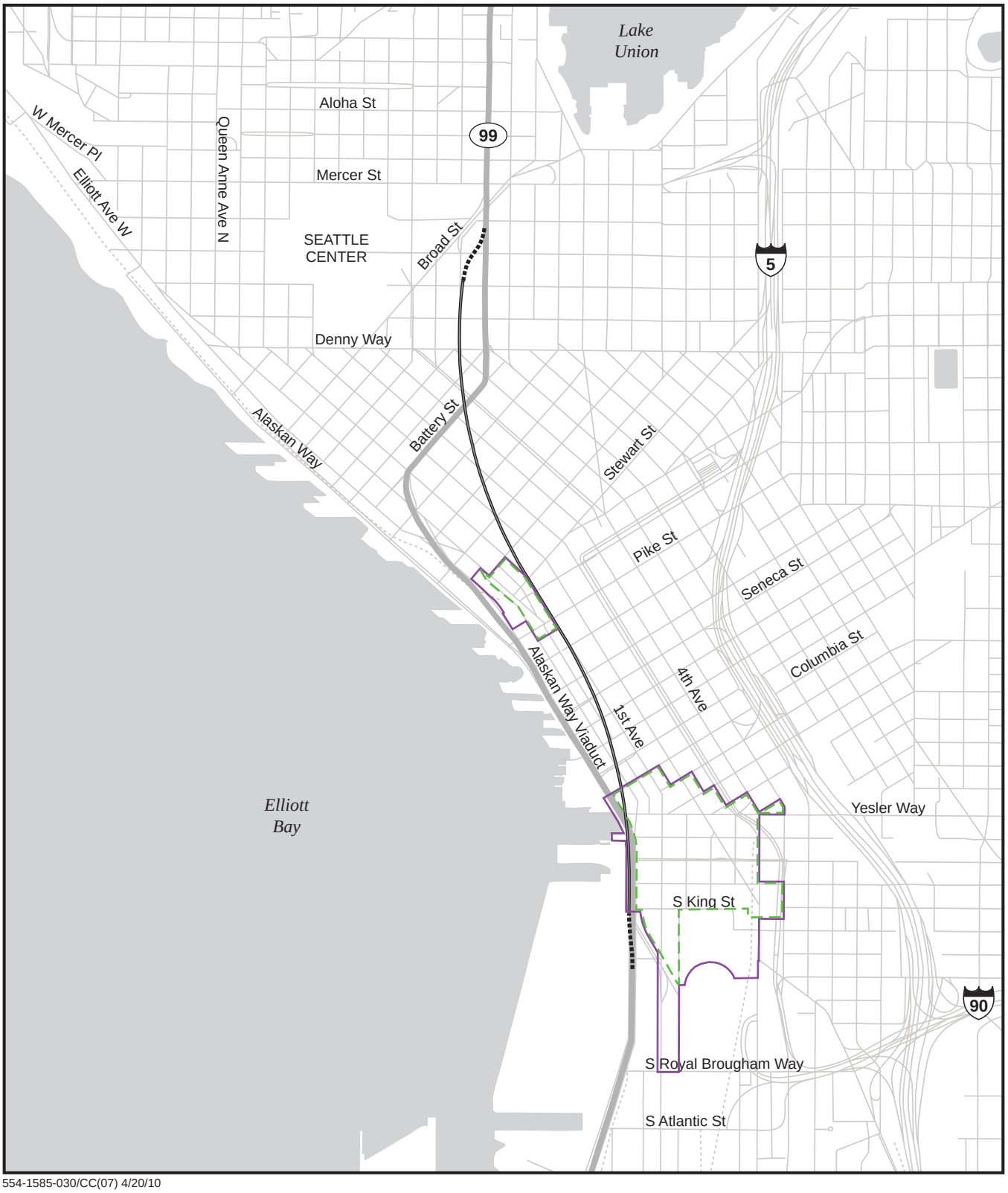
The primary objective of the project is to replace the viaduct, which is in danger of failing in a seismic event. As shown in Exhibit 1-1, the Bored Tunnel Alternative would construct a tunnel beginning near S. King Street, curving away from the waterfront at S. Washington Street and joining First Avenue at University Street; it would travel under First Avenue to Stewart Street, going east to connect to Aurora Avenue near Roy Street. Exhibits 1-2 and 1-3 show the configuration options at the south and north portal areas, respectively. Various street improvements near the north portal would increase connectivity throughout the neighborhood. The viaduct would then be demolished and the Battery Street Tunnel decommissioned.

Because the viaduct alignment adjoins two historic districts and numerous other historic resources in downtown Seattle, the potential effects of the alternatives on historic, cultural, and archaeological resources have been identified and are summarized in this report. More detailed information on the effects can be found in other appendices to the Supplemental Draft EIS, particularly Appendix F, Noise Discipline Report; Appendix M, Air Discipline Report; Appendix D, Visual Quality Discipline Report; Appendix C, Transportation Discipline Report; Appendix L, Economics Discipline Report; and Appendix P, Earth Discipline Report.

The Area of Potential Effects (APE) contains portions of two districts that are listed in the NRHP: Pioneer Square and Pike Place Market. Numerous other NRHP-listed properties and sites are located along Western, First, and Second Avenues. In downtown, Belltown, and along the waterfront, there are a considerable number of additional properties that are eligible for listing in the NRHP. Many of these are designated as Seattle landmarks; others appear to meet the criteria for this designation. The APE also contains seven recorded archaeological sites, as well as potential undiscovered sites.

The primary operational effects of the Bored Tunnel Alternative on historic resources would be the demolition of the Alaskan Way Viaduct and the decommissioning of the Battery Street Tunnel. The viaduct and tunnel have been determined eligible for the NRHP.

Potential construction effects of the Bored Tunnel Alternative on historic resources would occur primarily west of First Avenue, near Columbia and Marion Streets where the tunnel alignment curves from Alaskan Way to First Avenue. Construction would result in potential adverse effects on two contributing buildings in the Pioneer Square Historic District: the Western Building (619 Western Avenue, H-108) and the Polson Building (61 Columbia Street, H-109). These buildings would be affected by settlement during the tunnel boring process. Thirteen additional historic buildings in this area may potentially



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Local Historic District

National Historic District

Connection to SR 99

Tunnel Alignment

Exhibit 1-1
Bored Tunnel Alignment

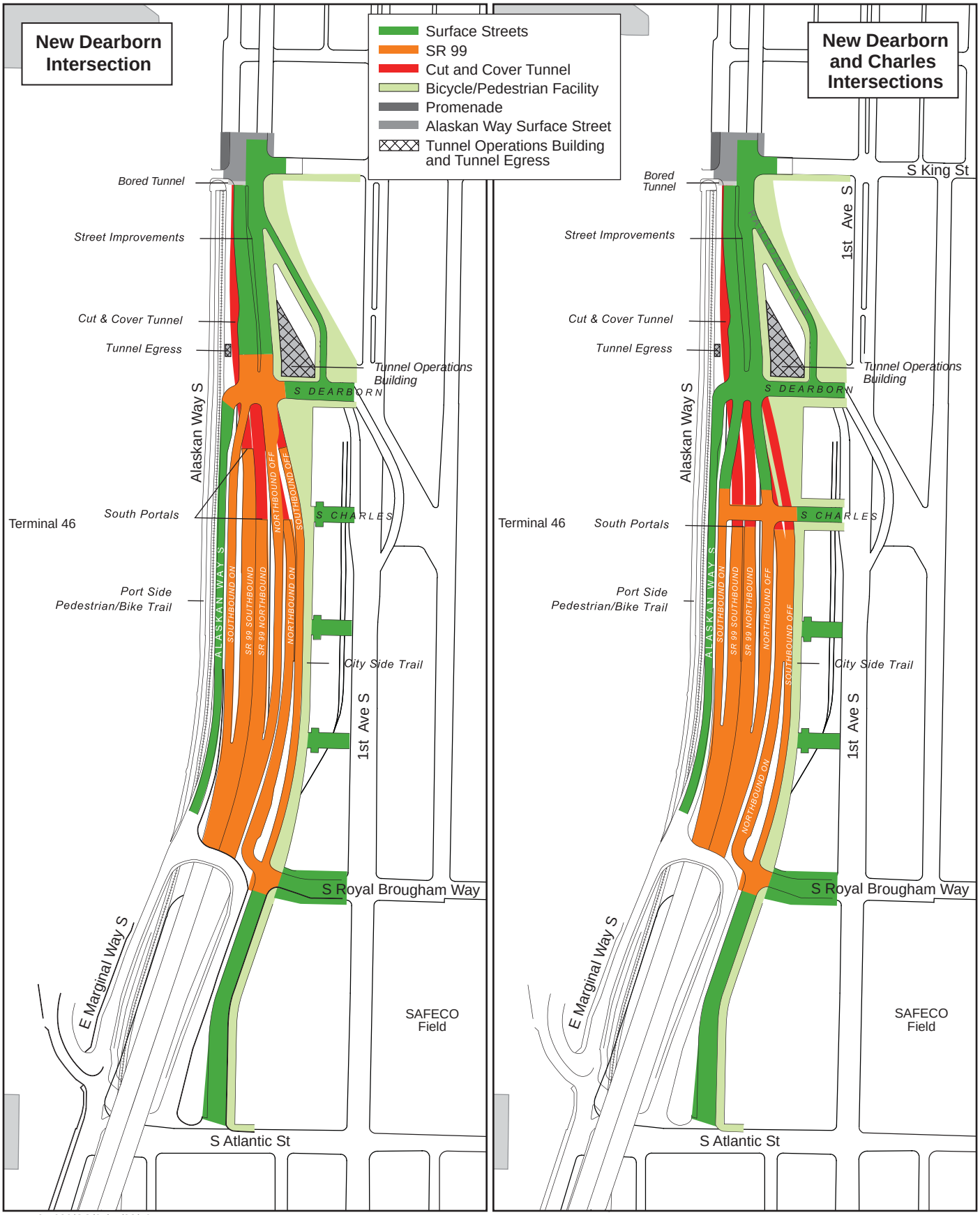

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Exhibit 1-2
South Portal Options

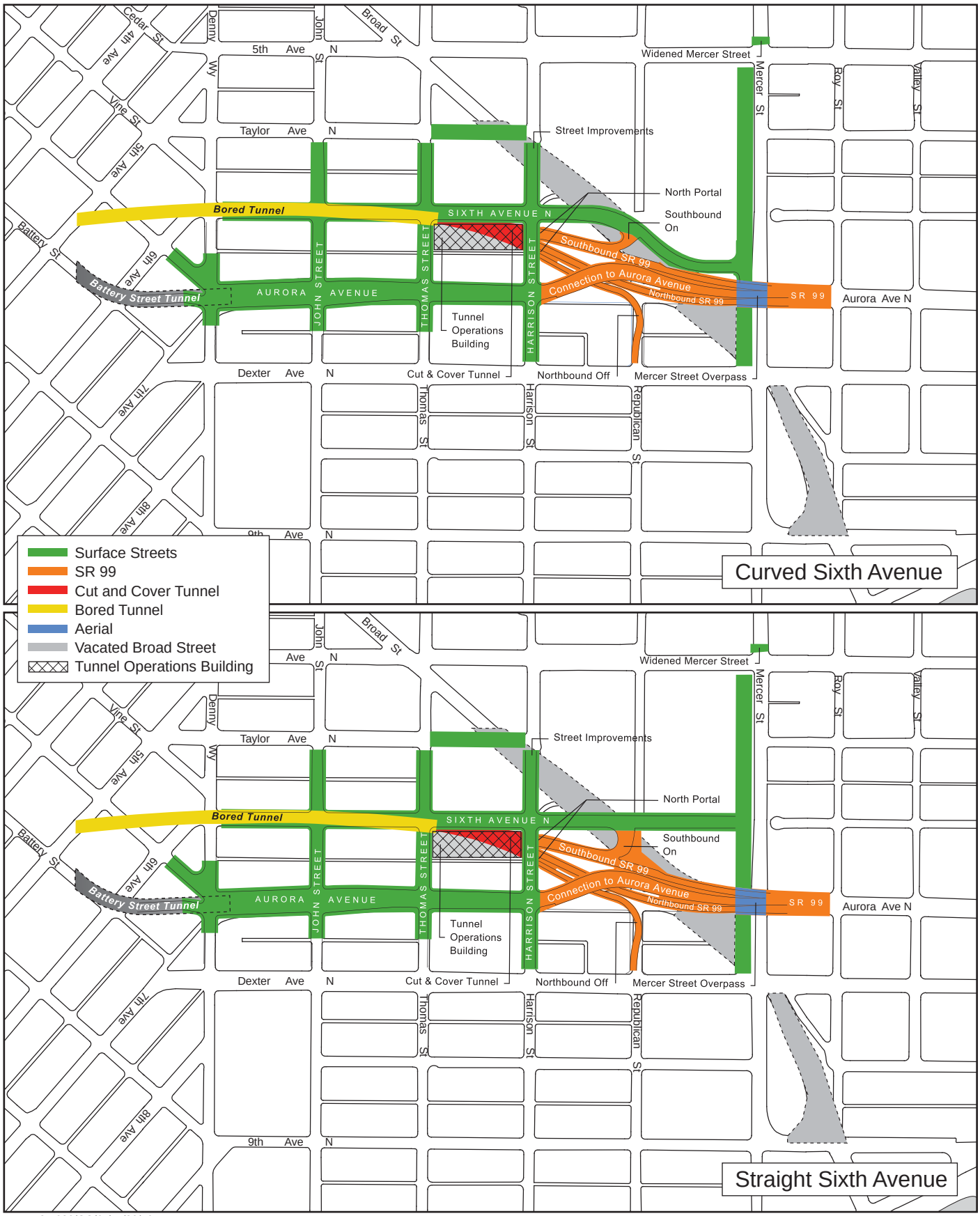

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Exhibit 1-3
New North Portal Options

be slightly affected by settlement during the tunnel boring process; these effects would not be considered adverse. Other construction effects associated with the Bored Tunnel Alternative include noise, vibration, minor ground settlement, dust, mud, traffic congestion, limited access, reduced parking, and the economic impacts; they are not expected to adversely affect historic properties.

Project construction would adversely affect one significant historic-period archaeological site, the Dearborn South Tideland Site (45KI924). Mitigation in the form of data recovery would be undertaken prior to construction. Additional subsurface exploration in areas identified as highly sensitive for archaeological deposits would also be conducted prior to construction. The construction schedule would be designed to accommodate the evaluation and mitigation of significant archaeological sites found during construction in areas that were inaccessible for examination prior to construction. Construction would proceed in compliance with a Memorandum of Agreement (MOA) developed in consultation with concerned agencies, tribes, and other parties. All of these measures would meet the requirements of Section 106 of the National Historic Preservation Act and other applicable laws, regulations, and policies.

The Bored Tunnel Alternative would benefit the Pioneer Square Historic District by enhancing the historic context of the district. Views of the buildings along the west side of Pioneer Square and views from these buildings to the waterfront would be opened up. The tunnel would also reduce the vehicle noise and air pollution now experienced by customers, residents, workers, and others in the historic district.

The central waterfront piers (Piers 54 through 59, Seattle landmarks that are NRHP eligible) would also benefit from enhanced views between downtown and the waterfront and reduced noise and air pollution from vehicles.

Historic buildings adjacent to the existing ramps at First Avenue S. and at Seneca and Columbia Streets would benefit from the demolition of these ramps, which would result in reduced vehicle noise, vibration, and air pollution. Views of these historic structures would be enhanced, and views from the buildings would be opened up.

Toward the end of the project timeline, the Alaskan Way Viaduct would be demolished. This would adversely affect the viaduct structure but would not adversely affect adjacent buildings along Alaskan Way.

Mitigation for the demolition of the viaduct has been partially addressed in an MOA developed for the S. Holgate Street to S. King Street Viaduct Replacement Project. Under this MOA, a Historic American Engineering Record (HAER) report (including photography) on the viaduct and the Battery Street Tunnel has been completed and submitted to the National Park Service (Sheridan 2009).

Additional interpretive programs are planned as further mitigation and are described later in this document.

Mitigation measures for adverse construction effects include, but are not limited to, monitoring historic buildings and areaways (spaces beneath sidewalks adjacent to some buildings) for vibration effects and implementing measures to minimize these effects; and compensation grouting and structural reinforcement of vulnerable buildings. The Polson Building, a contributing property in the Pioneer Square Historic District, would need foundation reinforcement. The adjacent Western Building is currently in very poor structural condition; potential measures to reinforce the structure are described in Section 6.2.1.

Actions to be taken to alleviate impacts that are not considered adverse include compensation and compaction grouting; implementing best management practices (BMPs) to control noise and air pollution; using various methods to relieve traffic congestion and preserve parking spaces; providing assistance to communities to maintain business viability; scheduling construction, when possible, to minimize traffic and noise effects; minimizing street closures and detours; and ensuring continued access to stores, offices, and residences.

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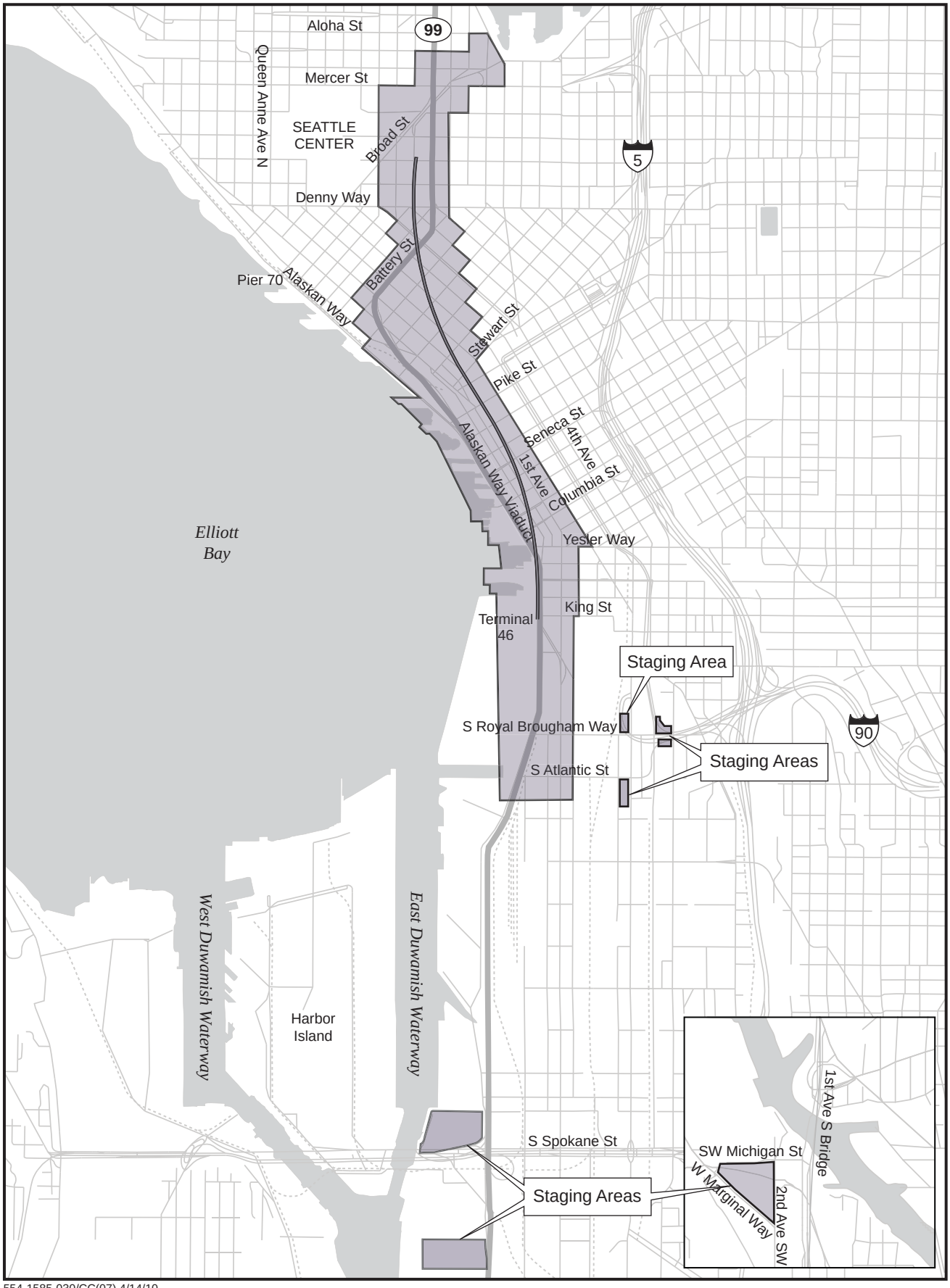
Chapter 2 METHODOLOGY

2.1 Study Area (Area of Potential Effects)

The study area for the Bored Tunnel Alternative begins south of S. Atlantic Street, with the tunnel itself beginning near S. King Street. The tunnel would continue under Alaskan Way S. to approximately S. Washington Street where it would curve slightly away from the waterfront and then run beneath First Avenue beginning at approximately University Street. At Stewart Street, it would travel in a northern direction under Belltown. At Denny Way, the bored tunnel would run beneath Sixth Avenue S., where it would transition to a side-by-side surface roadway at about Harrison Street. Modifications to SR 99 would continue to Roy Street. The APE, shown on Exhibit 2-1, extends horizontally one block on each side of this route, as well as around the staging areas (the locations of the staging areas are indicated in Appendix B, Alternatives Description and Construction Methods Discipline Report). To account for the removal of the existing viaduct structure, the APE also extends one block east of Alaskan Way and west to the waterfront piers, between S. Jackson and Battery Streets. Correspondence between WSDOT and DAHP regarding the APE is included in Attachment B.

To evaluate the potential effects of the Bored Tunnel Alternative on archaeological resources, an area of potential ground disturbance was delineated within the APE. This area represents the area within the APE with the potential to affect subsurface archaeological resources. Within the area of potential ground disturbance, the depth of potential ground disturbance varies depending on the project element (Exhibits 2-2, 2-3, and 2-4). The following project elements, listed below from south to north, have the potential to affect archaeological resources:

- From S. Atlantic to S. King Streets between Alaskan Way S. and First Avenue S., the south portal for the Bored Tunnel Alternative would include excavation of a cut-and-cover trench to a maximum depth of approximately 90 feet below ground surface, excavation of a tunnel operations building to a maximum depth of approximately 60 feet below ground surface, excavation of utility trenches and vaults to a maximum depth of approximately 13 feet below-ground surface, excavation of stormwater facilities to a maximum depth of 20 feet below ground surface, and surface improvements to an estimated depth of 5 feet below ground surface.
- From S. King to S. Main Streets within Alaskan Way S., ground improvements would take place from the ground surface to the middle of the bored tunnel, which is located at a maximum depth of approximately 90 feet below ground surface as it approaches S. Main Street.



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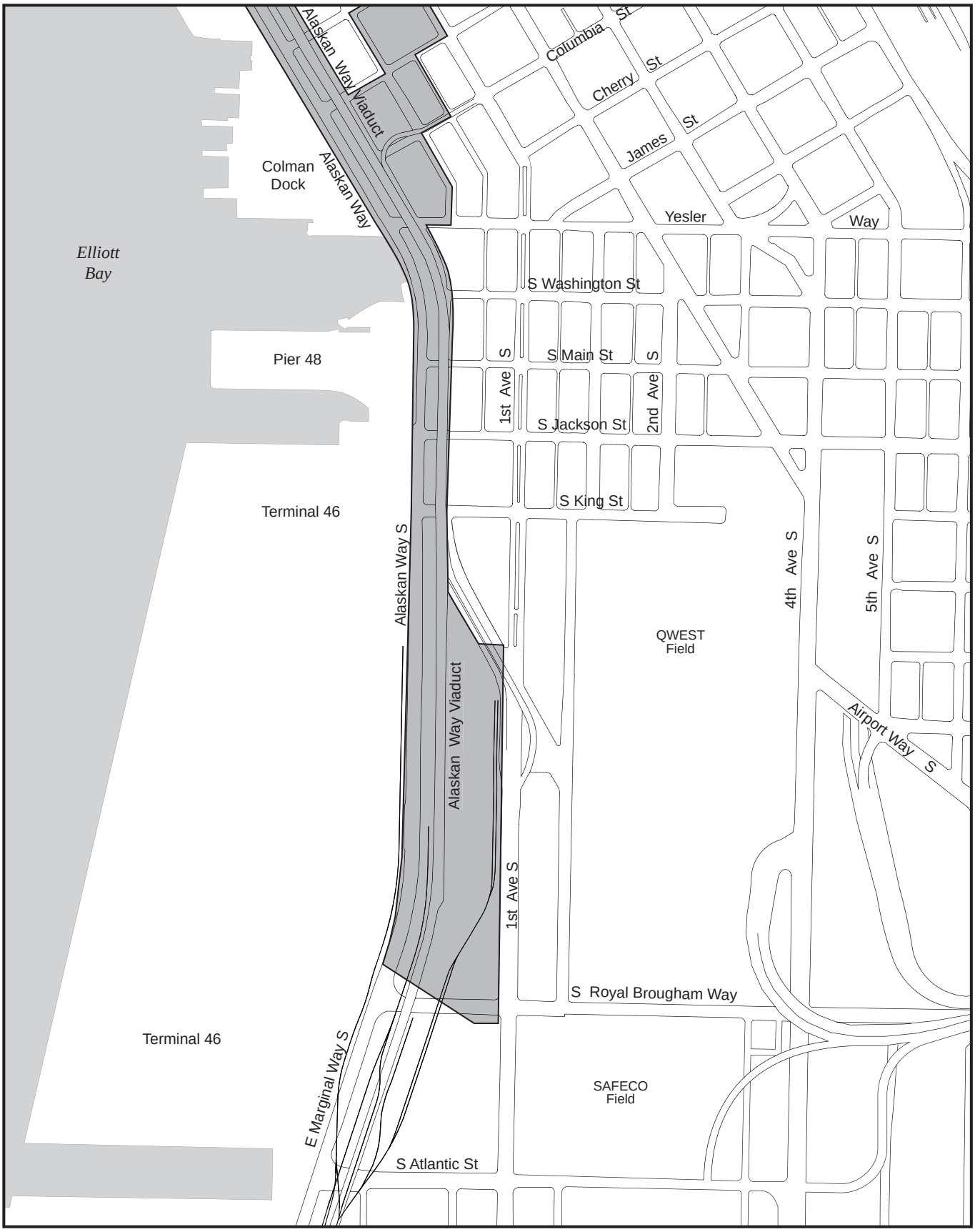
Tunnel Alignment

Exhibit 2-1
Area of Potential Effect



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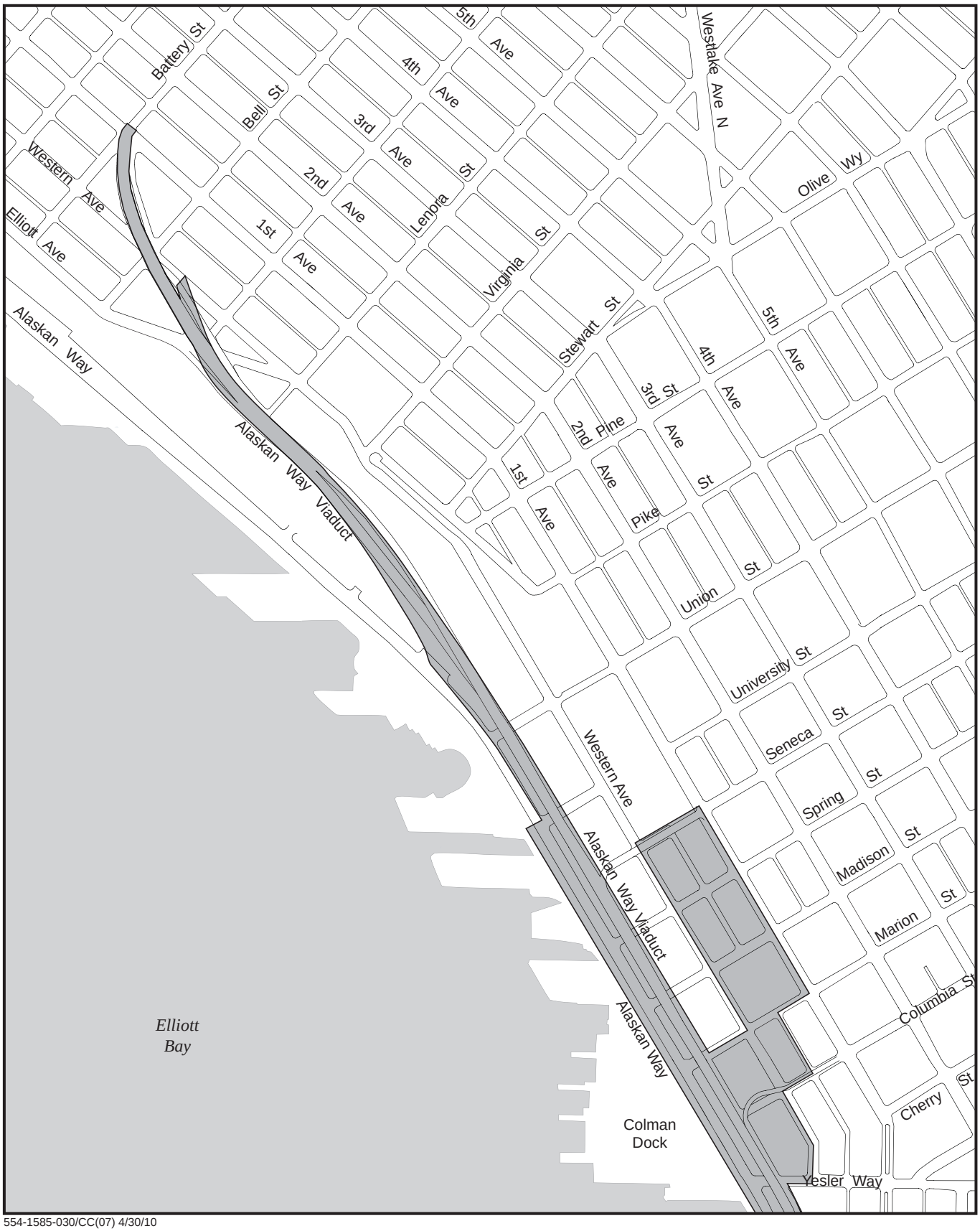
Areas of Ground Disturbance

Exhibit 2-2
Areas of Potential Ground Disturbance South



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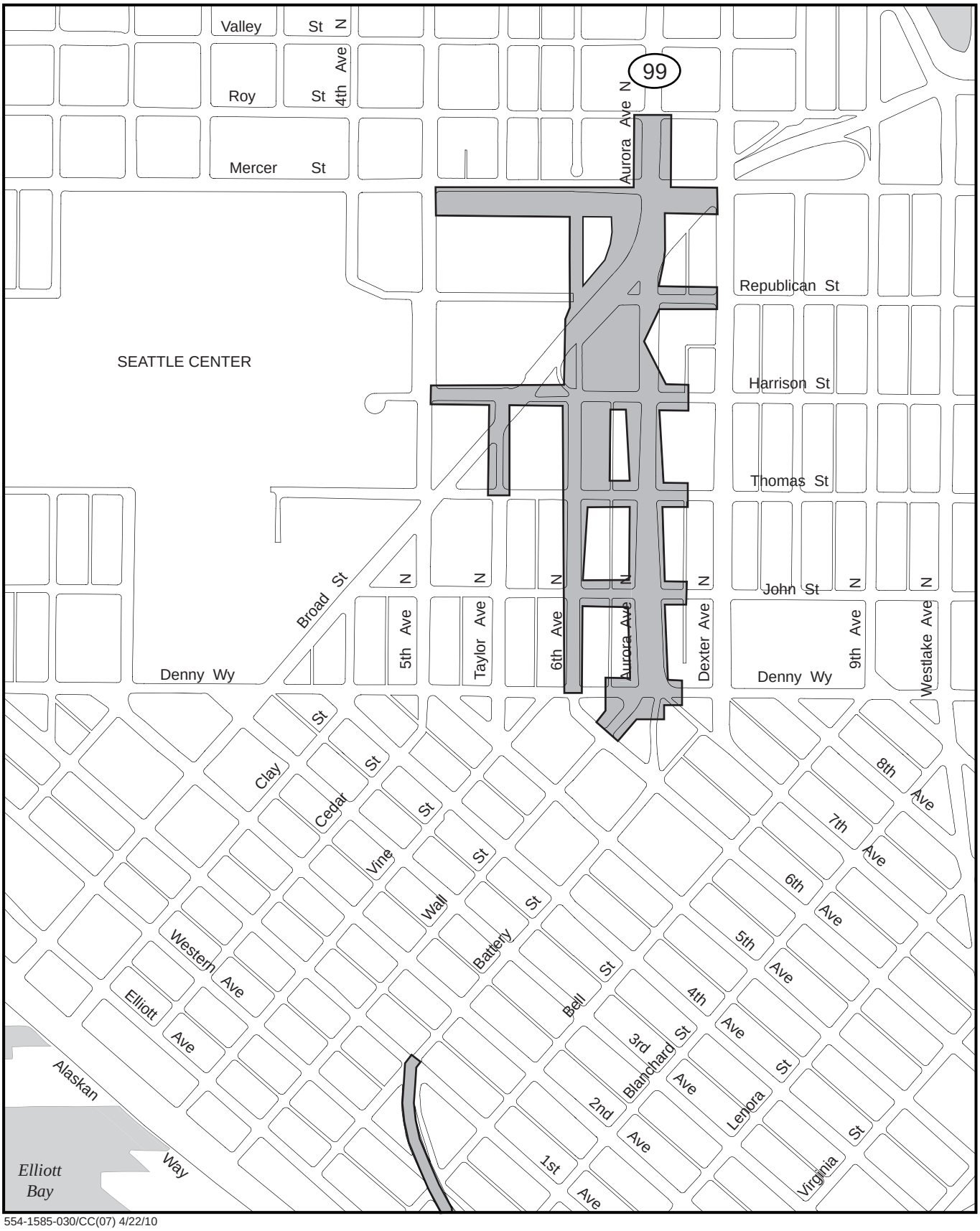
Areas of Ground Disturbance

Exhibit 2-3
Areas of Potential Ground Disturbance Central



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Areas of Ground Disturbance

Exhibit 2-4
Areas of Potential Ground Disturbance
North

- From one-half block north of S. Washington Street to one-half block north of Yesler Way, ground improvements would take place at Bents 94 to 100 of the Alaskan Way Viaduct to a maximum depth of approximately 110 feet below ground surface.
- From Yesler Way to Seneca Street between the Alaskan Way Viaduct and First Avenue, shafts, no greater than 20 feet in diameter, would be excavated in six specific locations to a maximum depth of approximately 55 feet below ground surface.
- From Columbia to Madison Streets within Western Avenue and from Western Avenue to First Avenue S. within Madison Street, trenches for water line relocation would be excavated to a maximum depth of approximately 8 feet below ground surface.
- From S. King to University Streets between Alaskan Way S. and the Alaskan Way Viaduct, trenches and vaults for transmission line relocation would be excavated to a maximum depth of approximately 9 feet below ground surface.
- From S. King to Pike Streets within Alaskan Way S. and continuing from Pike to Bell Streets along the alignment of the Alaskan Way Viaduct, trenches and vaults for communications line relocation would be excavated to an estimated depth of 5 feet below ground surface.
- From the Alaskan Way Viaduct to Western Avenue within University Street, trenches and vaults for transmission line relocation would be excavated to a maximum depth of approximately 15 feet below ground surface.
- From Denny Way to Mercer Street between Fifth Avenue N. and Dexter Avenue N., the north portal for the Bored Tunnel Alternative includes the excavation of a cut-and-cover trench to a maximum depth of approximately 90 feet below ground surface, the excavation of utility trenches and vaults to a maximum depth of approximately 14 feet below ground surface, the excavation of stormwater facilities to a maximum depth of 25 feet below ground surface, and surface improvements to an estimated depth of 5 feet below ground surface.
- At all existing bents of the Alaskan Way Viaduct, removal of the Alaskan Way Viaduct would include excavation within the footprint of each bent to a depth no greater than the pile caps, which are approximately 5 feet below ground surface.

2.2 Analysis of Affected Environment

2.2.1 Archival Research

After designation of the APE, information was gathered to guide studies of the affected environment. The primary sources of data fall into two categories:

- Information on previously identified resources.
- Information needed to identify and evaluate the significance of newly identified resources.

To identify those historic buildings or structures that had previously been identified as significant, information on the developmental history of the area, on the historic districts, and on the individual buildings was collected, including the following:

- Nomination forms for properties listed in the NRHP and for Seattle landmarks.
- Information on the historic districts.
- Information from previous surveys of the area, including the recent survey of downtown and Belltown by the City of Seattle (City).
- Information in previous environmental reports regarding potential historic resources in the study area.
- Developmental history found in standard works of history, university theses, and similar sources.
- Historical building data from City directories, building permit files, and King County Tax Assessor property record cards.
- Historical photographs of key buildings and their vicinity.

To identify previously recorded archaeological sites, information was collected from DAHP in Olympia, as well as from published sources at the University of Washington, Seattle Public Libraries, Washington State Library, and other locations. Researchers also consulted historic maps and photographs.

To identify and evaluate the significance of newly identified archaeological resources, analysts referred to the *National Register Bulletin 36*, Evaluating and Registering Archaeological Properties (Little et al. 2000). Other guidance from the National Park Service, the Advisory Council on Historic Preservation, and DAHP was consulted as needed. Archival records of similar and nearby sites, at DAHP and elsewhere, were also consulted for comparative purposes.

2.2.2 Built Environment Investigations

To identify potential Seattle landmarks and historic resources as defined by the NRHP, buildings and structures within the APE that were constructed in or before 1963 were evaluated. Information from the City's comprehensive survey (City of Seattle 2007–2008) of downtown properties was a major source for assessing their significance, as well as survey work and additional research conducted for the Program. For properties that have not been surveyed, information from the City's construction records, the King County Tax Assessor, City directories, and other archival information has been used to assess the significance of the properties. All properties within the APE constructed in or before 1963 (that have not been previously recorded or that are not located within NRHP historic districts) were evaluated and recorded in the DAHP Historic Property Inventory Database. Copies of the inventory forms are part of the project record on file at the project office. Areaways (spaces beneath the sidewalks adjacent to some buildings) in the APE have been identified and evaluated. Information on their historic and structural characteristics collected by the Seattle Department of Transportation (SDOT) from 2000 to 2002 has been expanded and updated through physical inspections (City of Seattle 2003).

2.2.3 Archaeological Investigations

Following the delineation of areas of potential ground disturbance that would have the potential to affect archaeological resources, researchers determined the probability that archaeological materials would be present in those areas (Huber et al. 2010).

Within the area of ground disturbance, archaeological probability varies based on several factors. These factors can be divided into three categories:

- Presence of Holocene sediments or intact historic surfaces.
- Presence of archaeological materials associated with those sediments or surfaces.
- Intersection of project construction with those sediments or surfaces.

Investigation for the presence of Holocene sediments or landforms and intact historic surfaces required deep archaeological testing that consisted of geoarchaeological techniques, such as core sampling, as well as limited open excavation using heavy equipment, such as backhoes and excavators. This deep testing was necessary due to the constraints of the urban environment within the project area, specifically pavement, utilities, and historic and modern fill.

Existing geoarchaeological data were examined. The GeoMapNW database includes the results of geotechnical investigations conducted for a variety of purposes and projects throughout the city (GeoMapNW 2009). A second set of

data was provided by previous geoarchaeological and geotechnical investigations conducted as part of the Program. Additional geoarchaeological work was also carried out specifically for the Bored Tunnel Alternative. The additional work included continuous cores (rotasonic cores, or split-spoon or hollow-stem auger geoprobes), which allowed precision when delineating stratigraphy, and reached depths in excess of the limits of open excavation. However, cores offer only a narrow view. While stable surfaces and even artifact-bearing layers can be identified, it is difficult to assess the horizontal extent of these deposits.

In areas where the constraints of the urban environment allowed, open excavations, primarily backhoe trenches and augers, allowed correlations to be traced among depositional units and cultural layers with a greater degree of confidence. Larger cross sections also exposed a greater range of surfaces and contacts. However, trench exposures were limited only to the upper 25 feet of soil, and were often terminated at much shallower depths due to obstructions, contamination, or water infiltration.

The Program has conducted 31 rotasonic cores, 178 probes, and 3 open excavation projects within the area of potential ground disturbance. Exhibit 2-5 lists the archaeological coring project reports, and Exhibit 2-6 lists the excavation reports.

Exhibit 2-5. Alaskan Way Viaduct Program Archaeological Coring Reports

Author and Date	Description	Results
Huber et al. 2010	Synthesis of the Alaskan Way Viaduct and Seawall Replacement Program Archaeological Coring Projects	Analysis of the TB 400 series archaeological cores strongly suggests that a portion of Ballast Island has been identified in cores TB 408, 409, and 410 in Area 2.
Rinck and Valentino 2009	Summary of TB- and GP-Borehole Series Archaeological Core Monitoring	Well-defined natural and cultural stratigraphic units identified; industrial, domestic, and architectural cultural materials identified; archaeological resources associated with the South Dearborn South Tideland Site (KI45924) identified (dates between 1895 and 1910).
Miss et al. 2010	South Holgate Street to South King Street Viaduct Replacement Archaeological Treatment Plan	Well-defined stratigraphic assemblages identified; industrial, domestic, and architectural cultural materials recovered; archaeological resources associated with the Dearborn South Tideland Site (KI45924) identified (dates between 1895 and 1910).
Miss, Matson, Valentino, et al. 2008 (NADB# 1351445)	Archaeological Core Collection Program, Phase I	Well-defined natural and cultural stratigraphic units identified throughout construction corridor; archaeological evidence of industrial and transportation features identified; historic-period artifacts deposited during early-twentieth century recovered.

Exhibit 2-5. Alaskan Way Viaduct Program Archaeological Coring Reports (continued)

Author and Date	Description	Results
Miss, Valentino, Rinck, et al. 2008 (NADB# 1351449)	Archaeological Assessment: South Holgate to South King Streets	Well-defined natural and cultural stratigraphic units identified; industrial, domestic, and architectural cultural materials identified.
Valentino et al. 2008 (NADB# 1351879)	Yesler Way Stabilization Project Archaeological Assessment	Well-defined natural and cultural stratigraphic units identified; industrial, domestic, and architectural cultural materials identified.
NWAA 2006 (NADB# 1347441)	TOD-BF: Geoarchaeological Examination of Geoprobes	Well-defined natural and cultural stratigraphic units identified; industrial, domestic, and architectural cultural materials identified.
Gillis et al. 2005a (NADB# 1346580)	Archaeological Resources Monitoring of Geotechnical Borings from Harrison to Valley Streets	No archaeological resources identified.
Gillis et al. 2005b (NADB# 1348804)	Archaeological Resources Monitoring of Geotechnical Borings from South Spokane Street to the Battery Street Tunnel	No archaeological resources identified.

Exhibit 2-6. Alaskan Way Viaduct Program Archaeological Excavation Reports

Author and Date	Description	Results
Valentino et al. 2008 (NADB# 1349691)	Yesler Way Stabilization Project Archaeological Assessment Technical Memorandum	No significant archaeological sites or properties were identified. Furthermore, there was less vertical variability and fewer discrete facies deposits than expected.
Valentino et al. 2010 (NADB# 1353931)	Results of Monitoring for the AWV Electrical Line Relocation Project	Investigation of NRHP-eligible property 45KI924 identified backlot sheet middens, industrial locations, structural foundations associated with specific businesses, and remains associated with the creation of the landform itself.
Wegener et al. 2010	Archaeological Exploration within the Seattle DOT Harrison Street Maintenance Yard in Support of the SR 99 Alaskan Way Viaduct Replacement Project, King County, Washington	Potentially eligible NRHP cultural deposits in the form of deeply buried historic-period structural remains appear to be located within the parcel.

The probability that archaeological materials are present in the identified Holocene sediments was assessed through extensive background research and analysis of the data gleaned from testing.

Background research included cultural, historical, and geoarchaeological sources. Cultural and historical information was compiled in two detailed research designs

for the identification and evaluation of archaeological properties developed previously for the Program (Miss and Hodges 2007; Miss et al. 2007). These studies reviewed the existing viaduct alignment and vicinity, developed historical contexts, identified sensitive areas and methods for investigating subsurface archaeological materials, and established the framework for assessing the significance of discoveries. Additional cultural and historical information was gathered for individual projects in the Program.

Previous geoarchaeological results were used to identify artifact-bearing strata in Holocene sediments and plan future test locations. Archaeologists directly observed several new geotechnical bores completed for the Program between 2005 and 2009 and were able to log information important for the identification of cultural resources (Gillis et al. 2005a; Gillis et al. 2005b; Miss and Hodges 2007; Hodges et al. 2007; Roedel et al. 2003).

In 2007, a program of continuous rotasonic cores was proposed for identifying archaeological historic properties at sensitive locations determined from existing geotechnical data and archival research (Miss and Hodges 2007; Miss et al. 2007). Northwest Archaeological Associates (NWAA) completed Phase 1 of the program, collecting and analyzing sonicores from along Alaskan Way in 2008 (Miss, Matson, Valentino, et al. 2008). Based on these results, additional cores were collected within the APE of the S. Holgate Street to S. King Street Viaduct Replacement Project (FHWA et al. 2008).

NWAA conducted additional coring during work to stabilize support columns (bents) in the one-block section of the viaduct between Columbia Street and Yesler Way (Valentino et al. 2008). Coring indicated that complex stratigraphy was present at the location. However, larger excavations found less vertical variability and fewer discrete deposits than expected, providing valuable correlation data between coring and open excavation. Additional open excavations undertaken as part of the S. Holgate Street to S. King Street Viaduct Replacement Project (FHWA et al. 2008) and results of archaeological monitoring for the Electrical Line Relocation Project (Miss and Valentino 2007; Valentino et al. 2010) provided important information that allowed for correlation of cores and historic fill sequences south of S. Dearborn Street.

For all coring and excavation, artifacts were collected and analyzed. Artifacts were initially sorted by material class. Subsequent analysis focused on characteristics broken down by material class and function following Sprague (1981). A wide range of published sources was used to identify and describe artifact manufacture, function, and history. Artifact deposits were compared to historical maps and archival sources to assess historical associations. These associations were used to assign date ranges to deposits and estimate the extent and content of the unexcavated portions of deposits encountered in cores or open excavations.

In combination, the extensive background research, geoarchaeological and geotechnical investigations, and archaeological testing allowed archaeologists to identify site deposits, as well as determine areas sensitive for potential archaeological resources within the area of potential ground disturbance.

2.3 Analysis of Environmental Effects

The project would affect historic resources if it changes the characteristics that qualify a historic property for inclusion in the NRHP. The effect is adverse if it diminishes the integrity of such characteristics. If the project adversely affects a historic property, then it may significantly affect the quality of the human environment under NEPA.

2.3.1 Built Environment Resources

To determine the direct and indirect effects on built environment resources, the following information was used:

- For operational effects, the type and extent of permanent effects (such as loss of a historic property) caused by the project were identified.
- For construction effects on historic resources, the following information was used:
  - Construction methods.
  - The location and length of time of cut-and-cover excavation at the portals.
  - Excavation of the tunnel boring machine (TBM) insertion trench at the south end.
  - The amount of building settlement potentially caused by construction of the tunnel.
  - The locations of tunnel operations buildings and staging and spoils disposal areas.
  - Plans for the removal of the existing viaduct structure and ramps and for decommissioning the Battery Street Tunnel.

The extent to which these effects would alter the integrity of the historic properties was analyzed based on experience with previous activities and events that have caused similar effects. For example, if building alterations are necessary, the degree to which the alterations affect the resource's physical integrity and historic significance were analyzed, using the Secretary of the Interior's Standards for Rehabilitation Historic Properties (Code of Federal Regulations, Title 36, Section 67.6 [36 CFR 67.6]).

For indirect effects, broader changes (such as changes in land use) that the project may cause in the greater downtown area have been identified and analyzed, based primarily on the effects seen from previous projects.

2.3.2 Archaeological Resources

For most projects, the contents and boundaries of archaeological sites are explored prior to construction. The responsible federal agency then determines whether the sites are NRHP-eligible, how they will be affected by the project, and how adverse effects should be mitigated. For this project, however, the standard approach was not possible.

Because the project includes areas where access to cultural resources is restricted by depth, groundwater, existing infrastructure, transportation requirements, the need to maintain utility service, and construction methods, a phased process will be used to conduct identification and evaluation efforts (36 CFR 800.4[b][2]). This may include data recovery using controlled archaeological excavation, as well as planning for discovery, testing, evaluation, and data recovery investigations integrated with construction processes. These measures will be described in an Archaeological Treatment Plan developed in consultation with State Historic Preservation Officer (SHPO), affected tribes, and other consulting parties. The development of this plan and its contents will be outlined in an MOA for this project.

2.4 Determination of Mitigation Measures

2.4.1 Built Environment Resources

Mitigation measures for adverse effects on historic properties will be determined in consultation with SHPO, affected tribes, and other consulting parties, and will be outlined in an MOA for this project.

Operational mitigation measures, such as documentation or interpretation programs, have been identified based on past projects and state and federal guidance.

Construction mitigation measures are based on the BMPs of the type of construction activity and the extent of the effect on the resource; construction mitigation measures are described later in this document. BMPs during construction and a detailed communication plan with property owners and buildings tenants will be implemented during construction.

2.4.2 Archaeological Resources

Mitigation of adverse effects on significant archaeological sites discovered prior to or during construction includes scientific data recovery or other suitable measures determined in consultation with SHPO, affected tribes, and other consulting parties. Mitigation will be described in an MOA and an associated Archaeological Treatment Plan. To minimize adverse effects on inadvertently discovered potentially significant archaeological deposits, all construction would be conducted under an Unanticipated Discovery Plan that would include provisions for initiating consultation on the discovery of cultural materials or human remains.

2.5 Cumulative Built Environment and Archaeological Effects

Cumulative effects are effects that result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions. The cumulative effects analysis focused on the combined effects of the Bored Tunnel Alternative and other roadway and non-roadway elements included in the Program. In addition, other projects that are anticipated to add to effects on historic, cultural, or archaeological resources in the study area were evaluated.

These other roadway and non-roadway elements of the Program were qualitatively assessed for operational and construction effects on historic, cultural, or archaeological resources. The roadway Program elements included in this qualitative analysis are the Alaskan Way Surface Street Improvements (on the location of the former viaduct) from S. King Street to Pike Street, the Elliott/Western Connector from Pike Street to Battery Street, and the Mercer West Project (Mercer Street improvements from Fifth Avenue N. to Elliott Avenue). The non-roadway Program elements include the Elliott Bay Seawall Project, the Alaskan Way Promenade/Public Space to be built on the location of the existing Alaskan Way surface street, the First Avenue Streetcar Evaluation, and Transit Enhancements.

Other planned or completed projects and developments in Seattle may add to the effects on historic, cultural, or archaeological resources in the study area. The following projects were included in the cumulative effects analysis:

- Mercer Corridor improvements east of Dexter Avenue
- Sound Transit University Link Light Rail Project
- Sound Transit North Link Light Rail Project
- Sound Transit East Link Light Rail Project
- S. Spokane Street Viaduct Widening
- SR 519 Intermodal Access Project, Phase 2
- SR 520 Bridge Replacement and HOV Program
- Interstate 5 (I-5) Improvements
- South Lake Union Redevelopment

Chapter 3 STUDIES AND COORDINATION

3.1 Studies

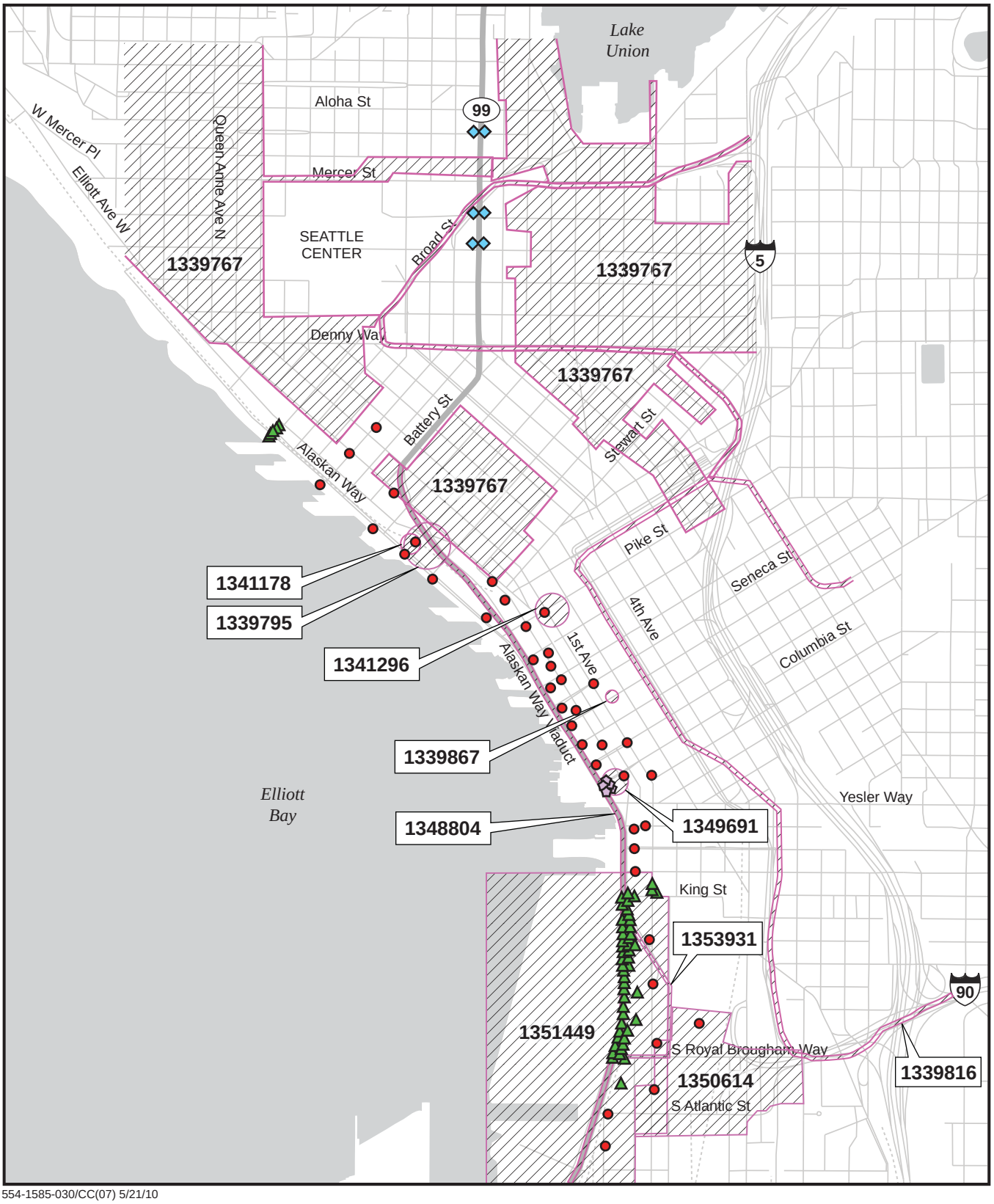
3.1.1 Archival Research

Researchers used a variety of studies to collect and refine information for the Affected Environment chapter and the analysis of individual resources. Of particular importance was the work performed previously for the Program. The 2004 Draft EIS Appendix M, Archaeological Resources and Traditional Cultural Places Technical Memorandum, was prepared using existing literature, archives, and environmental data.

For built environment resources, other useful documents were the City's context statements for the downtown area and the updated NRHP nomination for the Pioneer Square–Skid Road Historic District. Among the most important were environmental documents completed for other projects in the area, including those for the Seattle Commons (Tobin and Hart-Crowser 1994), the Major League Baseball stadium (Washington State Major League Baseball Stadium Public Facilities District 1996), the Port of Seattle's Central Waterfront project (Port of Seattle 1994), and the Waterfront South Master Plan proposed by the Port of Seattle and WSDOT in 1999 (Hart-Crowser 1999). Additional information was obtained from the NRHP form for the Alaskan Way Viaduct and Battery Street Tunnel. Other surveys include an NRHP multiple property nomination form on Seattle apartment buildings and a study performed in 1988 by the City of Seattle Department of Community Development on renovation of apartment buildings in the Denny Regrade (City of Seattle 1988).

For archaeological resources, other sources included the archaeological research design for the Program (Miss and Hodges 2007; Miss et al. 2007), as well as the other cultural resources survey reports for projects in the Program (see Exhibits 2-5 and 2-6). In addition to the investigations for the Program, seven cultural resources studies unrelated to the Program have been conducted in the APE, as shown in Exhibits 3-1 and 3-2. These studies identified several areas with elevated probability for archaeological resources and one NRHP-eligible archaeological site.

Researchers also sought primary documents, ethnographies, and historical accounts in local libraries and archives, including those of the University of Washington, Seattle Public Library, the Museum of History and Industry, and Seattle Municipal Archives. Collections of early photographs and maps were critical in reconstructing the early land use and historical transformation near the APE. Among the most important of these were the University of Washington and Museum of History and Industry photographic collections and bird's-eye maps and the Sanborn fire insurance maps.



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- CR Surveys

Exhibit 3-1
Previous Archaeological Studies in APE

Exhibit 3-2. Previous Cultural Resources Surveys in the APE

Author and Date	Description	Results
NWAA/EHC 2007 (NADB# 1350614)	SR 519 Intermodal Access Project. Phase 2: South Atlantic Corridor. Addendum to Cultural Resources Discipline Report: Results of Supplemental Archaeological Investigations	No NRHP-eligible sites identified. Further archaeological treatment and monitoring recommended in limited areas due to potential for historic archaeological sites.
Lewarch et al. 2002 (NADB# 1341178)	Archeological Evaluation and Construction Excavation Monitoring at the World Trade Center, Baba'kwob Site (45KI456)	Historic archaeological deposits, including Native American human remains (45KI456).
Rooke 2002 (NADB# 1341296)	Letter Report: Procedures and Results of a Cultural Resources Survey of Cingular Wireless Project Site WA-795	No archaeological resources identified.
Forsman et al. 2000 (NADB# 1339867)	Proposed Aspen Murray Hotel/Condominium Project Archaeological and Traditional Cultural Places Overview, Seattle, King County, Washington	No NRHP-eligible sites identified. Archaeological monitoring recommended due to potential for historic archaeological sites.
Forsman et al. 1998 (NADB# 1339795)	Wall Street Project Cultural Resources Overview	Review of geotechnical borings indicated moderate to high probability for Pre-Contact and historic archaeological resources. Archaeological monitoring recommended.
Forsman et al. 1998 (NADB# 1339767)	Denny Way/Lake Union Combined Sewer Overflow Control Project, Seattle, King County. Cultural Resources Assessment	Literature review only. Further archaeological work recommended.
Courtois et al. 1998 (NADB# 1339816)	Link Central Light Rail Transit Project, Seattle, Tukwila, and SeaTac, Washington. Final Technical Report, Historic and Archaeological Resources	Limited archaeological testing. Area around south Lake Union recommended to have high archaeological probability.

3.1.2 Archaeological Investigations

Archaeological testing was designed to augment the previous work done for the Program. This testing assessed whether deeply buried cultural deposits that may be eligible for listing in the NRHP exist within the area of potential ground disturbance.

Two forms of testing were conducted for the Bored Tunnel Alternative: geoarchaeological testing and deep archaeological testing. Geoarchaeological testing was carried out in areas in which the constraints of the urban environment

within the area of potential ground disturbance did not allow for open excavation. Geoarchaeological testing focused on three primary goals:

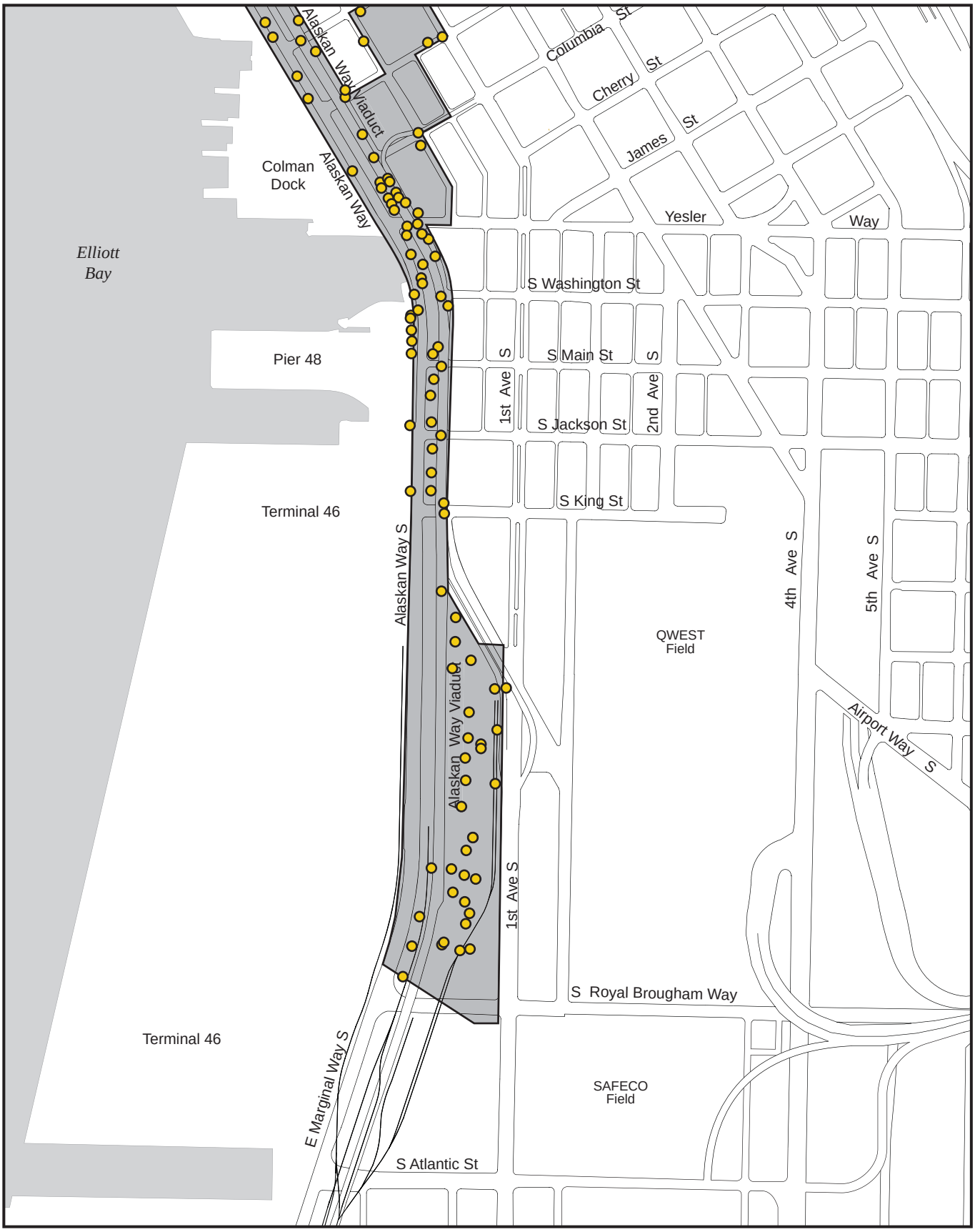
- To define areas within the area of potential ground disturbance that are sensitive for potential archaeological resources.
- To define the presence of Ballast Island in relation to the area of potential ground disturbance.
- To define the western shoreline of Denny Island.

Deep archaeological testing was conducted at one location within the area of potential ground disturbance that allowed for open excavation, a portion of the north portal area located within an SDOT maintenance yard. This location provided one of the only areas where open excavation was possible. This area had been identified through geoarchaeological and geotechnical testing to have intact Holocene sediments with a high likelihood of containing Native American resources. For this reason, the goal of this deep archaeological testing was to identify potential archaeological resources beneath historic fill layers.

Geoarchaeological Testing

Geoarchaeological investigations included review and compilation of data from the coring program as well as the analysis of 12 additional sonicores. The review and compilation of the existing coring program datasets and documents focused on identifying potential adverse effects on cultural resources eligible for listing in the NRHP within the area of potential ground disturbance for the Bored Tunnel Alternative. In addition to compiling data from previous coring projects, 12 sonicores (TB 400 to 411) were analyzed in a manner directly comparable to the previous AWV archaeological coring program to attempt to define the presence of Ballast Island. An additional 20 geoprobes (GP 600 to 619) were drilled to define the western shoreline of Denny Island. Exhibits 3-3, 3-4, and 3-5 depict the locations of boreholes from which the existing coring data analyzed for this effort were obtained. Attachment D includes the full report of the results of this testing.

This testing was intended to identify locations within the area of potential ground disturbance with the highest likelihood of containing NRHP-eligible cultural resources. The locations of cores within the area of potential disturbance were compared to the locations of structures shown on overlays of relevant sections of the 1884, 1888, 1905, and 1917 Sanborn fire insurance maps. The information about sediment and artifacts obtained for the set of cores collected within the boundaries of the area of potential ground disturbance were examined to define stratigraphic relationships between natural and anthropogenic strata. The interpretation of the origin of stratigraphic units in the cores was facilitated by the analysis of the timing and nature of late nineteenth- and early twentieth-century



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Project Borehole

Areas of Ground Disturbance

Exhibit 3-3
Subsurface Coring Locations South

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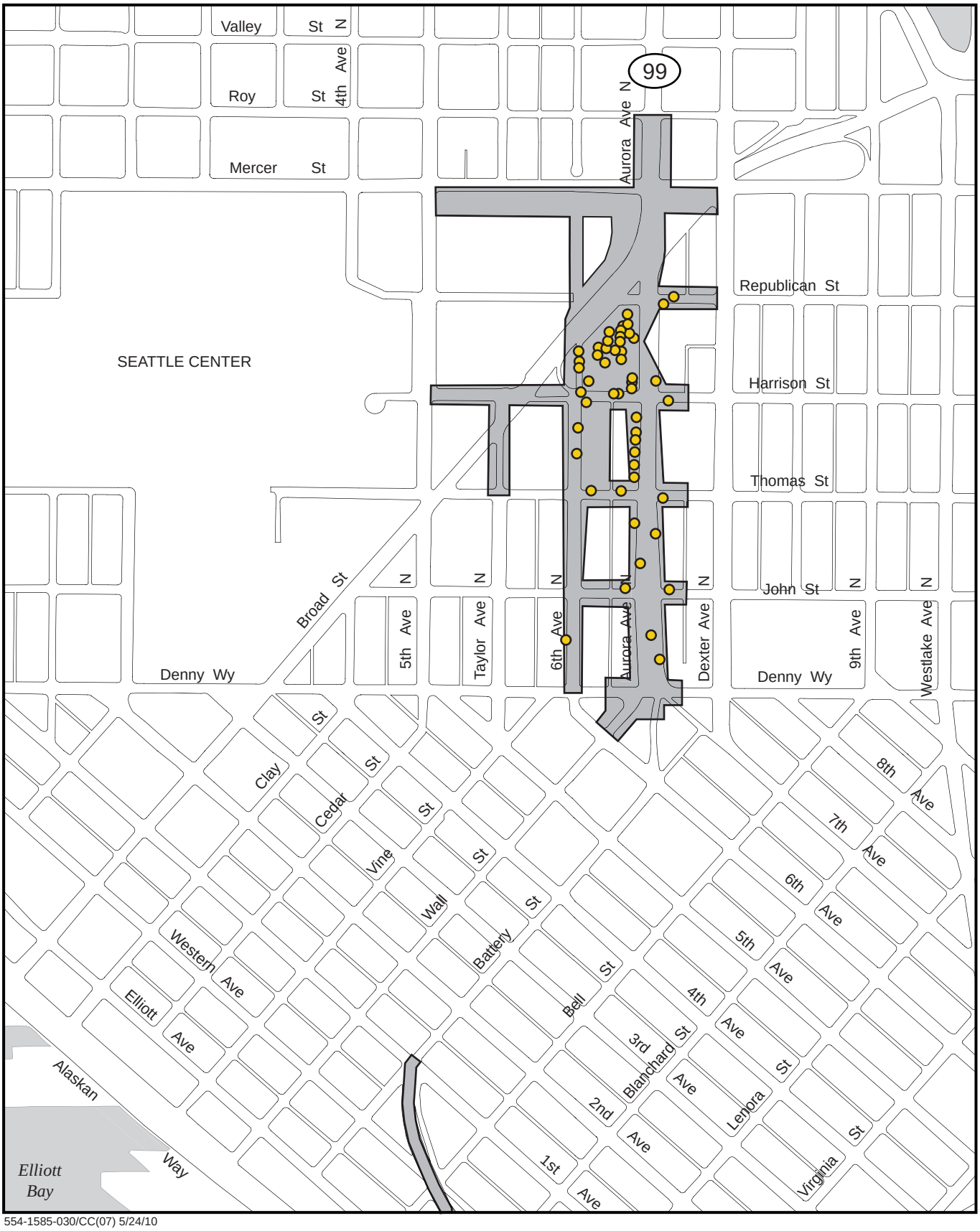
Project Borehole

Areas of Ground Disturbance

Exhibit 3-4
Subsurface Coring Locations Central



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Project Borehole

Areas of Ground Disturbance

Exhibit 3-5
Subsurface Coring Locations North

historic-period filling events along Seattle's waterfront. As part of this investigation, 12 additional sonicores (TB 400 to TB 411) were analyzed, and the resulting data were incorporated in the coring analysis and the synthesis. These data were then compiled and incorporated into a project database that was used to construct three-dimensional images showing relationships between stratigraphic units and classes of artifacts found in the cores, which could then be compared and contrasted with the Sanborn structural overlays.

As a result of analysis of core data, three general stratigraphic units were defined that characterize the deposits within the areas of potential ground disturbance. NRHP-eligible cultural resources could potentially be associated with two of the three units. The oldest stratum consists of Pleistocene till and outwash sediments, which predate the human occupation of the Pacific Northwest. Marine and terrestrial Holocene sediments rest atop this Pleistocene surface, and these Holocene sediments have the potential to contain prehistoric and historic-period cultural resources. In fact, the upper surface of the Holocene stratum is the surface on which Seattle waterfront development first occurred. The youngest stratum consists of historic-period fill.

The results of this geoarchaeological testing identified several areas with a high likelihood of containing cultural resources with sufficient integrity to be considered NRHP eligible. These locations, detailed in Section 4.3.3, include potential Native American archaeological resources and historic period archaeological resources.

To attempt to define the presence of Ballast Island within the area of potential ground disturbance, 12 rotasonic cores were drilled and analyzed (see Exhibits 3-3, 3-4, and 3-5). TB-400 was located [redacted] and TB-402 through TB-412 were located [redacted] A full report of coring results is included as Attachment D.

Ballast Island was created, as its name implies, by ships dumping ballast into the nearshore waters of Elliott Bay. Ships' ballasts in the mid to late 1800s generally consisted of materials that could be had for little or no cost. This might have consisted of sand, gravels, cobbles, demolition debris, or whatever might have been available after cargo was offloaded. There are historical references and photographs indicating that Native Americans regularly camped on Ballast Island either while working in Seattle or when they rested while traveling up or down Puget Sound (Miss and Hodges 2007). The historical location of Ballast Island as described in documents and photographs appears to have been between S. Washington Street and S. Main Street.

Inspection and analysis of the TB 400 series archaeological cores strongly suggests that a portion of Ballast Island was intersected by the cores [redacted]

[redacted].

A repeated sequence of fill materials consisting of cobbles, gravel, sand, and some shell has been identified in cores TB 408, 409, and 410 (see Attachment D). The co-occurrence of these materials, which appear to be limited to just these three cores, is evidence of the presence of Ballast Island. The fact that this sequence of materials is not found in cores to the north or south is further support to the inference that the intersected area is Ballast Island.

Although no cultural materials clearly related to Native American use were found, the presence of these probable ballast materials suggests that Ballast Island exists in the area in which these three cores have intersected. Coring offers only a narrow window into deeply buried sediments, and it is likely that archaeological evidence of Native American use of Ballast Island is present somewhere on the landform. Any such evidence would offer a unique window into a poorly understood community and would significantly contribute to our understanding of one or more of the research domains described by Miss et al. (2010). Therefore, archaeological materials associated with Ballast Island are likely to comprise an NRHP-eligible site, although to date, no such materials have been located.

To attempt to define the western shoreline of Denny Island, 20 geoprobes were drilled from First Avenue S. to the Alaskan Way Viaduct within S. Jackson, S. Main, and S. Washington Streets. Seven geoprobes were drilled within S. Jackson Street, seven were drilled within S. Main Street, and six were drilled within S. Washington Street. The western shoreline of Denny Island was clearly defined midway between First Avenue S. and the Alaskan Way Viaduct. Deep, clean fill beneath S. Washington Street appears to have been deposited in a fluvial/alluvial sand spit environment. This is likely the location where the tombolo of Denny Island connected to the mainland. No archaeological materials were identified in the geoprobes. This identification of Denny Island places the landform over a half block to the east of the area of ground disturbance from S. King to S. Washington Streets.

Deep Archaeological Testing

Archaeological testing was conducted at one of the only locations within the area of potential ground disturbance that allowed for open excavation. This location is within the proposed north portal area for the Bored Tunnel Alternative within a storage and maintenance yard owned by SDOT, a portion of which is used by the Seattle Housing Authority as a parking lot. The lot is bounded by Broad Street to the northwest, Aurora Avenue to the east, Harrison Street to the south, and Sixth Avenue N. to the west (Exhibit 3-6). The location had been previously identified through geoarchaeological and geotechnical testing to contain potential intact Holocene sediments. The archaeological testing was undertaken to assess whether deeply buried cultural deposits that may be eligible for listing in the NRHP exist within the SDOT parcel. The full report of results is included as Attachment E.

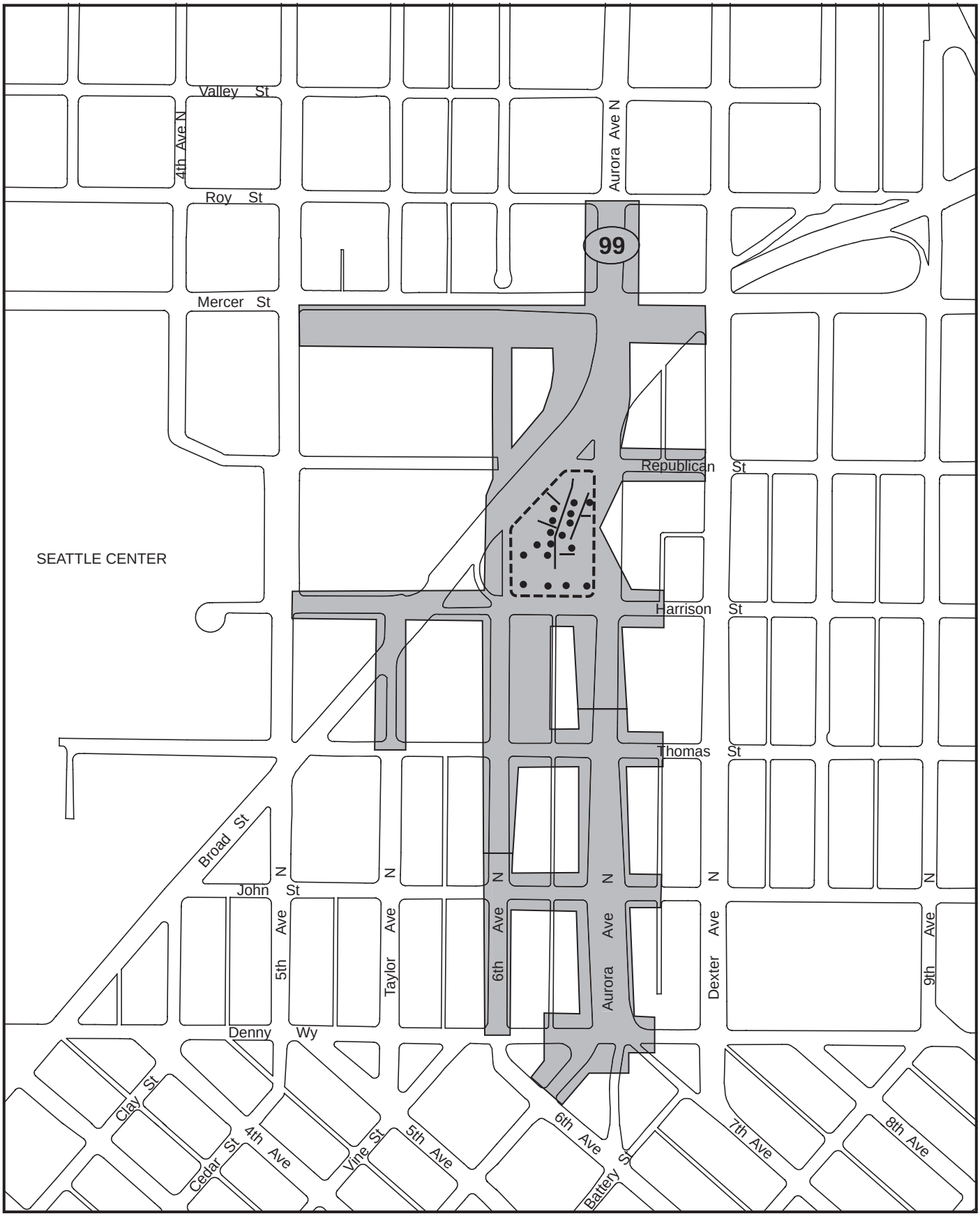


Exhibit 3-6
Location of Archaeological Testing at North Portal Area

The SDOT parcel had as much as 15 feet of fill on top of native sediments. For this reason, the identification of potential archaeological deposits required the removal of overburden through the use of heavy equipment. A trackhoe was used to excavate trenches between 15 and 26 feet deep, and drilling equipment excavated auger holes as deep as 40 feet. Sediments removed during mechanical excavations were inspected for cultural material, and a sample of mechanically excavated sediment was screened.

A total of 600 linear feet (183 linear meters) of trench was excavated, equaling 2,147 square feet (199.5 square meters), or approximately 3 percent of the parcel. Trench backdirt was stockpiled adjacent to each trench for inspection, screening, and backfilling. A total of 17 auger holes were excavated, which equals 91.5 square feet (8.5 square meters). Backdirt was stockpiled to the side of the hole for inspection, screening, and backfilling. These auger holes were strategically placed within the intervening spaces between trenches, as well as in the parking area along the southern end of the parcel where trenching was not possible.

Analysis of trench and auger stratigraphy revealed four individual strata (from bottom to top): Pleistocene glaciofluvial/ice-contact, Pleistocene glaciolacustrine, terminal Pleistocene-early Holocene peats, and historic anthropogenic fill materials. The upper boundary of the Pleistocene glacial deposits (the bottom two strata) is from 4 to 6 meters (13 to 20 feet) below the ground surface. The Holocene deposits above glacial sediments are less than 1 meter (1 to 3 feet) thick. These Holocene deposits consist of peat that appears to have formed in at least two episodes during the Holocene. The lower peat indicates a shallow-water marsh environment developed between 10,930 ± 20 and 9,880 ± 25 years before present (B.P.). The upper peat represents a similar environment from 2,905 ± 20 to 4,010 ± 15 years B.P. The uppermost stratum, historic and modern fill, ranges from 3 to 5 meters (11.5 to 17.4 feet) in thickness.

No Native American cultural materials associated with the Holocene deposit were discovered. The uppermost portion of the Holocene deposit had developed into a soil horizon. This Holocene deposit had been truncated by the construction of a laundry facility at this location in 1944. The construction of this facility likely resulted in the demolition of previous residential structures that had occupied the parcel from 1905 to 1944. Remnants of this residential occupation were discovered as truncated brick foundations that had been dug into the Holocene deposit, presumably from the overlying soil horizon. The subsequent demolition of the laundry facility in 1972 resulted in the placement of as much as 15 feet of fill material in this parcel.

The interface between fill deposits and the underlying soil horizon revealed 11 buried features and 252 historic period artifacts. The features included two red brick foundations, clay sewer pipes associated with the red brick foundation, a

linear arrangement of red brick, a partially demolished cylindrical reinforced-concrete piling, a concrete pillar, a concrete foundation, a concrete floor, and three utility vaults.

Thirty-nine diagnostic historic-period artifacts were collected. An additional 213 historic-period artifacts were observed but not collected. The 39 diagnostic historic artifacts include food and beverage bottles, toiletry bottles, ceramic sherds from porcelain architectural and electrical objects, ceramic tableware sherds, and a Lincoln "Wheat Ears" penny stamped 1940. Production dates for the datable artifacts range from the late 1890s to the 1960s. Eleven diagnostic artifacts were associated with features. The artifacts that were observed but not collected were mostly non-diagnostic architectural and construction debris, such as brick, concrete, plaster, scrap metal, and milled lumber.

The artifacts and features discovered during excavations at this parcel were recorded as an archaeological site with its boundaries being defined as the historic block. This site has been designated the SDOT Maintenance Yard Site (45KI958). Although the concrete piling, pillar, foundation, and floor was likely built in the 1940s, the three red brick foundations and clay sewer pipes represent the remains of at least one early twentieth-century residence. Archival evidence indicates that additional residential features may be preserved within the parcel. The utility vaults were modern. WSDOT has not yet determined NRHP eligibility, pending the collection of further information.

Investigations Summary

Geoarchaeological and deep archaeological testing conducted for the project met its goals. Geoarchaeological testing was able to define several areas sensitive for potential archaeological resources within the area of potential ground disturbance. These sensitive areas are described in Section 4.3.3. Geoarchaeological testing also further refined our understanding of the location of Ballast Island and Denny Island. These results are more fully presented in Attachment D.

Deep archaeological testing conducted at the SDOT Maintenance Yard provided a correlation for previous coring data of the area and helped to define one new site, 45KI958, as well as Holocene deposits that should be considered sensitive for potential Native American resources. These results are more fully presented in Attachment E. Discussion of the sensitivity of the north portal area is further discussed in Section 4.3.3.

3.2 Agency Coordination and Consultation

Coordination with relevant agencies is an important part of compliance with regulations and successful identification of historic resources and potential effects on them. As described in the Code of Federal Regulations (36 CFR 800.16[f]),

Section 106 consultation is "the process of seeking, discussing and considering the views of other participants and, where feasible, seeking agreement with them regarding matters arising in the section 106 process."

Coordination meetings have been held with SHPO, the City Historic Preservation Officer, and the WSDOT Cultural Resources Specialist. Through these meetings, an agreement was reached on the APE and the overall approach to the survey and inventory process. Information on potential effects was shared with these agencies as project engineering progressed. WSDOT has also met with the Pioneer Square Preservation Board and will meet with the Pike Place Market Historic Commission to discuss the project and its potential effects.

In addition, WSDOT is consulting with other interested groups about the project and its potential effects on historic resources. These groups include King County, the Washington Trust for Historic Preservation, and Historic Seattle. WSDOT has contacted these organizations and solicited comments throughout the Section 106 process: upon determination of the APE; upon identification of historic properties and city landmarks within the APE; and upon determination of adverse effects on historic properties as found in the report. Consulting parties will be invited to participate in the development of mitigation measures in an MOA.

3.3 Tribal Coordination and Consultation

A Tribal Consultation Plan was developed for the project to guide government-to-government tribal consultation from project initiation through the NEPA determination. This plan was prepared by WSDOT and delivered to interested and affected tribes at the beginning of the project for review and comment. In following the guidelines of the Tribal Consultation Plan, WSDOT and FHWA are working together with tribes to ensure early and continued feedback and involvement from tribes potentially affected by the project, and to ensure that tribal input is incorporated into the decision-making process.

In April 2009, the project team initiated formal Section 106 consultation with the following tribes:

- Muckleshoot Indian Tribe
- Snoqualmie Indian Tribe
- Suquamish Tribe
- Tulalip Tribes
- Confederated Tribes and Bands of the Yakama Nation
- Duwamish Tribe (a non-federally recognized tribe)

The invitation to consult on the project included a request for feedback on the initial archaeological coring program that was planned for the project. Since the initiation of consultation and the coring program, WSDOT and FHWA have continued tribal consultation, which has included presenting the following project information to the tribes:

Revised Purpose and Need Statement	September 2009
Cultural Resources Methodology for the Supplemental Draft EIS	June 2009
Draft Area of Potential Effects (APE)	August 2009
Phase 2 Archaeological Coring Locations	August 2009

In addition to providing project information to the tribes for review and comment, WSDOT and FHWA meet regularly with tribal council members and staff. This ongoing communication has included a series of project meetings with the tribes held between June 2009 and March 2010 during which WSDOT staff provided a review of the project alternatives and gathered information from the tribes on the potential of the alternatives to affect tribal resources. WSDOT and FHWA also solicited feedback from tribal staff and council members to identify any related concerns during these meetings. Additional information on consultation is provided in the Supplemental Draft EIS, Appendix A, Public Involvement Report.

An analysis of potential effects and proposed mitigation for the project is provided to the tribes in the Cultural Resources Assessment. WSDOT and FHWA will have additional meetings with the tribes over the next several months to develop an MOA and, if necessary, obtain tribal input into specific measures to address cultural resources concerns during construction.

Once project construction begins, WSDOT and FHWA will ensure continued coordination with the tribes as necessary and will ensure compliance with the MOA and the Unanticipated Discovery Plan for the project, which addresses both cultural resources and the discovery of human remains.

Chapter 4 AFFECTED ENVIRONMENT

This section describes the evolution of the natural setting that hosted Pre-Contact Native American settlement and greeted the earliest American immigrants. This evolution influenced the location and preservation of the evidence of human occupation. Subsequent sections review the ethnohistory and history of the study area. Emphasis is on processes and events that influenced the location and kind of evidence of nineteenth-century Native American presence, historical archaeological remains representing Seattle's early settlement and development, and buildings and other historic resources that characterize the city's growth into a metropolis.

4.1 Natural Setting

The east shoreline of central Puget Sound is relatively straight and featureless, consisting almost entirely of high bluffs, broken only by Elliott Bay and Commencement Bay and by a number of streams in steep, narrow ravines (Collins and Sheikh 2005b). In the mid-1870s when it was first carefully mapped, the shoreline of Elliott Bay, south from Smith Cove to the area of what is now Pioneer Square, was characterized by bluffs or low banks backed by steep slopes. The shore below was relatively broad, with a berm and a narrow back shore. Elliott Bay, exclusive of the mouth of the Duwamish River, was the location of three tidal marsh complexes: West Point, Smith Cove (the largest of the three), and the area now covered by the Occidental Square area in downtown Seattle (Collins and Sheikh 2005a). The Occidental Square area lagoon-marsh complex had already been filled and streets platted by 1875. The only map records are the 1853 plat map and a sketch map annotated 20 years after the Battle of Seattle, one skirmish in the Indian uprising that followed the signing of treaties in the region (Phelps 1855–1856). The complex was separated from Elliott Bay by a sand barrier with a central opening for tidal flow. Most of the complex was labeled "tide marsh," and early maps depicted several isolated lagoons within the complex (Collins and Sheikh 2005a). Muddy tidal flats extended south from the complex to the Duwamish River delta and the more welcoming shores of Alki Point.

At the north end of the study area, a small prairie occupied a relatively level upland between Lake Union and the waterfront, north of Denny Hill. The original topography is now dominated by modified land that was either filled or leveled.

4.1.1 Landscape Development

The Puget Sound basin is part of a much larger elongated structural trough traversing British Columbia, Washington, and Oregon, east of the Coast Mountain ranges. The modern topography and surficial geology is the result of multiple widespread continental glaciations that extended southward from

British Columbia. The latest glacial maximum began about 17,000 to 18,000 years ago and ended abruptly with the onset of climate warming about 14,000 years ago (Easterbrook 1993, 2003).

Deglaciation occurred rapidly during a period that probably lasted less than 1,000 years. The outwash deposited during the advance of the Vashon ice sheet filled Puget Sound. The surface of this fill is rarely higher than 500 feet in elevation and is interrupted by north-south-oriented troughs that were created by water flowing beneath the ice and streaming across the landscape as the ice retreated (Booth and Goldstein 1994). As a result, the topography of the Seattle area is dominated by well-defined north-trending ridges and deep ice-gouged troughs occupied by the waters of Puget Sound, Lake Washington, and Lake Sammamish (Galster and Laprade 1991; Liesch et al. 1963; Yount et al. 1993).

During and immediately after the deglaciation, between 13,000 years ago and 7,000 years ago, the global sea level rose rapidly from a maximum low of about 390 feet below present sea level (bpsl) to about 30 feet bpsl. The rate of sea level rise then appreciably declined from about 6,000 years ago to 3,000 years ago; about 5,700 years ago, the sea level was about 16 feet bpsl.

As the glaciers retreated, the land area formerly depressed under the weight of the ice experienced an isostatic rebound that lifted land levels between 197 and 262 feet within the Puget Lowland. The rebound appears to have stopped by 9,000 years ago, at which time ongoing global sea-level rise began to drown the early Holocene shorelines (Dragovich et al. 1994). As the sea level rose, marine incursion resulted in the formation of deltas at the head of the Duwamish Valley near present-day Auburn (Crandell 1963; Dragovich et al. 1994).

4.1.2 Late Holocene Delta Growth in the Duwamish Valley

The delta of the Duwamish Valley formed about 5,700 years B.P., when a large-scale summit and flank collapse on Mount Rainier resulted in the Osceola Mudflow. The flow passed down the White River and spilled into the Green and Puyallup drainages (Dragovich et al. 1994; Mullineaux 1970). After emplacement of the Osceola Mudflow, river aggradation (building up) and delta progradation (building out) brought the Duwamish delta from Auburn to its present position emptying into Elliott Bay. Current research indicates that the Duwamish delta arrived near Terminal 107 on the Duwamish River (at S.W. Hudson Street) between 1520 and 2120 B.P. The 1,400-acre Elliott Bay tidal flats filled over the next 1,500 years.

4.1.3 Earthquakes

The project is located in the northern portion of the Seattle fault zone. The fault and its associated fault strands extend from the Cascade Range foothills to Hood

Canal, and the fault zone is one of several in the Puget Lowland (Nelson et al. 2003; Sherrod 2001). Coastal tectonic research has documented a large earthquake on the fault dating 1050–1020 B.P. (Bucknam et al. 1992; Atwater and Moore 1992). During this event, Alki Point at the southern entrance to Elliott Bay was raised more than 4 meters (about 13 feet) creating the broad beach that hosted Native American encampments and, later, the Denny Party. At the same time, the West Point spit just north of Elliott Bay subsided approximately 1 meter (3 feet) (Atwater and Moore 1992). The shoreline of what was once Denny Island subsided as well, inundating and subsequently burying any archaeological deposits that may have been present on the beaches. At the time of the earthquake, the Duwamish delta would have been about 5 miles south of the fault (Sherrod 2001).

4.1.4 Resources

Elliott Bay and the Duwamish Delta provided important and diverse resources that influenced the locations and times of occupation for Pre-Contact period people. The tidal flats, the shoreline below the bluffs, and the heavily wooded slopes above the shoreline supported a wide range of habitats. The open water harbored squid, shrimp, various sea mammals, and runs of anadromous fish, including sockeye and Chinook salmon and steelhead trout. Bottom dwellers included ling cod, flounder, sole, rockfish, and invertebrates such as clams, sea cucumbers, crabs, and octopuses. The intertidal zone, which extended along the waterfront, included many invertebrates, among them crabs, shrimp, clams, oysters, mussels, chitons, barnacles, and sea urchins. Portions of the relatively young tidal flats were water-saturated but above the mean high tide, and they were covered with salt-tolerant sedges, grasses, and rushes. They also hosted migratory and resident birds, while the forest above the shoreline was inhabited by various mammals, large and small, and provided important cedar and other trees and plants useful for wood, fiber, food, tools, and medicines.

4.2 Cultural Setting

Before the arrival of Euro-Americans, Indian settlements were scattered along the shoreline of Elliott Bay and around the Duwamish River delta. After the arrival of the Denny Party and the establishment of Yesler's Mill, Native Americans provided important labor for domestic and industrial activities, as well as food for the growing community. Separate Indian encampments or enclaves continued through the 1870s. Temporary encampments of families headed to work in the agricultural fields were established seasonally in the tidal flats south of Jackson Street and included Alaska Natives and members of distant tribes.

The first non-Native settlements within the current city limits of Seattle were established along the Duwamish River and on the forested Alki peninsula in 1851.

Donation land claims were established around eastern Elliott Bay by early 1852, and early the next year, Henry Yesler's first mill began producing lumber on the thin strip of land that connected Denny Island to the mainland. The city's development continued from this early start, interrupted briefly by the Indian Wars in 1856 and spurred on by events of the nineteenth and twentieth centuries, including the Yukon Gold Rush, the Spanish-American War, World War I and World War II, the development of railroad transportation, and ever-changing national fortunes.

4.2.1 Pre-Contact Period

The earliest settlement of the region occurred in the early postglacial period, at least 11,000 years ago, based on finds of extinct mammals such as the Manis Mastodon near Sequim and scattered finds of artifacts thought to be of similar antiquity. The closest discoveries of these sorts of artifacts to the APE are associated with an ancient peat bog near Maple Valley and near Redmond beneath a peat layer dated to 10,500 B.P. (Kopperl et al. 2010; Meltzer and Dunnel 1987). Pre-Contact period sites from around the Pacific Northwest suggest continuous habitation throughout the ensuing 11,000 years (Ames and Maschner 1999; Matson and Coupland 1995). In the Puget Sound region, assemblages of stone tools called "Olcott" are attributed to early occupations. Olcott tools are found on the edges of terraces, often away from the saltwater shoreline, a position that suggests a site with expansive views as might benefit hunters. Such locations may also have been chosen to avoid the unstable river bottoms and shorelines. Shorelines that might have hosted early inhabitants were inundated by about 5,000 years ago by rising sea levels that have accompanied continued postglacial warming, making evidence of marine-oriented settlement before this time difficult to find.

Sites dating after about 5,000 years ago are more common. During this period, groups began to organize themselves in more complex ways. The subsistence base included a broad spectrum of locally available resources. The period between 3000 B.P. and 1000 B.P. saw the emergence of a semi-sedentary settlement pattern based on central villages with highly specialized seasonal camps. There is evidence of increasingly sophisticated use of storage technology, increased population, and emergence of ranked societies. The final 1,000 years of coast prehistory are characterized by permanent houses in central villages, a salmon-based economy, and ascribed social status (Matson and Coupland 1995; Morgan 1999).

Recorded Pre-Contact archaeological sites on the Elliott Bay shoreline, near the early historic period mouth of the Duwamish River, and at West Point in Magnolia provide information on the kinds of archaeological sites that might occur in shoreline and bluff environments of Elliott Bay. Data from the West

Point Site Complex (45KI428 and 45KI429) [redacted] demonstrate long-term Pre-Contact occupation of the marine littoral zone in the Greater Seattle area, dating back 4,500 years. The archaeological record shows a change in site function, due to a combination of rising sea level, changes in the configuration of the West Point landform, regional changes in Pre-Contact subsistence-settlement pattern organization, and effects of the earthquake on the Seattle Fault approximately 1,100 years ago (Larson and Lewarch 1995).

The physical setting of the West Point Site Complex shares many elements of the geomorphology of the shoreline and bluff landforms in the central and northern portions of the Alaskan Way Viaduct corridor. West Point included bluffs of Lawton Clay that backed a marine beach. An intermittent stream carved a ravine in the bluffs, and with springs, provided fresh water. West Point dropped 3 feet relative to the surface elevation of Puget Sound as a result of the earthquake. Indian people reoccupied the West Point landform after the earthquake and used the area for short-term seasonal camps.

Data from the Duwamish No. 1 Site (45KI23) document occupations on a stream terrace at the margin of Elliott Bay over the past 2,000 years (Campbell 1981; URS Corporation and BOAS, Inc. 1987). The terrace was uplifted approximately 20 feet by the same Seattle Fault earthquake 1,100 years ago. The prograding delta of the Duwamish River reached the vicinity of the Duwamish No. 1 Site (45KI23) between 500 and 1,000 years ago, and the local habitat changed from a marine littoral setting to a river delta and riverbank riparian environment.

4.2.2 Ethnography and Ethnohistory

The APE is in traditional territory of the Duwamish, a Lushootseed-speaking group that lived in villages on the shores of Elliott Bay, Lake Washington, Lake Union, Salmon Bay, and on the banks of the Duwamish, Black, and Cedar Rivers. Today many Duwamish descendants have chosen to become members of federally recognized tribes, including the Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Suquamish Tribe, and the Tulalip Tribes, while others continue to seek independent Duwamish tribal status. Like many other Puget Sound groups, the Duwamish traditionally followed a seasonal round that was tied to available resources. The region is one of mild climate and abundant resources, and usually enough salmon could be harvested in a few weeks to last the winter. In spring and summer, people dispersed from winter villages of cedar plank houses to live in temporary camps to fish, hunt land and sea mammals, and collect roots, berries, and other plants. In winter, preserved forms of these foods supported the village while important ceremonial work was completed. Winter was also important for establishing and maintaining social relationships. Heads of households hosted public events marking changes in status, such as naming, puberty, marriage, or death. The more important the family, the more guests

were welcomed, representing ties of marriage, adoption, trade, and social obligation (Miller 1999).

The Lushootseed names of places remembered by former inhabitants dot the margin of Elliott Bay, the Duwamish Delta, and adjacent lakes and waterways (see Exhibit 4-1 and Attachment C). They represent the memory of a people intimately familiar with the local landscape and refer to resource locations, encampments, events, and places of myth, or are simply descriptive.

On the south end of the APE were villages near Djidjil3lltc (Exhibit 4-1, #23), "the crossing over place." This place name refers to the promontory of Denny Island, roughly between Yesler Way and S. King Street and First Avenue S. to Second Avenue S. A village was located on each side of the promontory and a trail led from the beach on Elliott Bay to the lagoon on the east side of the island, hence the crossing over. At the north end of the study area was Baba'kwob (Exhibit 4-1, #22), or prairie, a series of open spaces. These open spaces were crossed by Cta'qwcld (Exhibit 4-1, #143), a trail between Elliott Bay and Lake Union that originated on the waterfront between Bell and Broad Streets (Waterman 2001).

A second set of locations, including encampments, cemeteries, and work areas, has been gleaned from historical accounts, records, and photographs (Exhibit 4-2 and Attachment C). These are specific locations, sometimes overlapping with the named ethnographic locations shown in Exhibit 4-1. Accounts from the 1850s, confirm encampments, and possibly a longhouse, on the promontory near Djidjil3lltc (Exhibit 4-2, #20/#21) and south of future Yesler Way. Confusion exists about the meaning of Baba'kwob (Exhibit 4-2, #1) in these accounts. Most sources apply the name to prairies and open spaces at the north end of the study area, but the same or a similar name is applied to an encampment that may have included a longhouse on the bluff [redacted] or may have been an encampment on the beach [redacted] (Exhibit 4-2, #7). David Denny's house [redacted] (and within the prairie-meadow-marsh identified as Baba'kwob) was reportedly the site of a gathering place for potlatches (Exhibit 4-2, #2).

Other encampments included a longhouse at the south end of Lake Union (Exhibit 4-2, #3) and temporary camps [redacted] (Exhibit 4-2, #6); between First and Second Avenues and University and Union Streets in early settler Arthur Denny's pasture (Exhibit 4-2, #10); on the beach [redacted] (Exhibit 4-2, #13); "Curley's Camp" [redacted] (Exhibit 4-2, #15); Ballast Island [redacted] (Exhibit 4-2, #18); on the beach [redacted] (Exhibit 4-2, #19); on the tidelands south of Yesler Way S. (Exhibit 4-2, #22); and east of Denny Island (Exhibit 4-2, #23).

Exhibit 4-1 Locations of Ethnographic Sites contains sensitive cultural resources information that is exempt from public disclosure pursuant to provisions of the Public Records Act (RCW 42.56.300).

Exhibit 4-2 Probable Locations of Historically Described Native American Sites contains sensitive cultural resources information that is exempt from public disclosure pursuant to provisions of the Public Records Act (RCW 42.56.300).

These residential locations represent three periods of historical Native American presence: existing villages and longhouses observed by the earliest American settlers; areas occupied by Indians displaced from traditional sites, but still residents in the city providing important labor and subsistence to the new residents; and temporary camps occupied by transient traders and hop pickers later in the nineteenth century after exclusionary laws were passed by the City. In the late nineteenth/early twentieth century, sailors, fishermen, and many of the unemployed lived near the waterfront west of First Avenue, while those who were slightly better off lived on First, Second, or Third Avenues or along alleys between blocks in small apartments, boarding houses, or occasionally rooms on the upper floors of business buildings. Rooming houses and small dwellings clustered around sawmills, packing plants, and the railroad housed much of the work force. Among these was the small house of Princess Angeline, Chief Seattle's daughter (Exhibit 4-2, #8), [redacted] An area known as Shacktown developed on partially filled tidal flats along First Avenue S. south of Denny Island. The community was made up of loggers, miners, seasonal employees, and Indian fisherman who lived in small dwellings, many on pilings, and in floating houses (Miss and Hodges 2007; Miss et al. 2007). Indian use of Elliott Bay continued with canoes drawn up and tents pitched for temporary camps on the newly filled tidelands (Exhibit 4-2, #24).

The early historical record also includes descriptions of burials sites and cemeteries. Accounts include discoveries of burial sites during construction in Belltown in the 1870s (Exhibit 4-2, #5), [redacted] (Exhibit 4-2, #11), and [redacted] (Exhibit 4-2, #14). A cemetery was reported on bluffs later lowered by grading [redacted] beside a ravine (Exhibit 4-2, #12).

4.2.3 Euro-American Historical Context

In 1792, Captain George Vancouver led the first European expedition to enter Puget Sound, mapping and renaming features of the landscape. British fur traders were the next to enter the region in the 1820s and built trading posts, most notably Fort Nisqually, strategically located between Fort Vancouver and Fort Langley. The United States Exploring Expedition led by Lieutenant Charles Wilkes marked American entry into the region in 1841. Like the earlier Vancouver exploration, the Wilkes party applied their own names to the landscape and its features including Puget Sound, Elliott Bay, and Piner's Point. The last was later renamed Denny Island and hosted the initial American settlement of Seattle.

After 1846, when the United States and Great Britain finally agreed on the boundary between their holdings in the Northwest, American settlers were drawn to the region, traveling north from the Willamette country. The first American settlers in

the region settled up the Duwamish River in 1851, where they planned to farm. In 1852, the more entrepreneurial members of the Denny party filed claims extending from Denny Island to Lake Union (Exhibits 4-3 and 4-4). The plat for the new town of Seattle was filed in 1853 as soon as the act creating Washington Territory was signed. The same year Henry Yesler established his sawmill at the foot of Mill Street (later Yesler Way). Yesler's Mill was soon expanded with a wharf that served as the early business center of the town and eventually stretched 900 feet into the bay by the 1880s. By the early 1870s, several more wharves extended from the shoreline between Mill and Main Streets and the Atkins and Commercial wharves extended south over the tidelands from Commercial Street.

Coal, the first major exportable commodity of the region, was shipped from bunkers at the foot of Pike Street where it was delivered in 1872 by a narrow-gauge track extending from south Lake Union down Westlake Avenue to Pike Street and then down Pike Street to Elliott Bay. After 1876, shipments left from bunkers on the King Street Wharf, the terminus of the Seattle and Walla Walla Railroad. Coal was shipped primarily to California, where the Central Pacific Railroad was one of the major consumers.

By 1889, the small settlement at Yesler's Wharf had grown into a regional center with a thriving commercial district extending along what are now First and Occidental Avenues. Although some buildings were brick, the majority were wood. When a cabinetmaker's glue pot ignited at First Avenue and Madison Street on June 6, 1889, the resulting fire destroyed 58 blocks, virtually all of the commercial district at that time, prompting a transformation in the city (Exhibit 4-5).

The entrepreneurial community saw the fire as a chance to build a new, modern city, and work proceeded immediately. New City ordinances required that all construction within the downtown area be of masonry or other fireproof construction. More than 130 brick or stone buildings were built within the next year. The result was a homogeneous commercial sector of red brick buildings in the latest Richardsonian Romanesque style, suited to become the center of trade for the new state of Washington. This became today's Pioneer Square Historic District.

At about the same time, growth also occurred on the waterfront to the north. William Bell's claim near Bell Street developed into a mixed industrial and residential community, with sawmills, fish processing plants, modest homes, boarding houses, small apartment buildings, and larger residential hotels for workers. In 1889, the same year as the Great Fire, Bell built the Austin A. Bell Building, a red brick Victorian Gothic structure designed by Elmer Fisher, the same architect who also designed many of the new Pioneer Square buildings (Ochsner 1994).

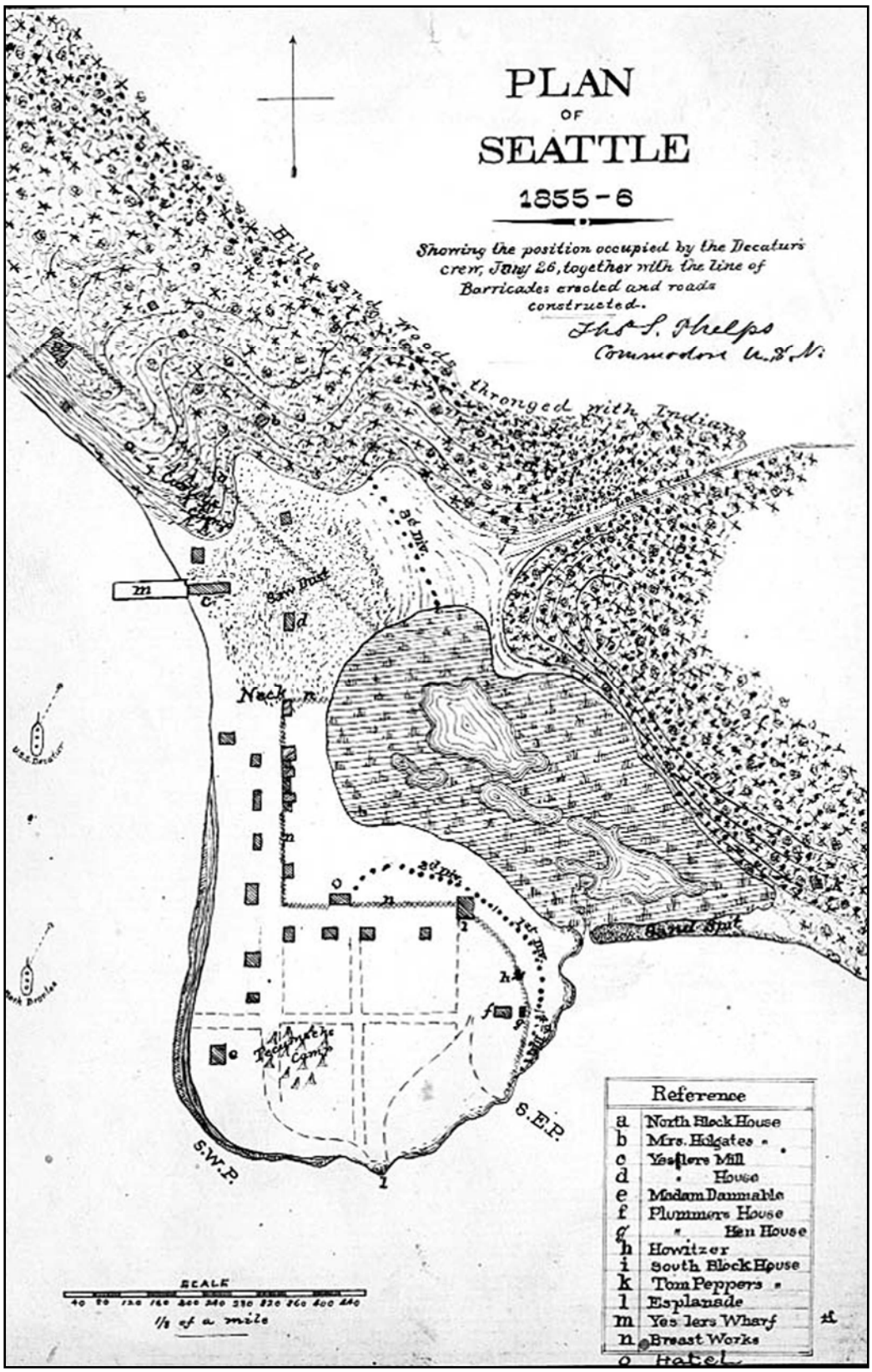
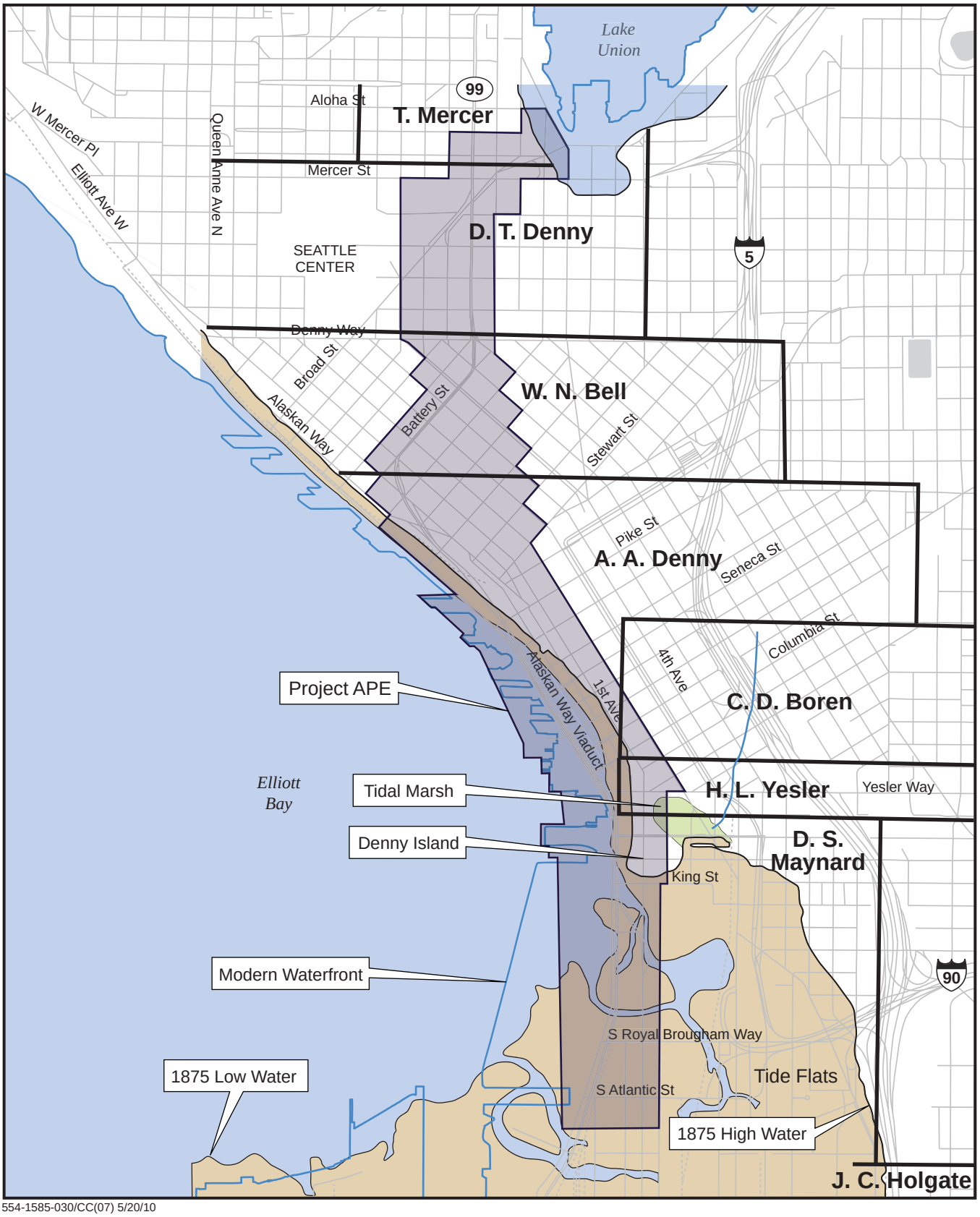


Exhibit 4-3. Map of Seattle in 1855-1856, drawn by Phelps and published in the late 1880s as part of his reminiscences (UW Special Collections, Seattle Photographic Collection, Image SEA1382).



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N

0 1,800

SCALE IN FEET

Exhibit 4-4
Land Claims in the Project Vicinity

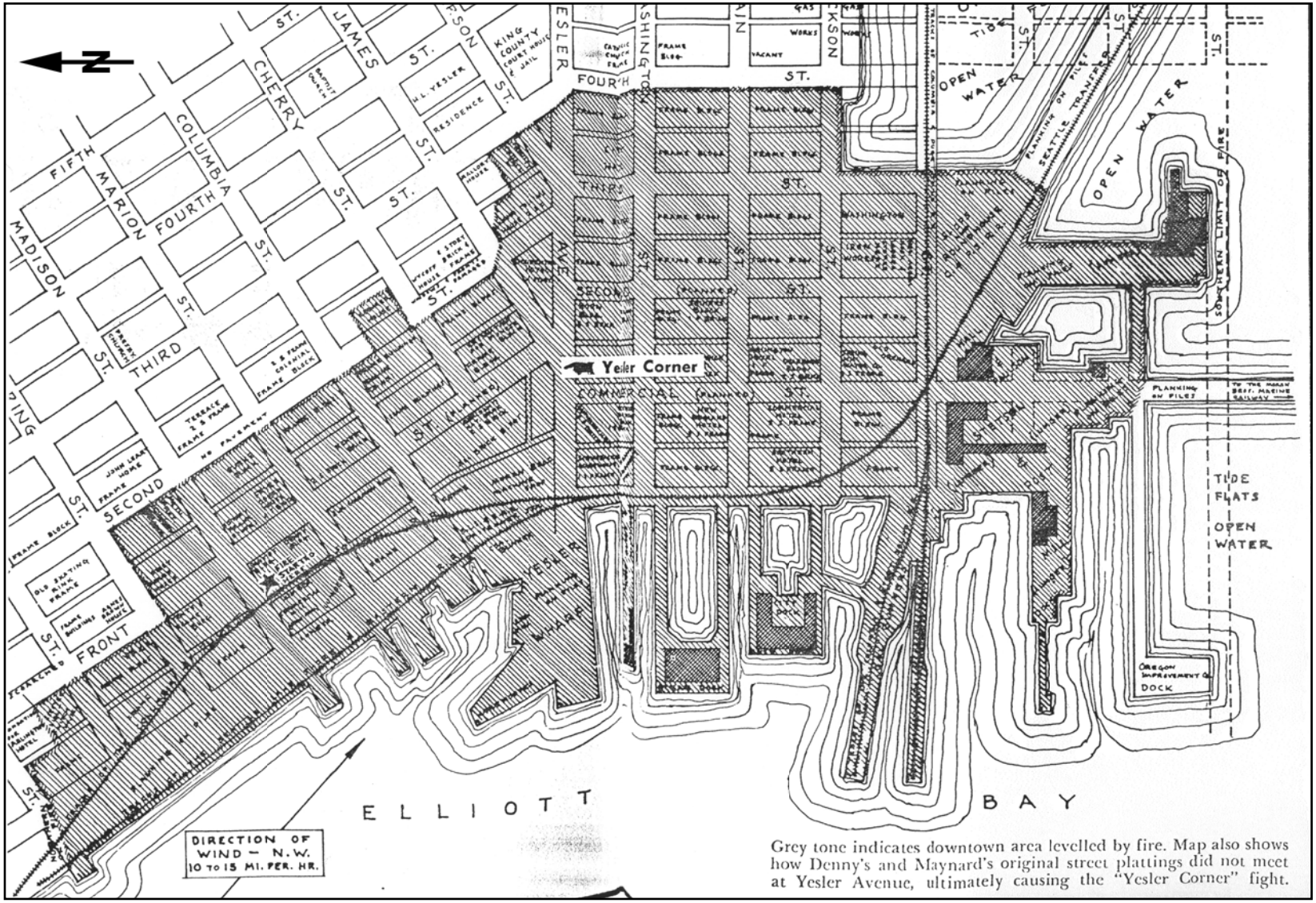


Exhibit 4-5. Map Showing the Extent of the Great Seattle Fire in 1889

Shortly after the fire, President Cleveland proclaimed Washington's statehood on November 11, 1889. Over the next 30 years, an economic depression, a speculative frenzy over Klondike gold, and America's involvement in the Spanish-American War and World War I also had huge effects (Hines 1893).

Before the turn of the twentieth century, Seattle was not a manufacturing city but the commercial center for a broad hinterland that included Puget Sound, western Canada, and Alaska. After the fire, the city developed a manufacturing base that initially relied on the raw materials available in the region and provided goods for local use. Lumber and other timber products dominated the market, and significant industries included shipbuilding, fish processing, and brick making. Additional manufacturing concerns including foundries, boiler makers, and machinery and machine tool makers provided ancillary products for the railroads and industrial plants. Other significant industries, based on the number of workers employed, included furniture making, bread and baking, flour milling, printing and publishing, and meat processing (Berner 1991; Sale 1976).

After construction of the Lake Washington Ship Canal in 1916, Lake Union began to play a much more important role in the local economy. The area grew into a mixed neighborhood of residences, industry, and retail and service businesses. Dry docks, marinas, machine shops, mills, factories, and worker housing were built around the south end of the lake. Streetcars connected the area to downtown and Fremont, but it was not until 1907 that Westlake Avenue and Valley Street were graded and filled to improve north-south road connections.

Seattle was profoundly affected by the Panic of 1893, a 4-year national depression. Because the city depended on East Coast investors to finance its new construction and infrastructure, development slowed substantially. However, the economy revived dramatically in June 1897, with the arrival of the steamer Portland carrying "more than a ton of gold" mined along the Klondike River. Seattle quickly became "The Gateway to Alaska," the commercial center and supply point for the subsequent gold rush. Adventurers from throughout the world sought fortunes in the Klondike, passing through Seattle to buy the required supplies. Although few made fortunes in mining, the city's merchants, hoteliers, theaters, restaurants, and shipping companies thrived. First Avenue was given over to small hotels, stores, cafes, and saloons serving sailors and other travelers. It retained this character for decades. The population grew by more than 25,000 people in only 3 years, reaching more than 80,000 in 1900 (Crowley and History Link 2001).

In 1909, Seattle hosted a belated celebration of the gold rush, the Alaska-Yukon-Pacific Exposition. Although the fair was held at the new University of Washington campus, its effects spread through the city with the development of hotels, apartment buildings, and other amenities, including many in the

downtown Belltown area. More than 3,000,000 visitors attended the fair, enhancing the city's national and international status and setting the stage for future growth.

Seattle became the principal port on the West Coast during World War I. With the peace, the city lost much of its military business, but with the help of the Panama Canal, new markets around the world were open to Seattle shipping (Berner 1991; Dorpat 2006; Berner 1992). This post-war prosperity was not sustained. By the time of the Great Depression, the hope that Seattle's position as a major port could prop up the local economy faded. Seattle continued its role as an important regional distribution and service center and the value of its trade with Alaska, in particular, was fairly steady, but throughout the decade, shipping remained fairly stagnant (Berner 1992).

When the nationwide economic downturn of the Great Depression reached Seattle, the city was hard hit, losing population and experiencing a sharp decline in the value of its manufactures. When World War II began, Seattle, which had been an important shipbuilding center during World War I, quickly geared up again to produce military vessels and soon expanded its output of other war-related products, including trucks and lumber.

Besides its advantages as a port city, Seattle was well located to profit from the growing importance of the aircraft industry. The presence of the Boeing Airplane plant in the city led to millions of dollars in contracts and thousands of new jobs. Thousands of newcomers flocked to Seattle to join the city's booming industrial labor force, which doubled between 1939 and 1941 (Sale 1976; Berner 1999).

By the early 1950s, there were 31 piers on the central waterfront, which encompassed the area from Smith Cove to the East Waterway. New development was directed south of the central waterfront as larger contiguous sites were needed for the greater volumes of cargo and improved connections to railroad and highway transportation networks. The tidelands became the preferred sites to accommodate these needs.

Aurora Avenue (SR 99) opened to traffic in 1933, ending in the north at Broad Street and Denny Way. The below-grade crossing for Broad Street was constructed in the 1950s, along with the Battery Street Tunnel. The tunnel connected Aurora Avenue with the new Alaskan Way Viaduct along the waterfront.

4.2.4 Historic Development Context

From the earliest days of settlement, Seattle residents altered the landscape along Puget Sound to provide better transportation access and encourage the development of commerce and industry. Steep hillsides and surrounding

tidelands were challenges to expansion, but by filling, dredging, and leveling, the city created more usable land for urban growth and created potential for preservation and formation of archaeological resources. Ambitious projects to dredge canals for ocean-going vessels and to regrade the city's main thoroughfares for easier access provided millions of cubic yards of earth and sand, which, in turn, was used to fill the tidal areas. For a short period at the end of the nineteenth century, industrial, commercial, and residential development took place side by side with the improvement of wharf and railroad facilities on these newly created lands. Soon after the twentieth century began, however, the major transcontinental railroads took control of most of the former tidal flats south of the city, influencing the direction of future growth and establishing patterns that would be in place until after World War II.

Railroads

The key to Seattle's position as both a regional and worldwide supply and distribution center was a diversified transportation system. Seattle's waterfront, which was also the center of its rail network, was destroyed by the Great Fire, but in rebuilding, the city was eventually able to organize its transportation network both on land and along the waterfront. The city's strong desire to have a connection to transcontinental rail lines and the power of the major railroad companies had a significant effect on Seattle's development during this era, particularly in the reclaimed tidal flats.

Seattle was surprised when in 1873, Tacoma was selected as the terminus for the Northern Pacific, but within 3 days Seattle residents pledged funds to build their own railroad. By February 1877, the Seattle and Walla Walla line was completed from the King Street Wharf to Renton and early in 1878 was extended to Newcastle, increasing the ease with which these coal-mining areas could ship products to the Seattle waterfront. New industries also got their start in the city, supplying mining and transportation companies with everything from boilers to rail cars (Armbruster 1999; Andrews 2005; Hanford 1923).

In 1881 Henry Villard, owner of the Oregon Transportation Company, bought the Seattle and Walla Walla, which was renamed the Columbia and Puget Sound Railroad. By 1884, Villard had connected Seattle to the mainline via the Puget Sound Shore Railroad, which crossed the tidelands before reaching S. King Street (Armbruster 1999). Seattleites were not happy with the Northern Pacific connection and in 1885 incorporated the Seattle Lake Shore and Eastern Railroad (SLS&E) with a route planned to extend north from the central waterfront around the north sides of Lake Union and Lake Washington, and through the Squak Valley (Issaquah) to Snoqualmie Pass and eastward. A City ordinance created Railroad Avenue, designated for use by all transcontinental lines entering Seattle, with the SLS&E situated on the prime eastern portion. Railroad Avenue, a 2-mile

trestle extending along the waterfront, was completed in the fall of 1887 (Armbruster 1999; Hanford 1923; Bagley 1916; Beaton 1914).

By the 1890s, several railroads were actively competing for a space on Seattle's waterfront. Seattle became a prize in the fierce competition among the late nineteenth century's two great railroad giants—Henry Villard and James J. Hill. A third, Edward Harriman, also entered the fray soon after the turn of the century. The Northern Pacific purchased the SLS&E in 1891. Part of the reason for the acquisition was the pending arrival in the Northwest of the "Empire Builder," James J. Hill.

Hill pushed west with his privately financed Great Northern Railroad, from the Great Lakes to the Pacific. He secured favorable concessions to make Seattle his line's terminus, obtaining valuable property along Smith Cove and in the unfilled tidelands south of downtown, and negotiating for some of the unused right-of-way of the SLS&E along Railroad Avenue, as well as additional land on S. Jackson Street for feeder lines and railroad outbuildings (Andrews 2005; Armbruster 1999). By October 1896, a new freight depot, which stretched for a full block east to west on Jackson Street, was completed. Three spur tracks abutted the facility on the south, while several loading bays were located on the north side (Armbruster 1999).

Hill's plans for the use of Railroad Avenue ran into opposition from Reginald Thomson, who had been hired as Seattle's city engineer in 1892. Thomson filed a report that argued against the project on the grounds that it impeded access to the wharves and manufacturing businesses along the waterfront and encouraged the railroad baron to consider a tunnel through the city as an alternative to the congested Railroad Avenue right-of-way. From 1903 to 1905, both the Great Northern and the Northern Pacific joined in building the mile-long tunnel under the city that Thomson had suggested. In the meantime, in 1906, Hill also built a grand passenger depot for the line at the southern end of the tunnel (Andrews 2005; Phelps 1978; Crowley and MacIntosh 1999; Schwantes 1993).

While the Great Northern and the Northern Pacific began to consolidate their side tracks, freight warehouses, and other facilities in the tidelands south of S. King Street and east of Second Avenue, Edward H. Harriman entered the Seattle market with the Oregon-Washington Railroad, a Union Pacific subsidiary. Harriman had reached an agreement with the Northern Pacific Railroad to share that line's tracks from Vancouver, Washington, to Seattle. The Union Pacific used a temporary depot at Railroad Avenue and S. Dearborn Street when its first trains entered the city in January 1910. Harriman purchased property in the tidelands to develop freight and warehouse facilities and to establish his own depot, which was built almost adjacent to rival Hill's King Street Station. When completed in

May 1911, it was first known as Oregon and Washington Station but later became simply Union Station (Armbruster 1999; Beaton 1914; Andrews 2005).

Harriman's entry into Seattle caused what some have called the greatest frenzy in early Seattle real estate history. The railroad's agents began paying large sums for the tideland lots south of S. King Street along Railroad Avenue and First Avenue S. in 1907. Many of the lots had already been developed with a variety of industrial and commercial businesses. These buildings were torn down to make way for additional trackage, as well as for a large new freight warehouse built below S. Dearborn Street on First Avenue S. By 1912 when the freight house was nearing completion, the railroad had developed additional sidetracks and other facilities along First Avenue S. almost as far south as S. Hanford Street, dominating the developed tidal flats east of the wharves along the recently completed East Waterway (Bagley 1929; Asay 1991).

In 1905, the Chicago, Milwaukee, and St. Paul announced the extension of its line from South Dakota to Puget Sound. In September 1908, the line reached the top of Snoqualmie Pass, and through freight traffic debuted in the summer of 1909. The Milwaukee Road initially used King Street Station, but soon switched to the new depot built by the Union Pacific (Armbruster 1999; Schwantes 1993).

Because of its proximity to wharves, railroads, and city streets, Western Avenue developed into a warehousing and distribution center for produce and other food products. One of the largest brokers, John Agen, founder of the Northwest dairy industry, established his headquarters here in 1910. He built his own dock (now Pier 56) nearby to receive and ship eggs, butter, and cheese. In 1907, the Pike Place Market opened nearby at First and Pike Streets to provide a means for consumers to buy directly from farmers without dealing with the middlemen on Western Avenue. Over the next 10 years, permanent buildings with market stalls were constructed to replace the wagons used originally. By 1927, more than 400 farmers were selling at the expanded complex (Woodbridge and Montgomery 1980).

Over the years, the railroads created a maze of freight yards and tracks with overlapping and sometimes conflicting services. Wartime increases in freight and troop movements for both world wars were offset in later years by increased transport of freight by truck and travel by automobile and later by airplane. At one time, Seattle welcomed five transcontinental lines and had two major passenger terminals. By the 1970s, passenger service was subsidized by Amtrak at King Street Station. Mergers and consolidations in the railroad industry left only two railroads operating in the city.

Tidelands

In 1893, the state legislature passed an act that allowed private individuals or companies to dig waterways through the public tidelands and to use excavated materials to reclaim the tidelands, while receiving a percentage of the proceeds from the land sales to finance the effort (Bagley 1916; Berner 1991; Dorpat and McCoy 1998;Finger 1968; Hynding 1973; Warren 1981). To take advantage of this law, the Seattle and Lake Washington Waterways Company was founded in 1894 by former territorial governors John Ferry and Eugene Semple, with backing from St. Louis investors. The company planned to dig a canal from Puget Sound to Lake Washington on the south side of the city, using the earth removed to fill in the tidelands. The South Canal, as the project was known, would allow large vessels to enter the lake from Puget Sound and included sluicing huge sections of Beacon Hill onto the tidal areas. A second project begun in 1895 was the creation of a peninsula extending south from Denny Island with dredge spoils from Elliott Bay. The company also planned to dredge two canals, the East and West Waterways, around a human-made land mass that would later become Harbor Island, and to dredge and straighten the Duwamish River so that it could accommodate ocean-going vessels (Dorpat and McCoy 1998; Berner 1991).

The company received a contract from the state to initiate these plans, which were partially financed by liens on the filled lots. The Seattle and Lake Washington Waterways Company could charge the cost of the fill for each parcel along with 15 percent interest, which was to be paid by buyers through the state in 10 annual installments. Semple and his investors also had the option to purchase any filled lands that were not sold after a year. Along with his St. Louis backers, Semple was also able to secure bank loans after he had raised another half-million dollars from local subscriptions. More than 2,500 Seattle businessmen and other residents enthusiastically supported the company's goal of digging the canal and filling the tidelands (Hynding 1973). The company hired the Bowers Dredging Company of San Francisco to undertake the work, which began in late July 1895.

The first lots of the newly constructed peninsula south of S. King Street were sold in early January 1896, and the rest of the reclaimed land north of Connecticut Street (now S. Royal Brougham Way) was sold within 6 months. Buyers included the Stetson and Post Mill Company, the Moran brothers, and a few others who already had businesses operating on wharves extending out into this portion of the tidal flats. Two lots were purchased by the Columbia and Puget Sound Railway Company, but most of the rest were sold to well-known local residents, many of whom were investors in the canal company. A number of these lots were sold again within a few years or leased to companies as the area experienced rapid industrial and commercial growth (Commissioner of Tidelands no date).

The Seattle and Lake Washington Canal Company faced fierce opposition from a group of influential Seattleites who supported a northern canal rather than Semple's plan. These supporters of the northern route to Lake Washington from Shilshole Bay through Salmon Bay and Lake Union sought government financing for construction. The group filed expensive legal suits and secured an injunction to stop work on the South Canal, eventually forcing the dredging company into bankruptcy (Hynding 1973).

After nearly 2 years of litigation during which no filling was performed, the South Canal project was revived in 1900 and reclamation efforts resumed. A local company, Puget Sound Bridge and Dredging, was hired to continue work on the East Waterway. This waterway was completed by the fall of 1902 and dredging of the West Waterway began in the summer of 1903 (Hynding 1973).

In the meantime, the company also started excavation for the South Canal through Beacon Hill and the Rainier Valley, using surplus water from the city's Cedar River system to sluice the west side of the steep slope and then carry the earth by flume into the nearby tidelands. This phase of the project, which was initiated in the fall of 1901, continued to be mired in controversy as people began to question whether Seattle's water had been sold too cheaply to the canal company. The City began to change its policies toward the company, reducing the amount of water it agreed to supply and then refusing to vacate streets for construction. Finally in 1905, the South Canal project quietly died. The completed portion of the South Canal was abandoned and later filled and replatted for development (Bagley 1916; Warren 1981; Dorpat and McCoy 1998; Berner 1991).

During the next decade, more than 1,400 acres were reclaimed, and by 1917, more than 90 percent of the tidal areas that Semple had planned to fill were completed (Bagley 1916; Warren 1981; Dorpat and McCoy 1998; Berner 1991; Hynding 1973). The City condemned portions of the new land for roads and services, and blocks in the tidelands were platted and frequently replatted. This process continued in a piecemeal fashion for several more decades (Phelps 1978; Dorpat and McCoy 1998).

Grades and Regrades

The early attempts to make it easier for wagons and other traffic to travel up and down Seattle's steep hillsides began in 1876 as the City passed ordinances establishing street grades and authorizing work on First Avenue from Mill Street (S. Yesler Way) to Pike Street, and then on Mill Street from First to Eighth Avenues. The work was difficult, and landslides on Mill Street caused the contractor to halt the grading efforts midway through the project. First Avenue was completed, but not without additional cribwork in places to shore up the road and large amounts of fill. Photographs taken by the Peterson Brothers studio in 1878 show an extensive log wall or bulkhead extending from at least

Columbia Street northward toward Union Street. Seneca Street also had to be extended above First Avenue by an overhead bridge (Exhibit 4-6) (Bagley 1929; Dorpat 2006; Finger 1968). Grading of Pike and Union Streets took place in 1882, and Jackson Street was first graded from the downtown area to Lake Washington in 1883 (Buerge 1986; Andrews 2005).

The Seattle Engineering Department began nearly 60 projects to change the topography of Seattle between 1898 and 1931. Collectively called the regrades, these projects altered the elevation of more than 20 city streets and also removed more than 250 feet from the height of Denny Hill (Klingle 2001). The First Avenue regrade, which extended from Pike Street to Denny Way, was completed in 1898. Attempts to grade small areas of First Avenue along the west side of Denny Hill had taken place periodically to provide better access to areas to the north. As a result of the regrade, property values along First Avenue climbed dramatically and prompted business owners and landowners to ask for the regrading of Second Avenue.

Steam shovels and cars were used for most of the excavation in this area rather than the sluicing techniques common in other regrading efforts. Streetcar lines were supported by wooden trestles as the digging proceeded and then lowered down to the new elevation during the night so as not to interrupt transportation flows. After the Second Avenue regrade was completed in June 1906, property values also rose. Regrades along Third Street, Westlake Avenue, and Fairview Avenue followed in subsequent years (Klingle 2001; Thomson 1950; Dimock 1928).

Contracts for the Jackson Street regrade were awarded in April 1907, and the work was completed by February 1910, with 1,810,656 cubic yards of earth excavated. The City used hydraulic sluicing techniques borrowed from the mining industry to flush dirt from hills into the tidal flats. The regrade washed away as much as 85 feet of the hill and leveled most of the buildings. The Jackson Street regrade provided spoils to fill the adjacent tidelands, which were raised as much as 40 feet in some areas. In 1910, regrading extended along Dearborn Street and Dexter Avenue, as well as a number of other north-south streets in the vicinity (Thomson 1950; Dimock 1928; Hershman et al. 1981).

Denny Hill separated developments along south Lake Union and Queen Anne Hill from the rapidly growing downtown business district. The steep grades were difficult to negotiate with horse-drawn wagons and effectively blocked the northward expansion of the city. The first Denny Regrade included several regrade projects that spanned the years 1903 to 1911. By far the largest of these involved the removal of the west half of Denny Hill east of Fifth Avenue.

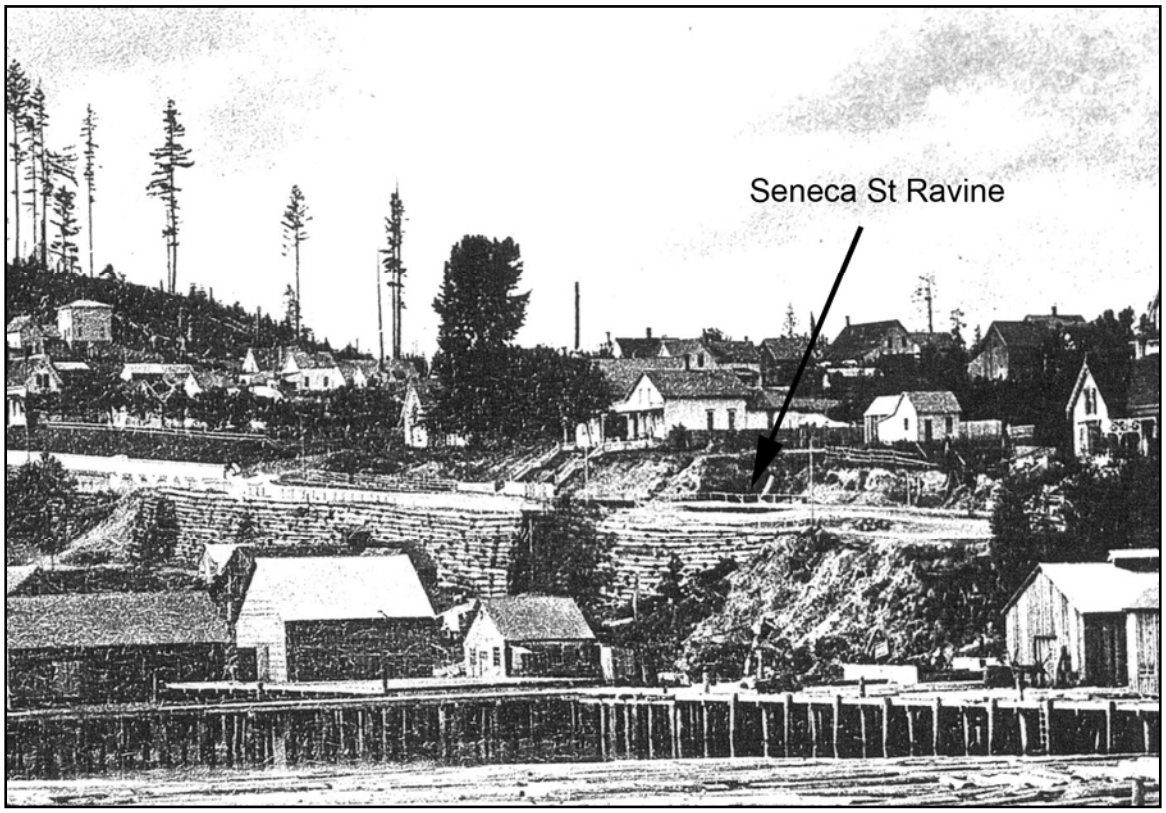


Exhibit 4-6. Cribbing along Front Street (First Avenue) and the Bridge of the Seneca Street Ravine, 1878 (UW Special Collections, Peterson Brothers Collection, PH Coll 284; photograph by the Peterson Brothers)

Westlake Avenue was regraded in 1908 and Ninth Avenue N. was regraded to funnel development toward Lake Union (Morse 1989). Substantial growth followed these regrades, with construction of the Moore and New Washington (now Josephinum) hotels on Second Avenue in 1908 and the Securities Building on Third Avenue in 1913. The Western Avenue vicinity, from First Avenue west to Alaskan Way, was not leveled, and its steep slopes gave it a character that was different from the eastern section. It retained its light industrial plants and modest workers' housing until the 1980s.

Beginning in 1928, the second Denny Regrade project removed the remaining east half of Denny Hill and all potential for archaeological deposits from Fifth Avenue east to Ninth Avenue and north to about Harrison Street (Dorpat 1984; Phelps 1978). The depth of the cut was as much as 89 feet, with the spoils removed by power shovels and then placed on conveyor belts. The conveyors extended more than half a mile, from Sixth Avenue and Battery Street to a dock on Railroad Avenue, where the earth was then loaded onto scows. Much of this material was deposited in the deep-water areas of Elliott Bay, off-shore between Pike and Battery Streets. Another portion of the fill was used in the valley immediately east of Denny Hill to raise the grade as much as 25 feet in some places (Phelps 1978; Dimock 1928).

Aside from the regrades, the late 1920s was a very intense period of physical development for Seattle, during which the face of its downtown changed completely. The financial section along Second and Third Avenues grew with the Exchange Building and the Northern Life (Seattle) Tower. Many other buildings were added on Fourth and Fifth Avenues. The Bon Marché department store moved east from Second Avenue to Fourth and Pine Streets, establishing a new retail center close to the 1918 Frederick and Nelson store at Fifth Avenue and Pine Street.

Another impetus to northward expansion of the business district was the development of a new commercial center at the former site of the University of Washington. The University had moved to the shores of Portage Bay in 1895, but it was not until 1907 that development began on its original site on Fourth and Fifth Avenues between Seneca and Union Streets. By 1910, this complex provided a new focus for up-and-coming businesses. Although only the Cobb Building (1910) remains from these original structures, numerous other buildings from this period remain in the area north of Pioneer Square: the National Bank of Commerce (1908), the Joshua Green Building (1913), the Bank of California (1916), the Arctic Building (1916), and the Times Square Building (1916).

Belltown also evolved considerably in the 1920s, although on a small scale. Because it was close to downtown but less congested and costly, it proved the ideal location for apartment buildings for downtown and waterfront workers and for support

services such as printing. A large number of these apartment buildings remain. Remnants can also be found of one of Seattle's little known industries, film distribution. Hollywood movie studios originally shipped film reels by train to regional centers for distribution to local theaters. Belltown was the regional film distribution center for the Northwest.

Railroad Avenue and the Seawalls

Railroad Avenue also continued to be, in the minds of many, an impediment to the city's growth. After the railroad tunnel was completed in 1904, some train traffic eased, but the advent of motorized vehicles soon made the waterfront thoroughfare even more congested and dangerous. One historian called it a "hole-ridden hell to cross, inspiring progressive muckrakers to see in the decaying timber quays a sign of the scabby morals on the waterfront" (Dorpat and McCoy 1998). To solve some of the problems, the City went ahead with construction of a new concrete seawall between Washington and Madison Streets on the southern edge of the waterfront between 1911 and 1916. Earth from the Jackson Street regrade and other areas was likely used to fill around Railroad Avenue, and much of the road surface was then covered with brick pavers (Makers 1979).

The planked road that covered the rest of Railroad Avenue to the north needed constant repairs, and the City had plans to extend the seawall and fill in additional parts of the road for more paving. Money was evidently set aside for the Madison to Pike Street section as early as 1920; however, possibly for political reasons, the improvements were not made at that time. Continuing arguments with the railroads over the high cost of the project, as well as proposed limitations on trackage in the area stalled progress on the work (Phelps 1978).

By the 1920s many railroad facilities had gradually moved south of the city, where much of the city's industrial base was located, so in 1929 the railroads signed a new franchise agreement that limited through tracks along the central waterfront solely to the east side of Railroad Avenue. Only spur lines to the piers would actually cross the main portion of the avenue. This agreement allowed the city to proceed with its plans to build a seawall along the rest of the waterfront and funding was secured by late 1933 (Phelps 1978).

Also by the late 1920s, the automobile had begun to make serious inroads into the region's transportation systems. The first two decades of the century had been a heyday of rail and water travel. The region had an efficient citywide streetcar network and a regional interurban rail system. All of Puget Sound was tied together by the Mosquito Fleet, steamboats that served communities large and small all around Puget Sound, including those on the Kitsap and Olympic Peninsulas and on Bainbridge, Vashon, and Whidbey Islands. The frequent arrival of Mosquito Fleet steamers full of shoppers and goods made the waterfront a place

that bustled not only with rail lines and cargo, but also with people for whom Railroad Avenue was the gateway to the city. Colman Dock at the foot of Madison Street was the Seattle terminus for most of these boats.

The automobile took over quickly in the 1930s. Streetcars and steamboats suffered a long period of decline, and local streetcars ceased their runs in 1941. Passenger-only steamers continued to run into the 1930s but were soon replaced with new, more expensive ferries that could carry automobiles as well as passengers.

The final regrade was completed in 1930, creating a flat expanse east of Fifth Avenue. Westlake Avenue, which had been graded and filled near Lake Union during an earlier regrade in 1907, was connected to downtown. This massive effort was undertaken to encourage businesses to move into the area, but by the time of its completion, the Great Depression had reduced business activity. However, one business sector took advantage of the newly opened land—auto dealers. Westlake Avenue became Seattle's new Auto Row, as dealers were being crowded out of their original quarters on Capitol Hill's Pike and Pine Streets.

One of the major public works projects the City was able to complete in the 1930s was the extension of the seawall from Madison to Broad Streets. The seawall, touted in local newspapers and even national engineering publications as a "novel design," used precast concrete slabs set into steel sheet piling to form the face of the wall on the water side and was held in place by a timber relieving platform supported by vertical timber pilings. The project was completed in 1936, but required continuing inspection for decaying timbers and corrosion of the sheet piling. As the seawall was constructed, Railroad Avenue was filled with sediments from the mouth of the Cedar River and then paved to Broad Street. With a growing number of automobiles in the city, Railroad Avenue became an increasingly important north-south route used by motorists to avoid busy downtown streets (Phelps 1978; Dorpat and McCoy 1998).

The Motor Vehicle and Post-War Transformation

Another major Depression-era infrastructure improvement was the completion, in 1932, of the Aurora Avenue Speedway, which included the George Washington Memorial Bridge (the Aurora Bridge) and a stretch of roadway with no intersections or traffic signals from the east side of Queen Anne Hill to north Green Lake. This highway offered, for the first time, a quick, direct automobile route from north Seattle to downtown, terminating at Denny Way. Aurora Avenue was part of a national phenomenon of highway building to accommodate the growing popularity of the automobile. Years before, a prominent Shoreline resident, Judge James Ronald, an avid promoter of good roads, had proclaimed his vision of Aurora Avenue as part of a grand highway from Canada to Mexico. A 1921 article (Chambers 1921) described "The Pacific Highway, the broad stretch of pavement,

700 miles in length at present and 1,600 when completed, ...the forerunner of great highways beyond the conception of the present generation that will mark the nation like a great checkerboard with its mass of highway arteries running in every direction and over which will flow the traffic of the continent."

Seattle was transformed by World War II, perhaps more than any other American city. Its Northern Pacific location made it a strategic military base for the war against Japan. More importantly, its airplane factories and shipyards made it a crucial part of the war effort. Waterfront industries south of downtown and in the Spokane Street vicinity prospered. South Lake Union also flourished with expansion of the shipyards and related industries, along with the establishment of a major naval reserve training center at the south end. However, civilian construction virtually came to a halt, and there is little legacy of the war in the downtown area or on the waterfront. The war's most lasting effect was the vast increase in population, as many of the thousands who came for military service or to work in industry remained here.

Development was very slow during the 1950s, as the region and the country struggled with the transition to a postwar economy. The Norton Building, the city's first major International-style structure, was built in 1960, 15 years after the end of the war. Ironically, it was adjacent to downtown's last major building project, the 1930 Exchange Building, built three decades earlier.

The opening of the Alaskan Way Viaduct on April 4, 1953, symbolized the final transition of the postwar world from water and rail transportation to automobiles and trucks. The viaduct structure connected to Aurora Avenue, completing the Pacific Highway (now designated SR 99) through downtown Seattle. It also dramatically altered the character of the waterfront and the western edge of downtown, turning the City's back on what had once been its gateway. Near its previous terminus at Denny Way, Aurora Avenue entered a new tunnel beneath Battery Street, emerging just west of First Avenue. From that point, the roadway continued on a double-level structure just east of Alaskan Way, past Pioneer Square and through the railroad yards south of downtown.

Planning for the Alaskan Way Viaduct had begun in 1934, shortly after completion of the Aurora Speedway. Detailed design work started in 1949, with construction of the first segment (Battery Street to Pike Street) taking place from December 1949 to July 1951. The Pike Street to King Street segment was constructed between January 1951 and the summer of 1952. At that time, construction of the Battery Street Tunnel to connect the new viaduct to Aurora Avenue began, with completion in June 1954. Additional construction took place at the south end, to S. Holgate Street, over the next few years, with the entire project being completed in August 1958 (George 2001).

In 1962, the Century 21 Exposition, Seattle's second World's Fair, was held to raise Seattle's visibility, attract industry, and revitalize downtown and the languishing Denny Regrade (Findlay 1992). The project revitalized much of the area between Lake Union and Elliott Bay, at the foot of Queen Anne Hill. An entertainment center, with a civic arena, auditorium, and football stadium, had been built on Mercer Street in the 1920s, near the site where pioneers David and Louisa Denny had settled. However, the surrounding Warren Avenue neighborhood, containing some of the oldest houses near downtown, had deteriorated to slum-like conditions. The older civic structures were rebuilt for the fair, and the surrounding 74-acre site was cleared to build new facilities. Despite the fair's popularity and financial success, it was not until 1969 that substantial downtown development occurred, with the Seattle First National Bank Building, followed by the Bank of California, Rainier Tower, and a new federal office building.

In the early 1960s, the automobile's influence was further emphasized by the proposals of local business leaders to demolish the old buildings of the Pike Place Market and Pioneer Square to make room for modern ring roads and parking garages. Momentum against these plans grew over the following decade. As a result of local activism and leadership, both neighborhoods were designated as NRHP historic districts. The NRHP was established in 1966 by the passage of the National Historic Preservation Act; these were among the first districts in the nation to be designated. The City also established its own historic preservation program, designating numerous individual buildings as landmarks beginning in the 1970s and 1980s (City of Seattle 2007–2008).

In November 1971, a citizens' initiative overwhelmingly defeated a plan to demolish and replace the Pike Place Market. Between 1972 and 1978, original buildings were renovated and new housing was added, using federal and private funds (Kreisman 1999). The community of farmers and produce dealers was joined by crafts people and numerous shops to form a thriving and internationally known market district. The boundaries of the local historic district (but not the NRHP historic district) were expanded westward in 1984 and 1991 to include the area between Western Avenue and the Alaskan Way surface street.

Pioneer Square was undergoing a similar renaissance during this time. Architects and property owners, with City and federal assistance, worked to renovate buildings, one by one, and to attract new restaurants, shops, and residents. The boundaries of the NRHP historic district were expanded twice, to incorporate later warehouse buildings to the east and on First Avenue S. The Pioneer Building and Pergola, at First Avenue and Yesler Way, were designated National Historic Landmarks. Fewer than 2,500 historic places in the nation have this designation, which is given to properties that are exceptionally valuable in illustrating or interpreting the history of the United States. The City landmark district (the Pioneer Square Preservation

District) has boundaries slightly different from those of the NRHP historic district, and extends south to S. Royal Brougham Way and to the waterfront (see Exhibit 1-1). It includes the Washington Street Boat Landing, which is listed separately on the NRHP. With the protection of its historic district designation, Pioneer Square retains its historic character as a late nineteenth century commercial center, despite the construction of two sports stadiums nearby.

Belltown also changed during the 1970s, although the circumstances differed. The growth expected after the regrades had never reached this area north of downtown. Its character remained primarily one- to three-story buildings, providing housing and services for downtown. The numerous apartment buildings from the 1920s and earlier remained. By the late 1960s, economic and technological developments led to the decline of Belltown industries, with substantial changes in land use. The American Can Company plant, the largest facility in the area when it opened in 1924, closed in 1970; it reopened in 1980 as the Seattle Trade Center. The company's pier (Pier 69) was later renovated into the Port of Seattle's headquarters. The Booth Fisheries pier was replaced by the Edgewater Inn in the early 1960s. In the 1970s and 1980s, nonprofit housing agencies, with federal housing funds, acquired and restored more than 20 buildings for use as low-income housing. Several new low-income apartment buildings were added as well. In 2001, the last three remaining workers' cottages at Vine and Elliott Streets were designated as Seattle landmarks.

Since 1975, the downtown/waterfront vicinity has generally continued to thrive. In the 1990s, Belltown saw a housing boom with the construction of numerous high rises. Pioneer Square experienced substantial renovation. By 2000, most buildings in the district had received at least some renovation, with many offices and housing units added. The Kingdome, a sports stadium completed in 1976, was demolished and replaced by two stadiums, one for football and one for baseball. The addition of Qwest Field and Safeco Field at the south end of the historic district brought increased attention to this warehouse/industrial neighborhood and expectations of future growth and land use changes adjacent to the railyards and the Alaskan Way Viaduct.

Land uses were also changing on the waterfront. The old Colman Dock and the Grand Trunk Pacific Dock to the north were demolished in 1964–1965 for the construction of a new Washington State Ferries terminal, oriented primarily to transporting automobiles rather than walk-on passengers. The Port of Seattle's freight traffic increased, requiring the construction of large container terminals with rail access. By the 1990s, these new facilities filled much of the traditional mixed industrial area from Pioneer Square south to the Spokane Street Bridge. As traditional maritime uses declined along the central waterfront, the historic pier sheds were converted to tourist-oriented restaurants and shops. Today, condominiums, a new hotel, and varied office uses are also part of the mix of uses along the waterfront.

4.3 Cultural Resources Within the APE

4.3.1 Built Environment Resources

The APE contains Seattle's richest area for historic resources. Designated historic resources and those identified as eligible for designation are listed in Attachment A. Maps showing the historic resources and the historic district boundaries (NRHP and local) in the APE are also provided (Exhibits 4-7, 4-8, 4-9). Unique ID numbers shown on the maps correspond to the historic resources listed in Attachment A.

Two NRHP historic districts are located within the APE: Pioneer Square–Skid Road Historic District and Pike Place Market Historic District. Each of these has a locally designated historic district with slightly larger boundaries, as shown in the exhibits. There is one National Historic Landmark (the Pioneer Building, Pioneer Place, and Pergola, H-96), on First Avenue and Yesler Way. In addition, there are 23 NRHP-listed properties (including several within historic district boundaries). Many of these properties are clustered along First Avenue just north of the Pioneer Square Historic District. Approximately 55 additional properties are eligible for NRHP listing. (The DAHP letter concurring with these determinations is provided in Attachment B.) Eighteen of these properties have been designated as Seattle landmarks, including the piers along the central waterfront (Exhibit 4-10). There are no known traditional cultural properties within the APE.

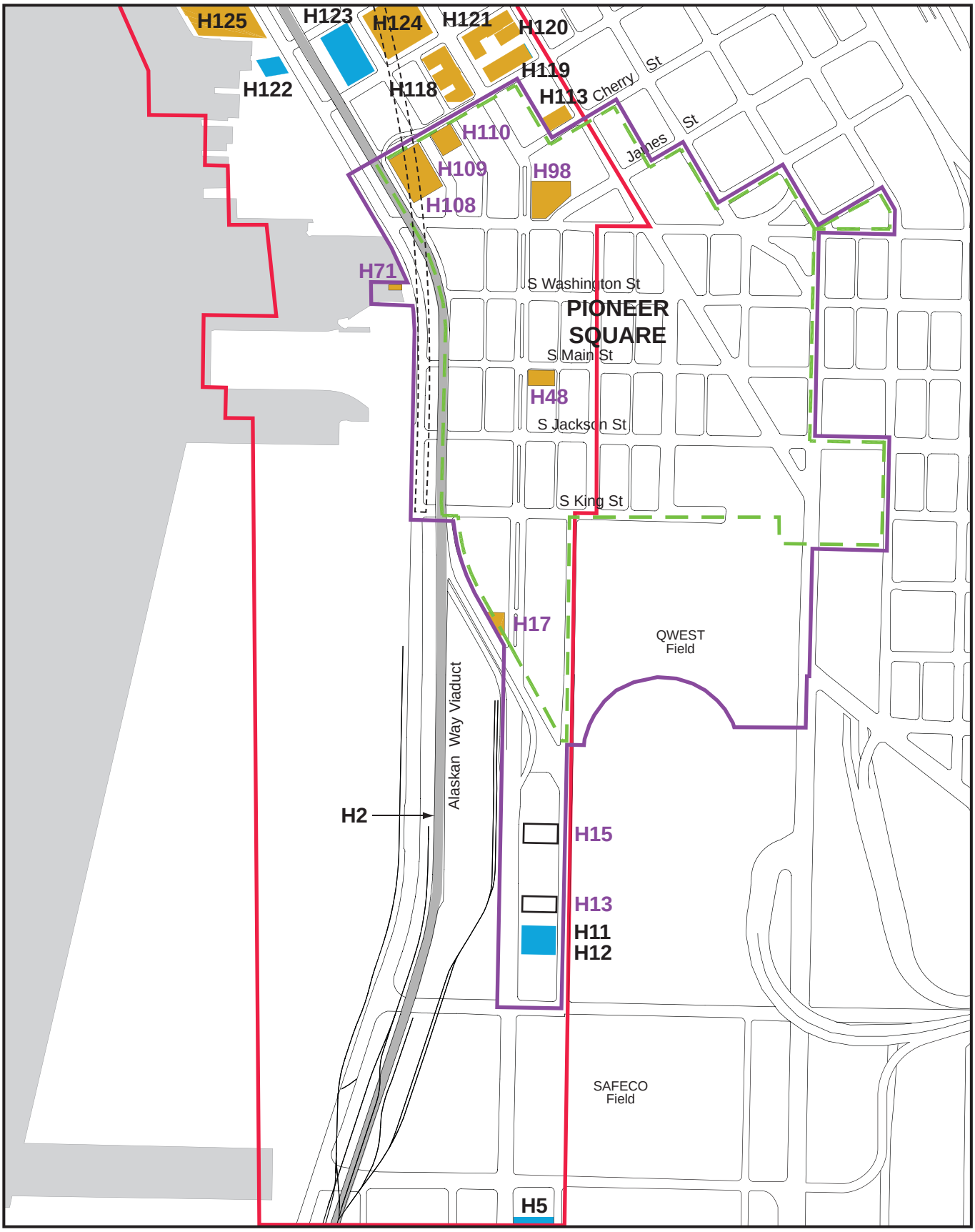
Areaways

Areaways are integral parts of many older Seattle buildings and are particularly common in Pioneer Square. Areaways are spaces beneath the sidewalks, between the building walls and the walls supporting the streets. Areaways typically have four structural components:

Deck: The deck, or ceiling, of an areaway rests on steel I-beams and supports the sidewalk above. In early post-fire (1889–1890s) construction, the deck sometimes consists of vaulted red brick arches. Later construction typically has concrete decks, either arches or flat slabs.

Street Wall: The walls supporting the streets are typically made of brick, rubble (irregular stone), or concrete. Some of the original brick or rubble walls have been covered with concrete, particularly where a major building rehabilitation has been completed.

Building Wall: In earlier construction (circa 1889–1905), the basement wall of buildings was of brick or stone. Often, arched doorways and windows connect the basement and the areaway. Some openings have been filled with wood or concrete; others remain much as they were. In many cases, there is no building wall, leaving the existing basement open to the areaway with the building edge defined only by large brick or concrete columns.



554-1585-030/CC(07) 9/3/10

N

0 600

SCALE IN FEET

- National Register and/or City Landmark
- NRHP Eligible
- Local Historic District
- National Historic District
- Area of Potential Effects
- Bored Tunnel

Note: See Attachment A for Building Name and Address.

Exhibit 4-7
Historic Buildings
Alaskan Way Viaduct South

554-1585-030/CC(07) 9/2/10

N

0 600

SCALE IN FEET

National Register and/or City Landmark

NRHP Eligible

Local Historic District

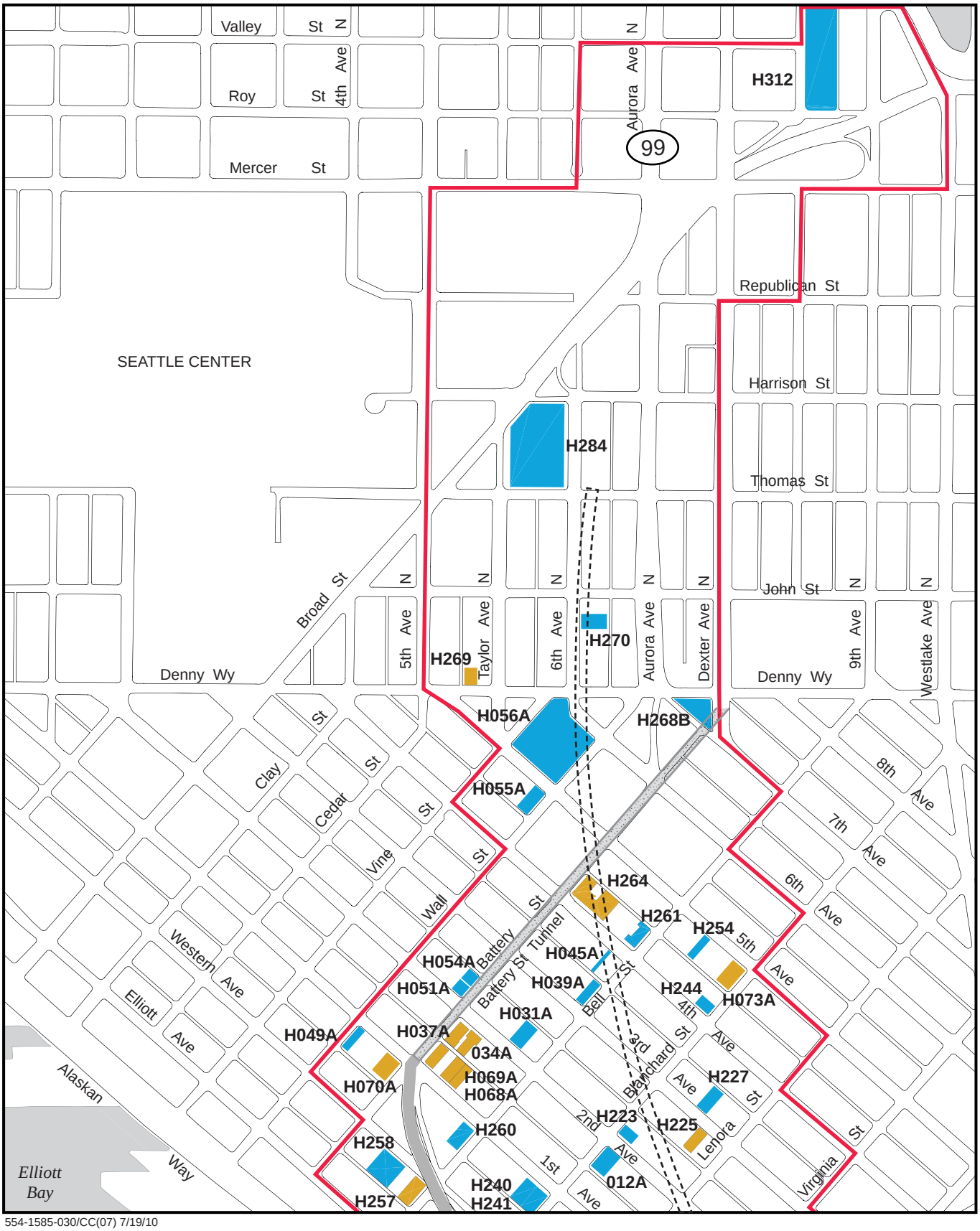
National Historic District

Area of Potential Effects

Bored Tunnel

Note: See Attachment A for Building Name and Address.

Exhibit 4-8
Historic Buildings
Alaskan Way Viaduct
Central



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National Register and/or City Landmark
NRHP Eligible
Local Historic District
National Historic District
Area of Potential Effects
Bored Tunnel

Note: See Attachment A for Building Name and Address.

Exhibit 4-9
Historic Buildings
Alaskan Way Viaduct
North

Exhibit 4-10. NRHP-Listed Properties in the APE

ID Number	Location	Popular Name (Historic Name)	Date	Designation
	Alaskan Way Viaduct to Fifth & Sixth Avenues, James & Columbia Streets, First Avenue S. (500 block)	Pioneer Square–Skid Road Historic District	1889–1931	NRHP, local district
	First Avenue to Western Avenue between Virginia & Union Streets	Pike Place Market Historic District	NA	NRHP, local district
H-17	553 First Avenue S.	Triangle Hotel	1910	NRHP, SL, PSHD
H-48	310 First Avenue S.	Globe Building	1890	NRHP, PSHD
H-71	Foot of S. Washington Street	Washington Street Boat Landing	1920	NRHP, PSPD
H-98	606 First Avenue at Yesler Way	Pioneer Building, Pioneer Place & Pergola	1889; 1909	NHL, PSHD
H-113	705 Second Avenue	Hoge Building	1911	NRHP, SL
H-118	801 First Avenue	Colman Building	1890; 1906; 1929	NRHP, SL
H-124	901 First Avenue	Federal Office Building	1932	NRHP
H-126	1000 Western Avenue	National Building	1904	NRHP, SL
H-127	1001 First Avenue	Alexis Hotel (Globe Building)	1901	NRHP, SL
H-129	1013 First Avenue	Arlington South (Beebe Building)	1901	NRHP, SL
H-130	1018 First Avenue	Holyoke Building	1890	NRHP, SL
H-131	1019–1023 First Avenue	Arlington North (Hotel Cecil)	1901	NRHP, SL
H-135	1115–1117 First Avenue	Grand Pacific (Grand Pacific Hotel)	1901	NRHP, SL
H-136	1123 First Avenue	Grand Pacific (Colonial Hotel)	1901	NRHP, SL
H-139	1203–1207 Western Avenue	(Olympic Warehouse)	1910	NRHP, SL

Exhibit 4-10. NRHP-Listed Properties in the APE (continued)

ID Number	Location	Popular Name (Historic Name)	Date	Designation
H-148	84 Union Street (1400 Western)	Marketside Flats (U. S. Immigration Building)	1915	NRHP, SL
H-175	119 Pine Street	Doyle Building (J. S. Graham Store)	1920	NRHP, SL
H-187	1915 First Avenue	Alaska Trade Building	1910	NRHP, PPMHD
H-189	1921 First Avenue	Butterworth Building	1915	NRHP, PPMHD
H-194	1932 First Avenue	Terminal Sales Building	1923	NRHP, SL
H-197	1902 Second Avenue	Josephinum (New Washington Hotel)	1908	NRHP, SL
H-202	1926 Second Avenue	Moore Hotel/Theater	1907	NRHP, SL
H-068A	2320 First Avenue	Barnes Building	1889	NRHP, SL
H-069A	2326 First Avenue	Austin Bell Building	1890	NRHP, SL
H-070A	2401 First Avenue	Hull Building	1889	NRHP, SL
H-071A	2101 First Avenue	Guiry Hotel	1904	NRHP, SL
H-072A	2111 First Avenue	Schillestad Building	1907	NRHP, SL
H-073A	420 Blanchard Street	Windham Apartments	1925	NRHP, SL

NHL= National Historic Landmark; NRHP = National Register of Historic Places, PPMHD = Pike Place Market Historic District; PSHD = Pioneer Square Historic District; SL = Seattle landmark

End or Partition Walls: The walls at the ends of each areaway may be of brick, concrete, or stone rubble. They are not necessarily the same material as the building wall or the street wall; many buildings combine two or three materials. The partition walls, which divide larger areaways into sections, are also usually of brick or rubble, with many buildings having a combination of materials in different sections.

Some areaways, primarily in Pioneer Square, have prismatic skylights to provide natural light to the underground spaces. However, skylights are very vulnerable to damage from moisture, foot traffic, vibration, and other factors, and the majority of them have been covered with concrete. Some have been replaced with newer versions, yielding a more modern appearance but still maintaining the original function. Only a small number of these original skylights remain, generally in poor condition.

Significance: Areaways in Pioneer Square are important resources in both the NRHP and local historic districts. In the oldest parts of the district, areaways were created after the 1889 fire when the city raised the street grade to alleviate

the effects of the swampy conditions in the area. In buildings constructed in later years, areaways appear to have been constructed primarily to acquire more basement area. Many areaways were used for storage, while others functioned as part of the adjacent uses such as restaurants or saloons. Today, most areaways are vacant or used for storage, but some are integrated into basements and used as part of the commercial use or for parking.

Areaways are typically an integral part of a building, either completely open to the basement or accessible through doorways. All areaways adjoining any historic building (including all buildings and structures within the Pioneer Square Preservation District) are part of the historic resource. However, the required protective and mitigation measures vary considerably.

Some areaways (primarily those in Pioneer Square dating from circa 1889–1905) contain historic features such as brick or stone walls, brick arches, doorways, windows, or brick columns or artifacts such as window sash, hardware, or machinery. These are important historic resources associated with the early development of Seattle and should be protected or restored as far as possible. The concrete areaways found in more recent buildings (after about 1905) seldom contain specific historic features or artifacts. However, they may be significant as part of the adjacent building (usually a section of the basement); protection and mitigation measures should take into account the areaway and its relationship to the building. Some areaways, even on historically significant buildings, have been so altered and modernized that they no longer retain integrity of materials or feeling. A broader range of mitigation options is possible in these cases.

Areaways in the APE: The APE contains a large number of areaways that retain much of their historic character. In Pioneer Square, almost every building on First Avenue/First Avenue S. south of S. King Street to north of Cherry Street has an areaway; these are among the oldest and most intact areaways in the city. Thirty of the 43 buildings on this stretch of First Avenue have one or more historically significant areaways. Elsewhere in Pioneer Square, within the APE, an additional 20 buildings have areaways; most of these are on Occidental Avenue S; 15 of these are historically significant. However, the western edge of Pioneer Square, adjacent to the bored tunnel alignment has very few areaways. There are none on Alaskan Way/Alaskan Way S., and only three buildings west of Post Alley have areaways; these have been altered and are not historically significant.

Within the APE, approximately 25 buildings outside of Pioneer Square have been found to have areaways. Several of these buildings are in the Pike Place Market Historic District:

- Smith Block (1923 First Avenue)
- Soames Dunn Building (1924 Pike Place)

- Alaska Trade Building (1915 First Avenue)
- Stewart House (1900 Pike Place/80 Stewart Street)
- Sanitary Market (1513 First Avenue)
- Corner Market (1505 First Avenue)

Twelve other NRHP-listed or -eligible buildings have been identified as having areaways:

- Alexis Hotel, 1001–1011 First Avenue, H-127
- Arlington South, 1013 First Avenue, H-129
- Arlington North (1019–1023 First Avenue, H-131)
- Holyoke Building (1018 First Avenue, H-130)
- Federal Reserve Bank (1015 Second Avenue, H-132)
- Exchange Building (821 Second Avenue, H-121)
- Marketside Flats/U.S. Immigration Building (1400 Western Avenue, H 148)
- Eitel Building (1501 Second Avenue, H-171)
- Doyle Building (119 Pine Street, H-175)
- Josephinum (1902 Second Avenue, H-197)
- Palladian Apartments (2000 Second Avenue, H-206)
- Bon Marché Parking Garage (1601 Third Avenue, H-179)

4.3.2 Recorded Archaeological Resources

One Native American archaeological site, 45KI456, and six historic archaeological sites are recorded within the APE (Exhibit 4-11). Three of the historic archaeological sites exist within the area of potential ground disturbance. Of these three, one site has been determined eligible for listing in the NRHP (45KI924), one site has been determined not eligible (45KI943), and one site has yet to have a determination of eligibility (45KI958).

Site 45KI456, *Baba'kwob*

The Native American archaeological site recorded within the APE, 45KI456, was named *Baba'kwob* by the recorders (Lewarch et al. 2002). This is a different location than the grassy clearing also named *Baba'kwob* described by Waterman (2001). Native American human remains and glass trade beads were found in excavation spoils during the construction of the World Trade Center [redacted] A review of historical maps suggests that this material may have accumulated along the lower slope and within a ravine that approximates [redacted] The ethnographically and ethnohistorically recorded trail from the waterfront to the prairies above Lake Union followed this ravine, and settlement ranging from a beach encampment to a longhouse has been described at or near this location (see Attachment C).

Exhibit 4-11 Archaeological Sites in and Adjacent to the Project APE contains sensitive cultural resources information that is exempt from public disclosure pursuant to provisions of the Public Records Act (RCW 42.56.300).

Site 45KI924, Dearborn South Tideland Site

The Dearborn South Tideland Site occupies [redacted] The site is located on dredge spoils deposited on the former tidal flats in this area. Dredging began in 1895, and the area was above tide level by 1898, when rapid development, including construction of substantial brick buildings, began. The Union Pacific purchased the property in 1908. By 1910, the area had been cleared, the grade raised, and an extensive railroad freight yard established. The site contains building remains, refuse accumulations, and other cultural features associated with the period from circa 1895 to circa 1910 and represents historic development of the tidal flats south of Denny Island. The site has been determined eligible for listing in the NRHP.

Site 45KI930

The site is the remains of a railroad, including ties and ballast, found [redacted] The railroad was found less than a foot below the current road surface during monitoring of utility trench excavations (Gilpin and Butler 2009). The site was not recommended eligible for the NRHP.

Site 45KI942, W.L. McCabe's Machine Shop

The site is a historic deposit 3 to 7 feet below the surface (fbs) resting on reclaimed tidelands created using spoils dredged from Elliott Bay. Cultural material consists of demolition debris and other material associated with a machine shop, tool shed, forge, and paint storage building. The lack of other structural remains and debris suggested thorough demolition and clean-up with only the lowest structural elements remaining. The machine shop appears to have been in business for only a year based on its single listing in Seattle city directories in 1904. McCabe's may have supplied parts for larger companies like the nearby Variety Iron Works or possibly for the flour and lumber mills or car manufacturers nearby (Meyer and Shong 2010). The site was determined not eligible for listing in the NRHP (Miss et al. 2010).

Site 45KI943, Dearborn North Tideland Site

The site is a historic deposit associated with a triangular configuration of four commercial lots on reclaimed tidelands. Cultural material was found 3 to 10 fbs during monitoring of excavation of the Electrical Line Replacement Project (ELRP) trenches. The cultural material is primarily structural demolition debris from a series of buildings and structures present from 1893 to 1950, intermixed with some domestic and personal artifacts. Historic maps show the property hosted an elevated trestle of the Seattle Terminal Railroad in 1893 followed by

scattered facilities of the Post and Stetson Lumber Company in 1904. By 1950, a two-story auto freight depot, freight shed, and office occupied the lots. These were demolished during construction of the Alaskan Way Viaduct and the ramp that replaced Railroad Way. The site failed to meet requirements for integrity because of mixing of deposits. The site was determined not eligible for listing in the NRHP (Valentino et al. 2010).

Site 45KI947

The site was identified during testing for the S. Holgate Street to S. King Street Viaduct Replacement Project. The site represents a cluster of small dwellings and outbuildings behind the Variety Iron Works as shown on a historical map from 1904. These buildings were located on the surface created with dredged material from Elliott Bay circa 1895. The investigation found evidence of the 1904 occupation mixed with unrelated material from later industrial use. Domestic and personal artifacts were intermixed with building and industrial rubble. Due to a lack of integrity and limited information potential, the site was determined not eligible for listing in the NRHP.

Site 45KI958

This site was discovered during investigations for the Bored Tunnel Alternative, and it is described in Section 3.1.2 and Attachment E. The site contains stratified remains of residential and commercial structures dating to the first half of the twentieth century. It has potential to yield information on residential life, commerce, and trade that is not available from written sources. The site has not yet been determined NRHP-eligible, pending the collection of additional information.

4.3.3 Areas Sensitive for Additional Archaeological Resources

Access to potential cultural resources for the project is restricted by depth, groundwater, existing infrastructure, utility and transportation service requirements. Therefore, the identification of cultural resources within the area of ground disturbance was addressed primarily through the geoarchaeological and geotechnical coring program that is described in Chapter 3 and presented more fully in Attachment D. Geoarchaeological and geotechnical coring efforts are well suited to the discovery of landforms and sediments, ancient and modern, rather than cultural resources associated with those landforms and sediments. Although the coring effort has the potential to identify archaeological sites, particularly if those sites manifest as dense accumulations of cultural materials, it is this landform and sediment information that is a key contribution of geoarchaeological and geotechnical testing. Each identified landform or sediment may not have associated cultural materials, but without a given landform or sediment in place, the presence of cultural materials is less likely. In this case, geotechnical methods

can establish a baseline as to potential locations open to human activity even though these methods may be a poor indicator of the activity itself.

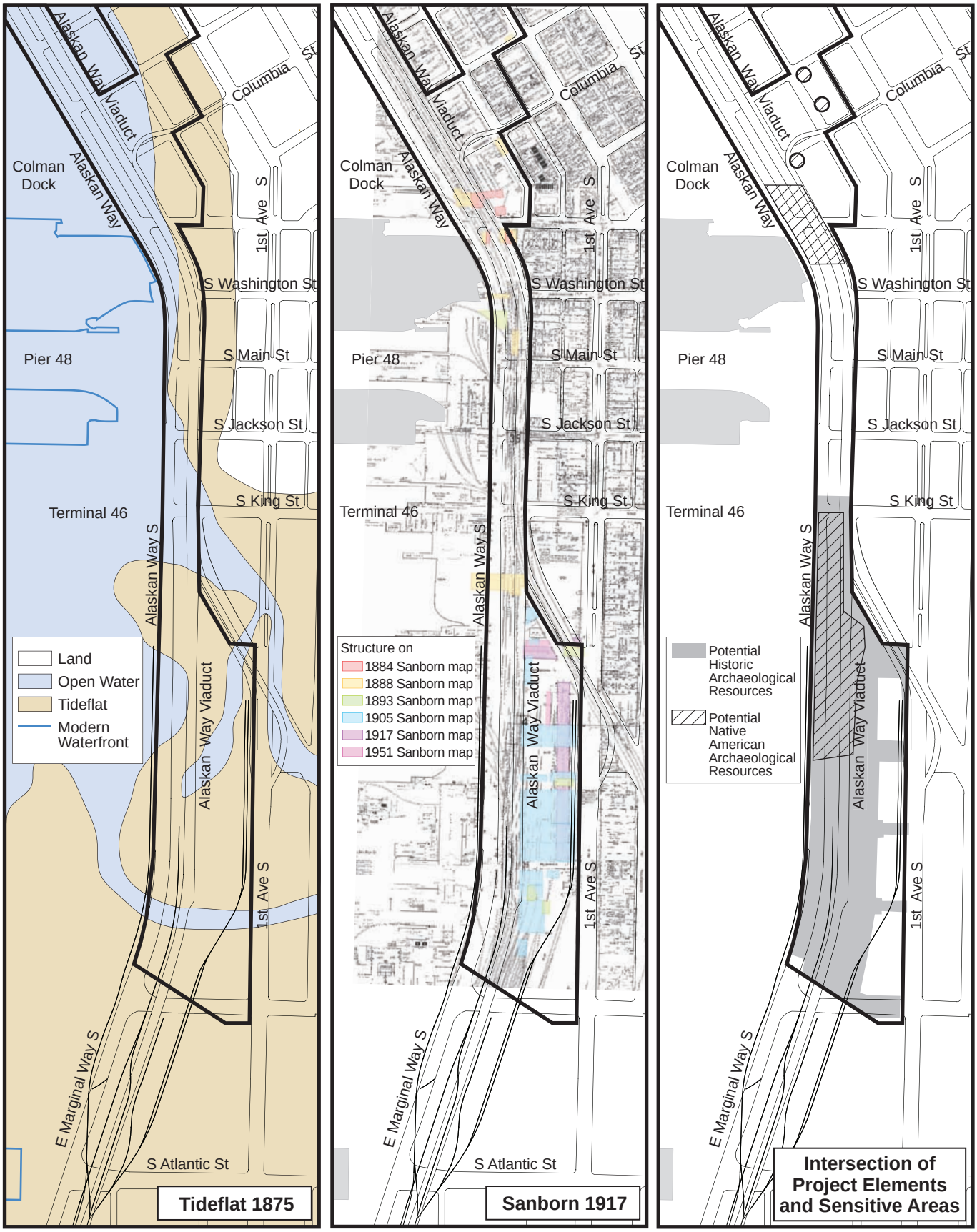
Exhibit 4-12 presents the locations within the area of potential ground disturbance that have been identified as sensitive for potential archaeological deposits. The table presents the locations from south to north within the APE. The narrative that follows discusses these same areas with reference to the potential Native American archaeological deposits followed by the historic archaeological deposits. Exhibits 4-13, 4-14, and 4-15 depict the area of potential ground disturbance in relation to these deposits.

Exhibit 4-12. Locations Sensitive for Potential Archaeological Deposits

Location Within Area of Potential Ground Disturbance	Potential for Cultural Resources	Depth of Potential Resources	Project Element at Location	Depth of Project Element	Potential Effect on Resource
South portal area	Native American resources at tidal flat elevation	22.5 to 41 feet below ground surface	Cut-and-cover trench and support structure	90 feet maximum	Yes
South portal area	Historic period resources at dredge fill elevation	4 to 12 feet below ground surface	Cut-and-cover trench, support structure, and utilities	90 feet maximum	Yes
Area south of S. Jackson Street to south of Columbia Street within Alaskan Way S.	Native American resources at tidal flat elevation	23 to 30 feet below ground surface	Utilities; ground improvements for bent stabilization	9 feet maximum for utilities; 110 feet maximum for bent stabilization	No for utilities; yes for bent stabilization
Area from Yesler Way to Seneca Street between the Alaskan Way Viaduct and First Avenue	Native American resources at tidal flat elevation	23 to 30 feet below ground surface	Drilled shafts for compensation grouting	55 ft maximum	Yes
Area from Union to Pike Streets within Alaskan Way S.	Native American resources at tidal flat elevation	7 to 37.5 feet below ground surface	Utilities	5 feet maximum	No

Exhibit 4-12. Locations Sensitive for Potential Archaeological Deposits (Continued)

Location Within Area of Potential Ground Disturbance	Potential for Cultural Resources	Depth of Potential Resources	Project Element at Location	Depth of Project Element	Potential Effect on Resource
Area from Pike to Bell Streets along Alaskan Way Viaduct	Native American resources associated with terrestrial Holocene sediments	0 to 14 feet below ground surface	Utilities	5 feet maximum	Yes
Area from Pike to Bell Streets along Alaskan Way Viaduct	Historic period resources associated with upper surface of terrestrial Holocene sediments	0 to 14 feet below ground surface	Utilities	5 feet maximum	Yes
North portal area	Native American resources associated with Holocene peat deposit	11.5 to 17.5 feet below ground surface	Cut-and-cover trench and utilities	90 feet maximum	Yes
North portal area	Historic period resources associated with upper surface of Holocene peat deposit	11.5 to 17.5 feet below ground surface	Cut-and-cover trench and utilities	90 feet maximum	Yes
Denny Island	Native American resources associated with ethnographic villages	8 to 13 feet below ground surface	None	None	No
Ballast Island	Native American resources associated with historic use	10 feet below ground surface	Utilities	9 feet maximum	No



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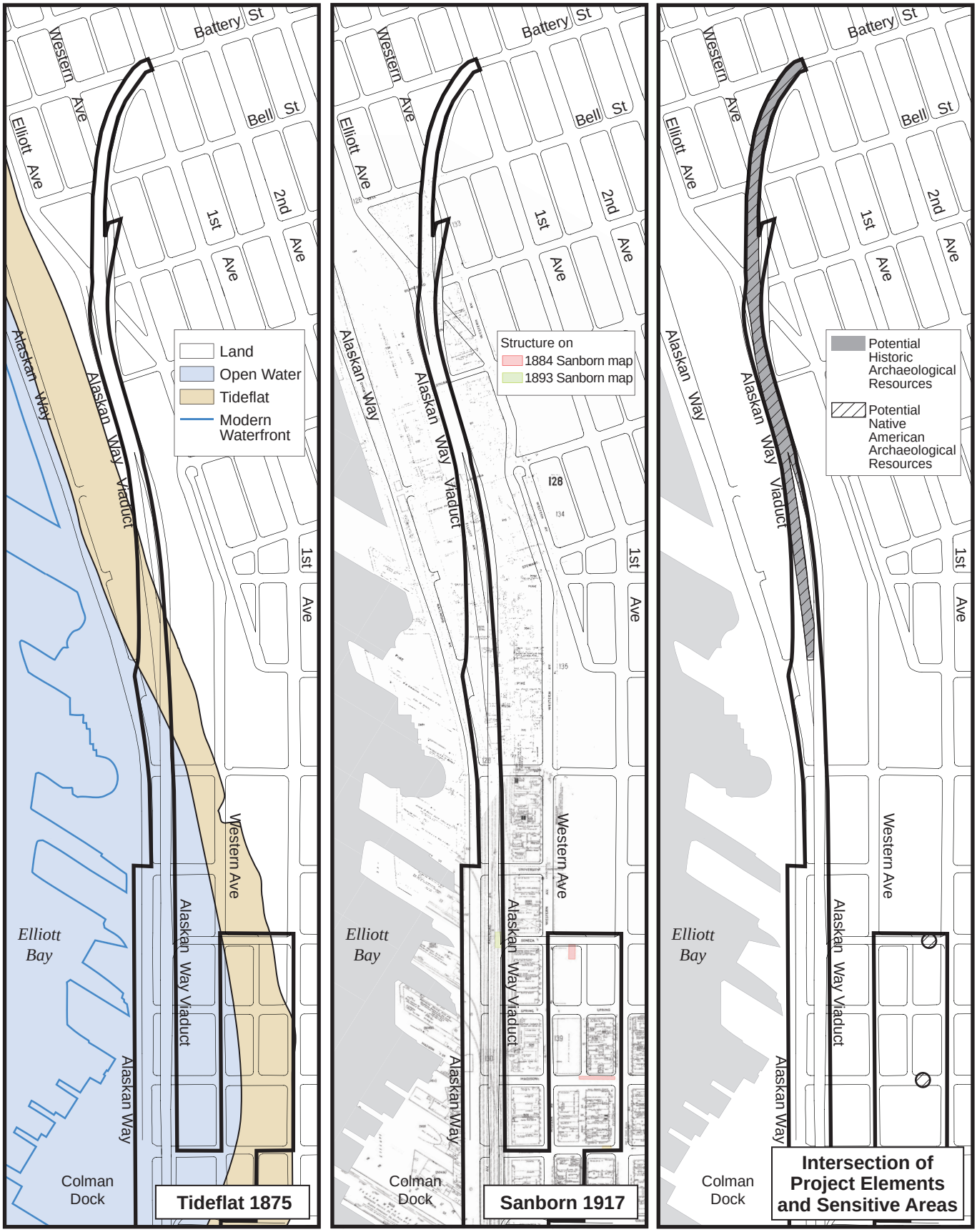
Areas of Potential Ground Disturbance

Exhibit 4-13
Areas Sensitive for Potential Archaeological Resources – South



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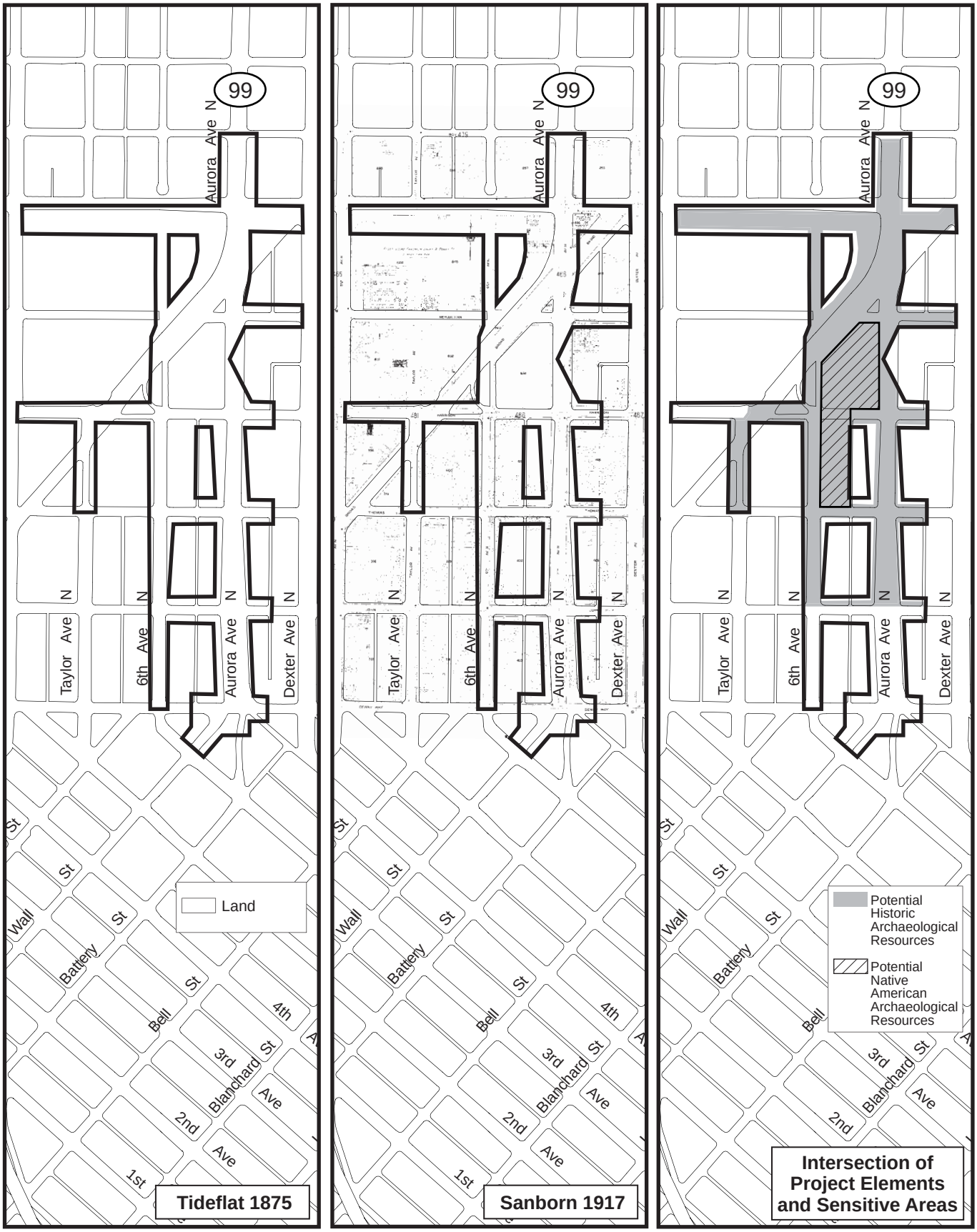
Areas of Potential Ground Disturbance

Exhibit 4-14
Areas Sensitive for Potential Archaeological Resources – Central



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Areas of Potential Ground Disturbance

Exhibit 4-15
Areas Sensitive for Potential Archaeological Resources – North

Potential Native American Archaeological Deposits

As detailed in the coring synthesis report in Attachment D, a band of Holocene sediments are present between Pleistocene tills and overlying historic-period anthropogenic fill within the APE. These sediments have the potential for containing Native American artifacts and cultural deposits ranging in age from the earliest peopling of the New World circa 11,000 years ago to the early historic period in the 1850s. In much of the area of potential ground disturbance, however, Holocene sediments exist only as historically mapped tidal flats and tidal zones (Exhibits 4-13, 4-14, and 4-15). It is possible that these tidal areas were once used for resource procurement by Native Americans. Archaeological materials may exist in these areas that result from these activities, including wooden stakes, lattice, or basket traps. These tidal Holocene sediments occur in four locations within the area of potential ground disturbance:

- The south portal area.
- The area from just south of S. Jackson Street to just south of Columbia Street within Alaskan Way S.
- The locations of drilled shafts from Yesler Way to Seneca Street between the Alaskan Way Viaduct and First Avenue.
- The area from Union to Pike Streets within Alaskan Way S.

These locations should be considered sensitive for potential archaeological deposits.

Areas of potential ground disturbance also include locations of terrestrial Holocene sediments that have been identified through the coring program (Attachment D). From Pike to Bell Streets along the alignment of the Alaskan Way Viaduct, Holocene sediments appear near the surface in one location and are overlain in other locations by a relatively thin layer of historic-period fill deposits. In the area of the north portal, a deeply buried Holocene peat deposit has been identified. The peat deposit has been radiocarbon dated at around 11,000 B.P. and would potentially have been available for use by Native Americans from that time to the historic period. The presence of the peat deposit indicates that a relatively resource rich environment existed prehistorically. Although no Native American cultural deposits were discovered in this area during deep archaeological testings (Attachment E), known Native American cultural deposits are associated with peat deposits elsewhere in Washington. These locations should also be considered sensitive for potential archaeological deposits.

Potential Historic Archaeological Deposits

Coring in conjunction with analysis of historic map data has allowed for a delineation of areas sensitive for potential archaeological deposits dating to the

historic period as well (Attachment D). Much of the area of potential ground disturbance was historically transportation corridor and has a low likelihood for the presence of significant archaeological resources. However, several locations have been identified that should be considered sensitive for potential archaeological deposits. These locations include:

- The area of the south portal, which has intact historical surfaces dating back to circa 1895 with associated archaeological deposits, as evidenced by the presence of [redacted].
- The area from Pike to Bell Streets along the alignment of the Alaskan Way Viaduct, which traverses several historic blocks that were not former transportation corridor.
- The area of the north portal, which has intact historical surfaces that have been sealed by fill and have associated archaeological deposits as evidenced by the presence of [redacted]

Additional Sensitive Areas

Additionally, two areas have been identified within the APE with particular sensitivity for Native American resources:

- Denny Island
- Ballast Island

These two areas have been located through the coring program (Attachment D). The western shoreline of Denny Island is located one-half block to the east of the area of potential ground disturbance from just north of S. King Street to the vicinity of S. Washington Street. Ballast Island is located [redacted] As currently proposed, the project elements would not disturb either of these areas. However, due to their sensitivity, these areas are important to note and consider if project elements are subject to change.

Chapter 5 OPERATIONAL EFFECTS, MITIGATION, AND BENEFITS

5.1 Operational Effects of the Viaduct Closed (No Build Alternative)

In the Viaduct Closed (No Build Alternative), it is assumed that the viaduct would be rendered unusable at some time. Several events could cause this to occur, such as a preventive closure for safety reasons or a non-catastrophic earthquake that damages the structure enough that it must be closed. If the viaduct were to fail in an earthquake, there would likely follow a period of time where the region would have to live without a replacement. Some transportation solution would be found and implemented as quickly as possible. In the meantime, an unusable viaduct would result in significantly increased traffic and congestion throughout the downtown area. An unusable viaduct could also result in loss of access and changed traffic patterns that could cause an adverse effect by threatening the economic viability of Pioneer Square and the Pike Place Market and the continued use and maintenance of the historic buildings in the districts. Some areaways (spaces beneath the sidewalks of older buildings) on First Avenue S., among the oldest in Seattle, may be adversely affected by vibrations from increased use of that street by heavy vehicles diverted from the viaduct.

A second possible scenario would be a catastrophic earthquake that would cause adverse effects by demolishing or severely damaging the viaduct, the seawall, buildings, utilities, and other facilities. The historic buildings at greatest risk from the collapse of the viaduct are those buildings in the Pioneer Square Historic District closest to the viaduct, generally between S. King and Columbia Streets.

No effects on archaeological properties would result from the operation of the Viaduct Closed (No Build Alternative).

5.2 Operational Effects of the Bored Tunnel Alternative

The primary permanent adverse effect of the Bored Tunnel Alternative on historic resources would be the demolition of the Alaskan Way Viaduct and decommissioning of the Battery Street Tunnel, which are eligible for listing in the NRHP. The other potential effect is associated with the presence of a 60-foot-high tunnel operations building at the south tunnel portal. The facility, containing ventilation fans and exhaust stacks as well as emergency generators and electrical and fire support utilities, would be constructed on the southwest corner of First Avenue S. and Railroad Way S.), across the street from the Pioneer Square Historic District and the NRHP-listed Triangle Building. The building would be a noticeable new feature, larger than the building previously on the site, but less

obtrusive than the existing adjacent ramp that would be demolished as part of the proposed alternative. Because it is outside of the historic district and would be of compatible design and materials, the introduction of this building is not considered an adverse effect on historic properties.

The north portal tunnel operations building would not have any effect on historic resources because there are few such resources in the vicinity.

No effects on archaeological properties would result from the operation of the Bored Tunnel Alternative.

5.3 Operational Mitigation

A completed MOA for the S. Holgate Street to S. King Street Viaduct Replacement Project addresses the mitigation for the demolition of the viaduct and the decommissioning of the Battery Street Tunnel.

As part of this mitigation, a HAER report (including photography) on the viaduct and the Battery Street Tunnel has already been completed and submitted to the National Park Service (Sheridan 2009). In addition, interpretive and public outreach programs will be developed. These include making available a narrative essay on the viaduct's history, preparing large-format HAER photographs for display, providing educational materials about mid-twentieth century Seattle; and creating an interactive website about the viaduct's history and its role in Seattle's development.

The visual effect of the tunnel operations building at the south portal on the adjacent historic district would be reduced by careful design to ensure that it would be compatible with the surrounding buildings and historic context of the area. The structure would be reviewed by the Seattle Design Commission. It would also be reviewed by the City Historic Preservation Officer under the City's SEPA policies (SMC 25.05.675) because of its proximity to the Pioneer Square Historic District, a Seattle landmark.

More detailed information on effects and mitigation can be found in the following discipline reports: Appendix D, Visual Quality Discipline Report; Appendix F, Noise Discipline Report; and Appendix M, Air Discipline Report.

No operational mitigation would be necessary for archaeological properties.

5.4 Operational Benefits

The Pioneer Square Historic District and Piers 54 through 59 (which are Seattle landmarks and are NRHP eligible) on the central waterfront would benefit from the removal of the viaduct structure. This change would reduce noise, vibration, and air pollution and improve views of and from the historic buildings. The

Polson Building and the Daily Journal of Commerce Building (both contributing resources to the NRHP historic district and also included within the local Pioneer Square Preservation District, at the northwest corner of the Pioneer Square Historic District) and the NRHP-listed Colman, Grand Pacific, and Olympic Warehouse Buildings would see the same benefits from the removal of the adjacent Columbia and Seneca Street ramps.

No benefits to archaeological resources would result from operation of the Bored Tunnel Alternative.

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Chapter 6 CONSTRUCTION EFFECTS AND MITIGATION

6.1 Construction Effects

6.1.1 Built Environment Resources

The primary adverse effects on historic properties related to construction would occur from settlement due to soil subsidence as the TBM moves from Alaskan Way to First Avenue, moving beneath buildings at the northwest corner of the Pioneer Square Historic District and NRHP-listed buildings to the north of the historic district. Other vulnerable buildings along the bored tunnel alignment may also be subjected to slight damage from settlement as the TBM bores beneath or close to them, but they would not be substantially damaged, and the effects would not be considered adverse. The following paragraphs describe these potential effects in greater detail.

Additional effects may occur during the demolition of the viaduct; this activity would primarily affect historic buildings on Alaskan Way. Businesses and residents would experience noise, vibration, reduced access and parking, and traffic congestion. It is anticipated that the period of time that these would affect a particular area would not be long enough to threaten the maintenance and preservation of the historic buildings. However, these historic neighborhoods (Pioneer Square, the Pike Place Market, and the central waterfront) depend on tourist and entertainment traffic, so even the perception of reduced access can have notable economic effects. A prolonged construction period could result in the loss of their distinctive characters and economic base. However, a prolonged construction period is not anticipated, and the other potential effects associated with demolition of the Alaskan Way Viaduct would not be considered adverse.

More detailed information on effects and mitigation can be found in the following discipline reports: Appendix B, Alternatives Description and Construction Methods Discipline Report; Appendix C, Transportation Discipline Report; Appendix F, Noise Discipline Report; Appendix M, Air Discipline Report; Appendix L, Economics Discipline Report; and Appendix P, Earth Discipline Report.

Avoidance and Minimization

Throughout the project planning and design process, efforts have been made to avoid or minimize adverse effects on historic and archaeological resources. One of the first steps in the design process was to identify and map both designated and potential historic properties (both NRHP-listed and locally designated properties). The design team used this information to influence specific decisions in order to avoid effects on historic resources whenever possible. When effects appeared to be unavoidable, efforts were made to minimize them.

A critical part of the minimization planning is the preconstruction assessment of buildings that may be affected by settlement. The extent of potential damage depends primarily on the building's existing structural condition and the depth of the tunnel beneath the building. To avoid and minimize these effects, structural engineers have inspected every building within the anticipated settlement zone (approximately one block on each side of the proposed alignment). Each inspection consisted of a review of available building plans and a physical inspection of both the exterior and interior to identify the structural system, existing cracks or flaws, and other relevant conditions. This information was then analyzed to evaluate the potential effect of predicted settlement on each building. The strategy for minimizing and/or mitigating effects is based on this analysis.

A number of measures would be implemented to minimize effects on historic properties. These measures include incentives in the design/build contract to minimize building settlement, contractual penalties for exceeding settlement thresholds, an extensive monitoring program that would provide early warning when settlement thresholds may be exceeded, contractual requirements for design and operation of the TBM, and use of various soil improvement and grouting techniques to improve soil strength or compensate for ground loss as the excavation advances. Consolidation and compensation grouting techniques would involve injecting a low-viscosity grout to fill voids and compensate for soil settlement, thus reducing effects. Further information on these options is provided in Section 6.2, Construction Mitigation.

Other damage minimization techniques involve grouting under buildings to improve soil strength, to fill voids created by settlement, and/or to compensate for settlement and underpinning. Controlled grout injection in the soils below and around the building foundations helps stiffen the ground prior to the excavation and/or tunneling operations. Grout injection can take place before, during, or after the excavation/tunneling process. The degree of compensation is controlled by carefully monitoring the site soils for movement. In this technique, small-diameter injection pipes are installed along the perimeter of the building and angled in such a manner to reach the target areas under the building. This requires accessibility to one or more exterior walls of the buildings and would require adequate space for drill rigs and grout injection equipment.

Monitoring of settlement and buildings before, during, and after construction would be a key element of the minimization strategy. Based on the allowable settlement threshold determined in the building assessment, settlement at points on each building would be continuously measured for 1to 6 months before the tunneling begins until up to a year after the tunneling operation has passed the building. As the TBM advances, measurement of ground loss directly over the tunnel would provide an indicator of potential effects on buildings and other

facilities. Action would be taken to reduce settlement by filling any voids created by the tunneling process with grout as the TBM advances.

Three levels of monitoring have been identified, based on each building's vulnerability to settlement. The degree of vulnerability has been used to determine how much information, and its frequency, is needed to continue to assess the potential damage. The most intensive monitoring (Level 3) would be used for the most vulnerable historic buildings. This would include, for each building, manual surveying, tilt meters, crack monitors, and GPS monitors to detect differential settlement as it occurs.

South Portal

The major direct effect of tunnel construction on historic resources would be near the south portal. The primary construction staging area would be located across the street from the Pioneer Square Historic District, at First Avenue S. and Railroad Way S. Until the completion of the tunnel, this site would contain temporary ventilation fans, air compressors, electric generators, and other construction equipment. This area may potentially include a concrete batch plant and a slurry separation plant for processing tunnel spoils. Tunnel spoils would be removed by barge or truck. This level of activity and noise could potentially affect some nearby residents and businesses, but the effects are not anticipated to be lengthy enough or severe enough to threaten the continued maintenance and preservation of the buildings. Therefore, they are not considered adverse. Greater detail on the potential construction-related noise in this area can be found in Appendix F, Noise Discipline Report.

Increased traffic and congestion on First Avenue S. would reduce access to Pioneer Square from the south and eliminate some street parking. These could have economic effects on business and building owners in Pioneer Square. However, the effects would be localized enough (at the southwest edge of the district) that they could be minimized and are not considered adverse; additional information is provided in Appendix C, Transportation Discipline Report. Furthermore, WSDOT will develop a communications plan to inform the Pioneer Square business community, residents, and Preservation Board of the potential temporary modifications. Other potential measures are discussed in Section 6.2.1, Built Environment Resources.

Bored Tunnel

The bored tunnel alignment passes directly beneath numerous historic buildings of various ages and types (see Exhibits 4-7, 4-8, and 4-9). Vibration and settlement from the operation of the TBM could potentially damage the more vulnerable of these buildings; this potential is further described below.

It is possible that settlement would cause utility disruption or damage to streets or sidewalks. Such effects, if they occur, would most likely be repaired quickly. The possible short-term economic effect would not be adverse as it would not be likely to affect the economic viability of the historic buildings and districts, or the characteristics that make them eligible for the NRHP.

Building Assessments

The alignment and size of the tunnel and the geotechnical conditions are the major factors in tunneling-induced settlement. Tunnel alignment and size are driven primarily by highway and tunnel design standards and by project constraints at either end. Where possible, adjustments have been made to the proposed alignment to avoid effects on historic buildings.

The data from the building assessments described above were analyzed and each building was rated using the Boscardin and Cording analytical method, a standard widely used for this purpose (Coughlin Porter Lundeen et al. 2010) This initial rating was then refined using more detailed computer-aided analysis for at-risk structures and professional engineering judgment to better account for the building's existing structural condition and other special factors. This analysis classifies potential building damage from settlement into six categories, as described in Exhibit 6-1.

Exhibit 6-1. Building Damage Classification

Class of Damage	Description of Damage	Approximate Width of Cracks
Negligible	Hairline cracks.	< 0.1 mm
Very Slight	Fine cracks; perhaps isolated slight fracture in building. Cracks in exterior brickwork visible upon close inspection.	< 1 mm
Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible, some repointing may be required for weather tightness. Doors and windows may stick slightly.	< 5 mm
Moderate	Cracks may require cutting out and patching. Tuck-pointing and replacement of some exterior brickwork may be required. Doors and windows stick. Utility service may be interrupted. Weather-tightness may be impaired.	5 to 15 mm, or several cracks > 3mm

Exhibit 6-1. Building Damage Classification (continued)

Class of Damage	Description of Damage	Approximate Width of Cracks
Severe	Extensive repair required, involving removal and replacement of section of walls, especially over doors and windows. Windows and door frames distorted; floor slopes noticeably; walls lean; doors bulge noticeably; some loss of bearing in beams. Utility service disrupted.	15 to 25 mm; also depends on number of cracks
Very Severe	Major repair required involving partial or complete reconstruction. Beams lose bearings. Wall lean badly and require shoring. Windows broken by distortion. Danger of instability.	Usually > 25 mm; also depends on number of cracks

Source: Boscardin and Cording 1989.
mm = millimeters

Affected Properties

Two properties that are contributing buildings in the Pioneer Square Historic District would be adversely affected by the tunneling: the Western Building at 619 Western Avenue and the Polson Building at 61 Columbia Street.

Western Building (H-108, 619 Western Avenue, T252[1])

The Western Building, located on Western Avenue near the end of Yesler Way at Western Avenue, may experience very severe impacts during the tunnel boring process. Because of the existing poor structural condition of the building, the estimated settlement may cause further extensive structural damage and the possibility of collapse.

The six-story building is currently occupied by retail uses on the ground floor and artists' studios on upper floors. It was constructed in 1910 and was most likely designed by the prominent architectural firm Saunders and Lawton, the architects of the adjoining Polson Building. The Western Building is a contributing property to the Pioneer Square Historic District, dating from the second period of significance, a time of explosive growth between 1900 and 1910. It was during this decade that the former tidal flats were developed into a thriving industrial and shipping center. The Western and Polson Buildings were constructed as warehouses to take advantage of this economic growth. They were ideally positioned on a rail line between the docks and the commercial heart of the city. Today, they form a portion of the western edge of the historic district.

[1] Building assessment identification number.

The Western Building measures approximately 100 feet by 134 feet. The north wall of the building is a concrete common wall shared with the Polson Building (discussed below). The east and west elevations consist of concrete beams and columns. The south elevation is a concrete wall with window openings. An interior concrete wall spans east-west the full height of the building. The roof and floor framing consist of laminated timber decking spanning to heavy timber girders, which are supported in turn by timber columns and the concrete walls. Concrete pile caps on timber piles of unknown size and depth support the wall and columns.

An inspection of the building indicates that the building is currently in poor structural condition, primarily due to severe existing settlement occurring as the timber piles supporting it have decayed. The following existing structural issues have been documented:

- Large full-height cracks in the north, interior and south shear walls.
- Severe differential settlement, leading to floors sloping up to 5 percent.
- Severe diagonal cracking and spalling in the central columns on the east façade, with large shear cracks extending through the parapet and the wall building out toward the street.
- Cracks in beams in the east and west façade, near supporting columns.
- Spalling leading to exposed reinforcing bars.
- Separation between the timber floors and the concrete walls, with gaps up to 3 inches wide.
- Large and extensive cracks in the slab-on-grade ground floor.
- Large differential settlements in the loading dock on the west side.

Because of these existing problems with the building, the settlement that would occur during tunnel boring may cause more severe cracking of the exterior and interior walls and loss of bearing in the beams, potentially leading to the building's collapse (Coughlin Porter Lundeen 2010).

Polson Building (H-109, 61 Columbia Street, T251)

The Polson Building is located immediately north of the Western Building and shares a common wall. The exterior walls along the north, west and east walls consist of concrete columns and beams; these walls have steel braced frames. There are two east-west shear walls, one at the south face of the building and one in the interior. The basement has a concrete slab-on-grade floor and concrete walls. Interior framing is heavy timber. An inspection of the building revealed some cracking and minor spalling in the exterior beams and columns and extensive cracking in the shear walls. The estimated settlement of 2.2 inches may cause severe to very severe damage, including damage to the architectural finishes and sufficient distortion, possibly causing windows to break.

Other Affected Buildings

The engineering analysis also indicated that 13 additional historic properties warranted compensation or compaction grouting and the highest level of monitoring (Exhibit 6-2). The remaining historic buildings were all evaluated in the building assessment, and the potential damage was determined to be negligible.

The One Yesler Building, the Maritime Building, the Federal Office Building, the National Building, the Alexis Hotel, Arlington North and South, the Colonial and Grand Pacific Buildings, the Watermark Tower, Two Bells Bar and Grill, Fire Station No. 2, and the Seattle Housing Authority building may potentially experience non-adverse effects, such as utility disruptions, minor cracks that require interior painting or repointing of brick walls, or slightly sticking doors and windows. Although these are not adverse effects, the damage would be repaired in kind, as needed, in keeping with the Secretary of the Interior's Standards for Rehabilitation of Historic Buildings (36 CFR 67.6).

Exhibit 6-2. Potential Effects on Historic Properties

ID Number (Building Assessment ID Number)	Address	Name (Historic Name)	Historic Status	Effects Determination/ B&C Classification[2]	Proposed Action[3]
H-87 (A160)	1 Yesler Way	One Yesler Building	PSHD	**Not adverse** *Very slight*	Level 3 monitoring possible compensation grouting
H-108 (T252)	619 Western Avenue	Western Building	PSHD	**Adverse** *Very Severe*	Potential structural reinforcement and compensation grouting
H-109 (T251)	61 Columbia Street	Polson Building	PSHD	**Adverse** *Severe to Very Severe*	Level 3 monitoring Compensation grouting Foundation strengthening
H-123 (A158)	911 Western Avenue	Maritime Building	NRHP eligible	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-124 (T243)	901 First Avenue	Federal Office Building	NRHP	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting

[2] The Boscardin & Cording classification is described in Exhibit 6-1.

[3] Level 3 monitoring and grouting are described Section 6.1.1.

Exhibit 6-2. Potential Effects on Historic Properties (continued)

ID Number (Building Assessment ID Number)	Address	Name (Historic Name)	Historic Status	Effects Determination/ B&C Classification[2]	Proposed Action[3]
H-126 (T234)	1000 Western Avenue	National Building	NRHP, SL	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-127 (T237)	1001 First Avenue	Alexis Hotel (Globe)	NRHP, SL	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-129 (T236)	1013 First Avenue	Arlington South (Beebe Building)	NRHP, SL	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-131 (T235)	1019 First Avenue	Arlington North (Hotel Cecil)	NRHP, SL	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-134 (T231)	1107 First Avenue	Watermark Tower (Column Building)	SL; not eligible for NRHP	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-135 (T230)	1119 First Avenue	Grand Pacific (Grand Pacific Hotel)	NRHP, SL	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-136 (T230)	1123 First Avenue	Grand Pacific (Colonial Hotel)	NRHP, SL	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-264 (T086)	2334 Fourth Avenue	Fire Station No. 2	SL, NRHP eligible	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-270 (T065)	120 Sixth Avenue N.	Seattle Housing Authority	NRHP eligible	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting
H-045A (A119)	2313 Fourth Avenue	Two Bells Bar and Grill	NRHP eligible	**Not adverse** *Slight*	Level 3 monitoring Compensation grouting

NRHP = National Register of Historic Places
PSHD = Pioneer Square Historic District
SL = Seattle Landmark

Mitigation for adverse effects on the Western and Polson Buildings is discussed below in Section 6.2.1, Built Environment Resources.

Areaways

Building assessments indicate that the Pioneer Square areaways are typically in fair condition, but are vulnerable due to their age and materials. However, no

damage to them is anticipated because they are some distance (one block or more) from the tunnel alignment. Therefore, no areaways would be adversely affected by this undertaking.

Potential damage would be minimized by careful monitoring and by installing temporary support or cribbing where monitoring and building assessment indicates a need. Areaways outside of Pioneer Square are typically of newer construction and made of concrete. They are generally in fair to good condition, although some have evidence of water infiltration or corroded beams. In addition, the bored tunnel would be at greater depth as it proceeds north; therefore, damage is less likely to occur. Regular monitoring would be used to provide early warning of potential settlement as the TBM advances, and cribbing or supports would be installed in areaways if needed.

North Portal

At the north portal, the bored tunnel would extend to Thomas Street, where a TBM recovery shaft would be excavated between Thomas and Harrison Streets upon completion of the boring activities. A cut-and-cover tunnel would extend between John, Thomas, and Harrison Streets. Harrison Street and a portion of Sixth Avenue N. would be rebuilt over the top of the tunnel. A tunnel operations building would be constructed on the east side of the tunnel between Thomas and Harrison Streets east of Sixth Avenue N.

The only historic resource in the north portal vicinity that would potentially be affected is the Seattle Housing Authority building (H-270, 120 Sixth Avenue N.). As shown on Exhibit 6-2, it would receive compaction grouting to minimize potential damage.

Viaduct Removal

The existing viaduct structure would be removed between S. King Street and the Battery Street Tunnel, including the ramps on Railroad Way S., First Avenue S., Columbia Street, and Seneca Street. This demolition would result in the loss of this NRHP-eligible structure, which has already been documented in the Alaskan Way Viaduct Historic American Engineering Record Report. Vibration from demolition could potentially affect older brick buildings adjacent to the structure, primarily those in the Pioneer Square Historic District along Alaskan Way, between S. Jackson and Columbia Streets and near the ramps on Columbia and Seneca Streets. These buildings include the Sturham Building (H-43), Our Home Hotel (H-53), the Boston Hotel (H-54), the OK Hotel (H-58), Seattle Image Setting (H-59), the Lutheran Compass Center (H-74), The Prudential Building (H-81), the One Yesler Building (H-87), the Western Building (H-108), the Polson Building (H-109), and the Daily Journal of Commerce Building (H-110) in the historic

district. NRHP-listed properties are the Grand Pacific (H-135), Olympic Warehouse (H-139), and the Colman Building (H-118).

It is anticipated that the viaduct structure would be taken apart piece-by-piece, and the vibration associated with demolition and removal is not anticipated to be substantial and is not considered an adverse effect on the adjacent historic properties. Businesses and residents would be able to continually occupy the buildings, but may be affected by noise, dust, and limited access. Businesses and users of the central waterfront piers (H-125, H-133, H-138, H-145, and H-152) may also be affected by noise, dust, and limited access, but to a lesser extent. The entire period of demolition would be approximately 9 months, but the effect on each particular area would be for a shorter period and is not anticipated to interfere with the ability of the owners to maintain the buildings in good condition. Potential measure to address the effects are described in Section 6.2.1.

Battery Street Tunnel Decommissioning

The Battery Street Tunnel would be decommissioned, causing an adverse effect on the historic property. The NRHP-eligible tunnel has been documented in the Alaskan Way Viaduct Historic American Engineering Record report and photographs. Several NRHP buildings are clustered near First Avenue and Battery Street at the south end of the tunnel: the Hull building, the Austin Bell Building, and the Barnes Building. Nearby is the NRHP-eligible Oregon Hotel. The current proposal for decommissioning is to use crushed concrete rubble recycled from the existing viaduct to fill the tunnel approximately two-thirds full and then pump in low-strength concrete slurry to solidify the tunnel. Businesses and residents may experience short-term non-adverse effects from truck traffic due to this activity, but no long-term effects are anticipated.

6.1.2 Archaeological Resources

South Portal Area

Construction at the south portal area would adversely affect one known archaeological resource, the Dearborn South Tideland Site (45KI924). The proposed footprint of the cut-and-cover trench overlaps the [redacted] In addition to this adverse effect, the cut-and-cover trench would also intersect the former tidal flats south of S. King Street, which have the potential to contain historic or prehistoric Native American cultural resources. Although no cultural resources associated with the former tidal flats have been identified through geoarchaeological and geotechnical investigation, the presence of these resources cannot be ruled out given the known ethnographic and historic use of this area by Native Americans. Finally, for the S. Holgate Street to S. King Street Viaduct Replacement Project, Miss et al. (2010) identified the area from S. Atlantic to S. Holgate Streets between Alaskan Way S. and First Avenue S. as having a

moderate likelihood for cultural resources related to the historic occupation of this area from circa 1895 to circa 1910. Within this area, there exists the potential for historic archaeological resources from 3 feet below surface. Ground disturbing activities would intersect this layer of occupation.

Mitigation for these effects is discussed below in Section 6.2.2, Archaeological Resources.

North Portal Area

Construction at the north portal area would have the potential to adversely affect one known archaeological resource, the SDOT Maintenance Yard Site (45KI958). This site has not yet been determined eligible for the NRHP, but WSDOT will assume eligibility until further testing can be conducted as outlined in Section 6.2.2, Archaeological Resources. The proposed footprint of the access to the cut-and-cover trench in this location would remove [redacted] In addition to this potential adverse effect, the cut-and-cover trench and other ground disturbing activities north of John Street would intersect a Holocene peat layer and historic period ground surface, which has the potential to contain historic archaeological resources and Native American cultural resources. Although no Native American cultural resources associated with this peat layer have been identified through geoarchaeological and archaeological investigation, the presence of these resources cannot be ruled out given the date of these sediments and the availability of this area for settlement and resource procurement. In addition, the upper portions of this peat deposit have developed into a soil horizon, which has been identified through archaeological testing as containing early twentieth-century archaeological deposits in this area. Fill materials seal these deposits and archaeological testing has provided evidence for potential intact historic cultural resources at the interface between fill and the underlying soil horizon. Ground disturbing activities would intersect these archaeological deposits and Holocene peat layer.

Mitigation for these effects is discussed below in Section 6.2.2, Archaeological Resources.

Viaduct Removal

The removal of the Alaskan Way Viaduct would have no effect on Native American or historic archaeological resources. Subsurface disturbance would be confined to areas previously disturbed during the construction of the Alaskan Way Viaduct and would only extend to the pile cap for each bent of the viaduct.

Battery Street Tunnel Decommissioning

The Battery Street Tunnel decommissioning would have no effect on Native American or historic archaeological resources.

6.1.3 Areas Sensitive for Additional Archaeological Resources

Based on the results of geoarchaeological and geotechnical investigations within the areas of potential ground disturbance and the proposed depths of ground disturbance in these areas, three project elements would intersect sediments with the potential to contain Native American or historic archaeological resources: (1) ground improvements from S. King to S. Main Streets; (2) drilled shafts for compensation grouting from Yesler Way to Seneca Street; and (3) communications line relocations along the alignment of the Alaskan Way Viaduct from Pike to Bell Streets.

Ground improvements from S. King to S. Main Streets as well as drilled shafts for compensation grouting from Yesler Way to Seneca Street would intersect the former tidal flats west of Denny Island, which have the potential to contain historic or prehistoric Native American cultural resources. Although no cultural resources associated with the former tidal flats have been identified through geoarchaeological and geotechnical investigation, the presence of these resources cannot be ruled out given the known ethnographic and historic use of this area by Native Americans.

Communications line relocations along the alignment of the Alaskan Way Viaduct from Pike to Bell Streets would intersect Holocene sediments located near Pine Street. Although ground disturbance would only occur to a depth of approximately 5 feet below ground surface, the Holocene sediments in this area are located at or near ground surface. No cultural resources associated with these sediments have been identified through geoarchaeological or geotechnical investigation, but the presence of these resources cannot be ruled out. Additionally, the alignment of the Alaskan Way Viaduct in this location traverses several historic blocks between Stewart and Bell Streets. Although no stable historic surfaces have been identified through geoarchaeological or geotechnical investigation, there is the potential for historic archaeological resources. Ground disturbing activities would intersect this potential historic layer of occupation.

The approach for identifying, evaluating, and mitigating adverse effects on these potential archaeological resources is discussed in Section 6.2.2, Archaeological Resources.

6.2 Construction Mitigation

Two types of effects on historic properties may occur due to construction, as discussed above. The first type consists of direct physical effects, caused primarily by settlement or vibration during demolition or construction. The second type, which is more widespread, consists of indirect effects due to noise, dust and mud, traffic congestion, construction traffic, loss of parking, and limited access during construction. These effect would occur to some degree at all

locations where either demolition or construction occurs. Effects would be greatest within approximately one block of the project (the APE is shown in Exhibit 2-1).

6.2.1 Built Environment Resources

Two properties in the Pioneer Square Historic District would be adversely affected by construction, the Western Building and the Polson Building. Specific mitigation measures are being proposed for them.

As described above, the Western Building is in very poor structural condition. Preliminary engineering analysis indicates that several steps would be needed to potentially stabilize the structure during construction (Coughlin Porter Lundeen 2010).

- A steel structural frame would be added on the exterior to stiffen and strengthen the building. Since this would encroach on the public sidewalk, it may be necessary to install it on the interior, which is more difficult. In any case, a temporary exterior structure would be needed to make the building safer during construction.
- The building's failing foundation would be replaced with an underpinning of micropiles (approximately 60 feet deep) around the existing pile caps and the installation of new pile caps. This would be done along both the exterior walls and beneath the interior columns. A new foundation would then be poured.
- Steel plates would be installed on the larger cracks to tie the floors and walls together.
- Once the above measures are completed, compaction grouting would be done beneath the building.

The extensive process described above involves considerable risk because there is no way to predict how the building would react to these measures. Because of the building's poor condition, including a failing foundation and inadequate structural strength, it is possible that any of these steps could result in the building moving in unforeseen ways, leading to greater damage and possible collapse. Worker safety and avoiding damage to surrounding buildings would be the primary concerns. Given the current condition of the building, demolition may be the only safe option.

In the event that demolition of the Western Building is necessary, WSDOT would work with all consulting parties to determine appropriate mitigation. Further analysis of the building options is being performed. The neighboring Polson Building, which shares a wall with the Western Building, would be carefully monitored throughout this process to ensure that no damage occurs to it. The Polson Building would be stabilized with compaction grouting and the potential

installation of grade beams on the basement level. This would involve installing shotcrete beams around the foundation to stiffen the building.

Other Buildings

As shown in Exhibit 6-2, 13 other historic buildings may experience slight damage, but this would not be considered adverse. Monitoring of buildings (before, during, and after construction) would determine vibration vulnerabilities so that the appropriate reinforcing mitigation can be implemented. These buildings would receive compensation or compaction grouting, based on each one's current structural condition, its proximity to the tunnel alignment, and potential damage. Repair of minor damage such as minor architectural cracking, sticking windows and doors, etc. would likely be performed after the tunnel boring operation is completed and the damage appears. All work in historic properties would be performed in compliance with the Secretary of the Interior's Standards for the Rehabilitation of Historic Buildings. (36 CFR 67.6)

Mitigation would be determined in consultation with DAHP and the City Historic Preservation Officer. For exterior alterations, approval would be sought, as required, from the Pioneer Square Preservation Board, the Seattle Landmarks Preservation Board, or the Pike Place Market Historical Commission.

Additional measures to address non-adverse effects may include the following:

- Use of BMPs to control noise, including using the quietest possible equipment and techniques and constructing noise walls or other barriers to block noise from historic buildings as needed.
- Use BMPs to control air pollution and mud.
- Minimize construction traffic in historic areas when possible.
- Provide clear detours and alternate routes and avoid, whenever possible, placing disruptive detour routes through historic areas.
- Ensure continued access to stores, offices, and residences.
- Minimize disruptions of utility service in historic areas and to historic buildings during construction.
- Develop a communications program to keep those in historic districts and in other historic buildings informed about construction issues. Elements of this program could include, for example, e-mail updates, a website with frequent updates, a newsletter, a telephone information line, and/or regular meetings with historic district organizations and building owners.
- Provide assistance such as support for neighborhood marketing programs to encourage people to continue to shop in the area and patronize other local businesses.
- Schedule construction activities, when possible, to minimize effects on tourism and peak and seasonal shopping periods.

- Provide information on alternative transportation or provide alternative parking where parking is lost due to construction.
- Repair any damage to historic buildings that occurs during construction.
- In the unanticipated event that historically significant areaways are damaged, necessary repairs would be made, as approved by the Pioneer Square Preservation Board.

Further development of mitigation measures would be closely coordinated among FHWA, WSDOT, the City of Seattle, and DAHP. These mitigation approaches would then be the basis for discussion leading to a Section 106 MOA among these parties to ensure that historic properties are adequately protected during construction.

More detailed information on mitigation can be found in the following discipline reports: Appendix C, Transportation Discipline Report; Appendix F, Noise Discipline Report; Appendix M, Air Discipline Report; Appendix L, Economics Discipline Report; and Appendix P, Earth Discipline Report.

6.2.2 Archaeological Resources

Mitigation for adverse effects on archaeological resources would be developed through an MOA between WSDOT, FHWA, SHPO, affected tribes, and consulting parties. The requirements of the MOA would include the creation of an Archaeological Treatment Plan that would more specifically detail investigations, data recovery, and monitoring as outlined below. An Unanticipated Discovery Plan would also be prepared that provides for notification and consultation among concerned agencies and tribes related to discoveries of unanticipated archaeological materials or human remains.

South Portal Area

Avoidance of the Dearborn South Tideland Site (45KI924) is not feasible; therefore, data recovery would be undertaken to recover the information that qualifies the site for the NRHP. An Archaeological Treatment Plan that details the data recovery effort would be developed and implemented prior to construction. The Archaeological Treatment Plan would also detail additional investigations to be undertaken at the location where the cut-and-cover trench would intersect the former tidal flats. During construction, archaeological monitoring would be required for ground disturbing activities that occur from 3 feet below ground surface to the top of the circa 1895 dredge fill surface located from 5 to 12 feet below surface. Methods for monitoring would be detailed in the Archaeological Treatment Plan.

North Portal Area

Since the SDOT Maintenance Yard Site (45KI958) has not yet been determined eligible for listing in the NRHP, additional investigations would be undertaken at this site in conjunction with construction. The results of this investigation would determine the NRHP eligibility of the site. If WSDOT determines the site NRHP eligible and DAHP concurs, data recovery would be undertaken to recover the information that qualifies the site for the NRHP. In concert with the investigation of 45KI958, additional archaeological investigation would also be undertaken in other areas within the footprint of the cut-and-cover trench where peat deposits and extant historic surfaces have been identified. If archaeological deposits are discovered and are determined eligible for the NRHP, data recovery would also be undertaken at these locations. The Archaeological Treatment Plan would provide the details of this investigation and potential data recovery. During construction, archaeological monitoring would be required for ground disturbing activities that would intersect the elevation of peat deposits and extant historic surfaces identified during geoarchaeological investigations. Methods for monitoring would be detailed in the Archaeological Treatment Plan.

6.2.3 Archaeological Resources

As discussed in Section 6.1.3, three project elements would intersect sediments with the potential to contain prehistoric or historic archaeological resources: (1) ground improvements from S. King to S. Main Streets; (2) drilled shafts for compensation grouting from Yesler Way to Seneca Street; and, (3) communications line relocations along the alignment of the Alaskan Way Viaduct from Pike to Bell Streets.

Ground improvements from S. King to S. Main Streets would intersect the former tidal flats west of Denny Island, which have the potential to contain historic or prehistoric Native American cultural resources. The method of ground improvement would not allow for archaeological investigation in advance of construction or monitoring during construction. For this reason, the investigation that would be carried out at the location of the cut-and-cover trench for the south portal just south of S. King Street would be part of an exchange for the loss of the former tidal flats between S. King and S. Main Streets.

Drilled shafts for compensation grouting from Yesler Way to Seneca Street would also intersect the former tidal flats, which have the potential to contain historic or prehistoric Native American cultural resources. Exhibits 6-3 through 6-8 present the areas where compensation grouting would be conducted. During construction, the sediments from the tidal flat elevation would be isolated and subject to archaeological investigation. The Archaeological Treatment Plan would provide the details of this investigation.

Communications line relocations along the alignment of the Alaskan Way Viaduct from Pike to Bell Streets would intersect Holocene sediments located near Pine Street and have the potential to intersect historic surfaces along this alignment. During construction, archaeological monitoring would be required for ground disturbing activities along the Alaskan Way Viaduct from Pike to Bell Streets. Methods for monitoring would be detailed in the Archaeological Treatment Plan.

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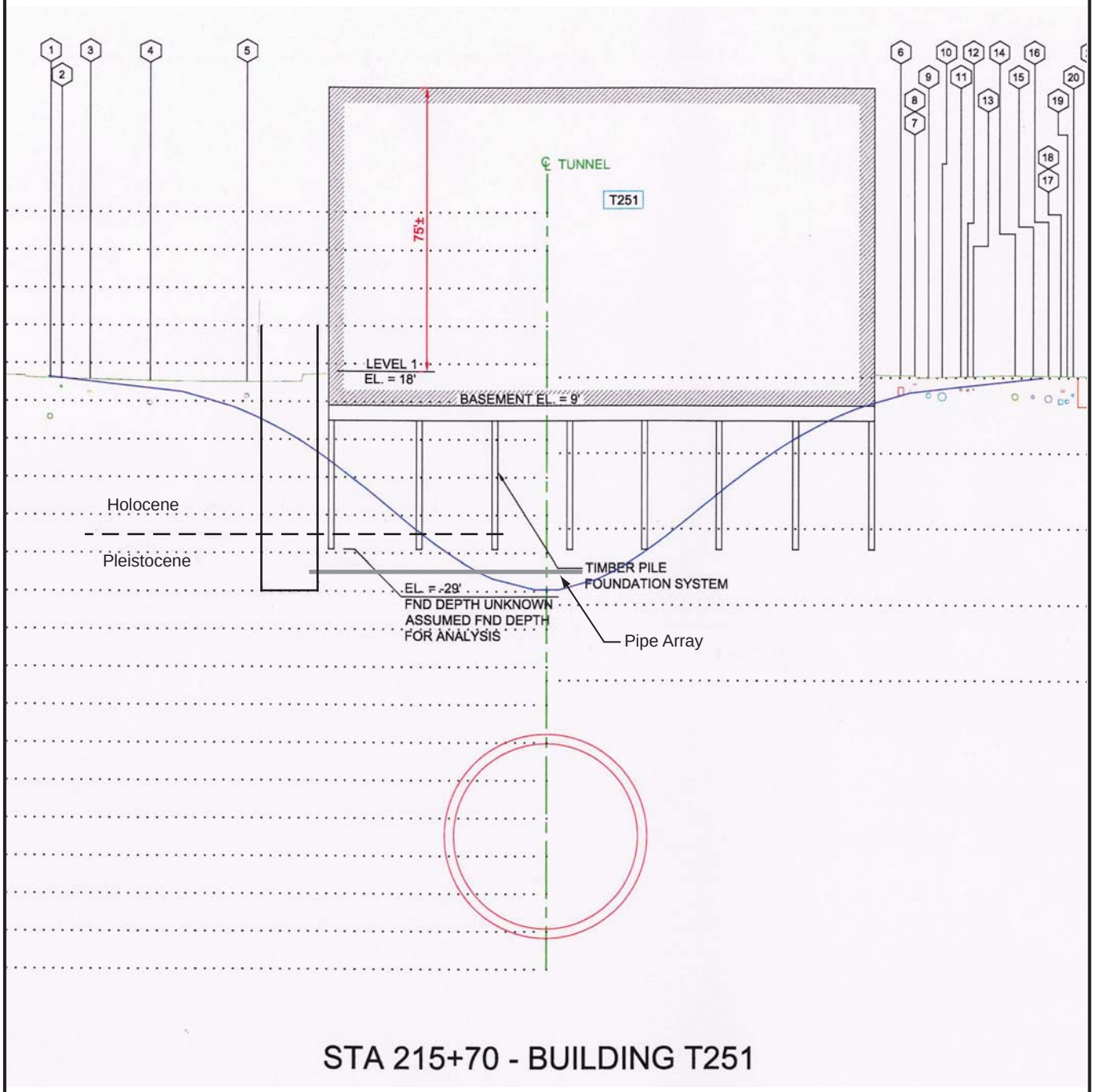
0 600

SCALE IN FEET

Shaft Locations

Bored Tunnel

Exhibit 6-3
Compensation Grouting Locations



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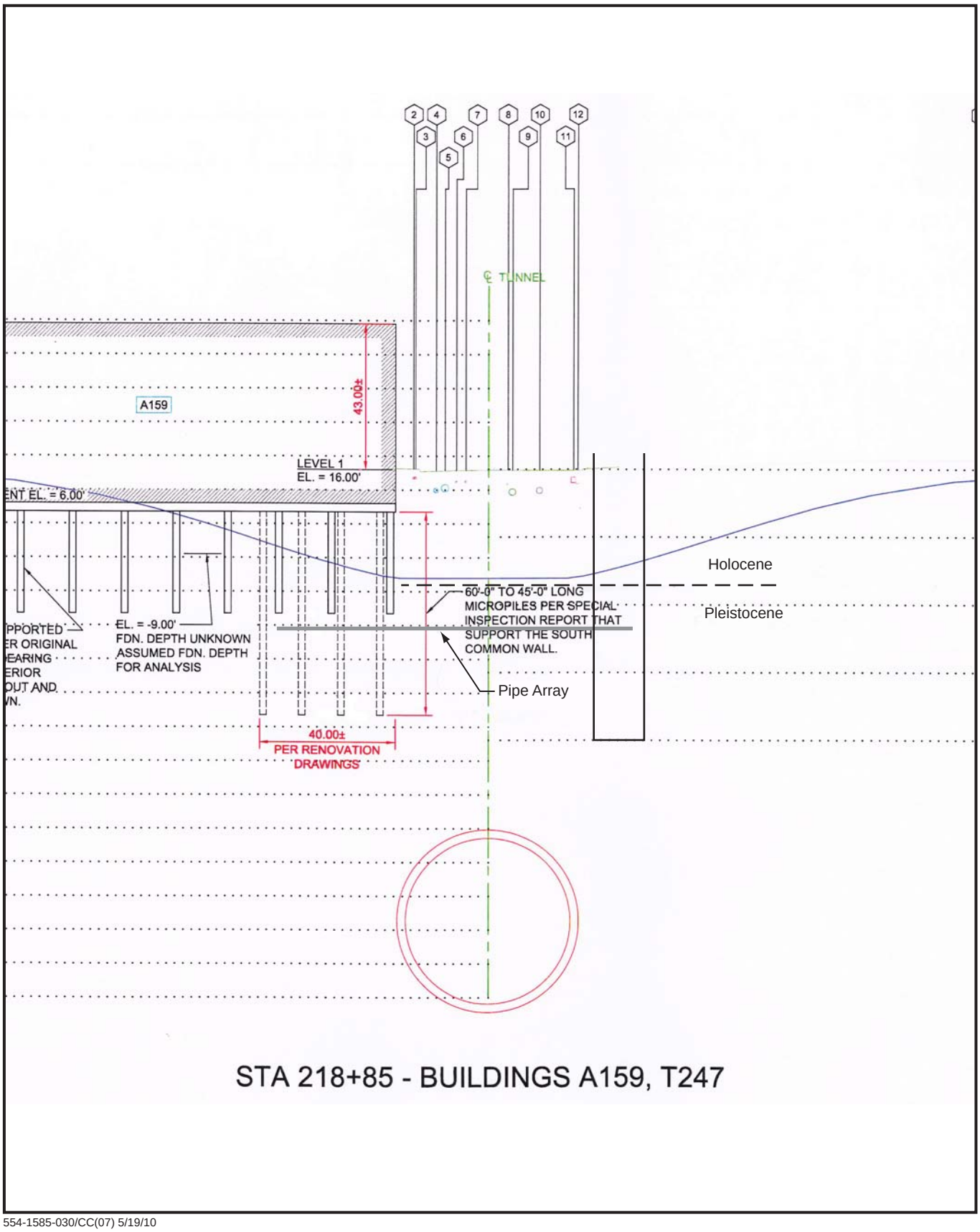
SCALE IN FEET

Tunnel Settlement Trough

Exhibit 6-4
Compensation Grouting
Building T251



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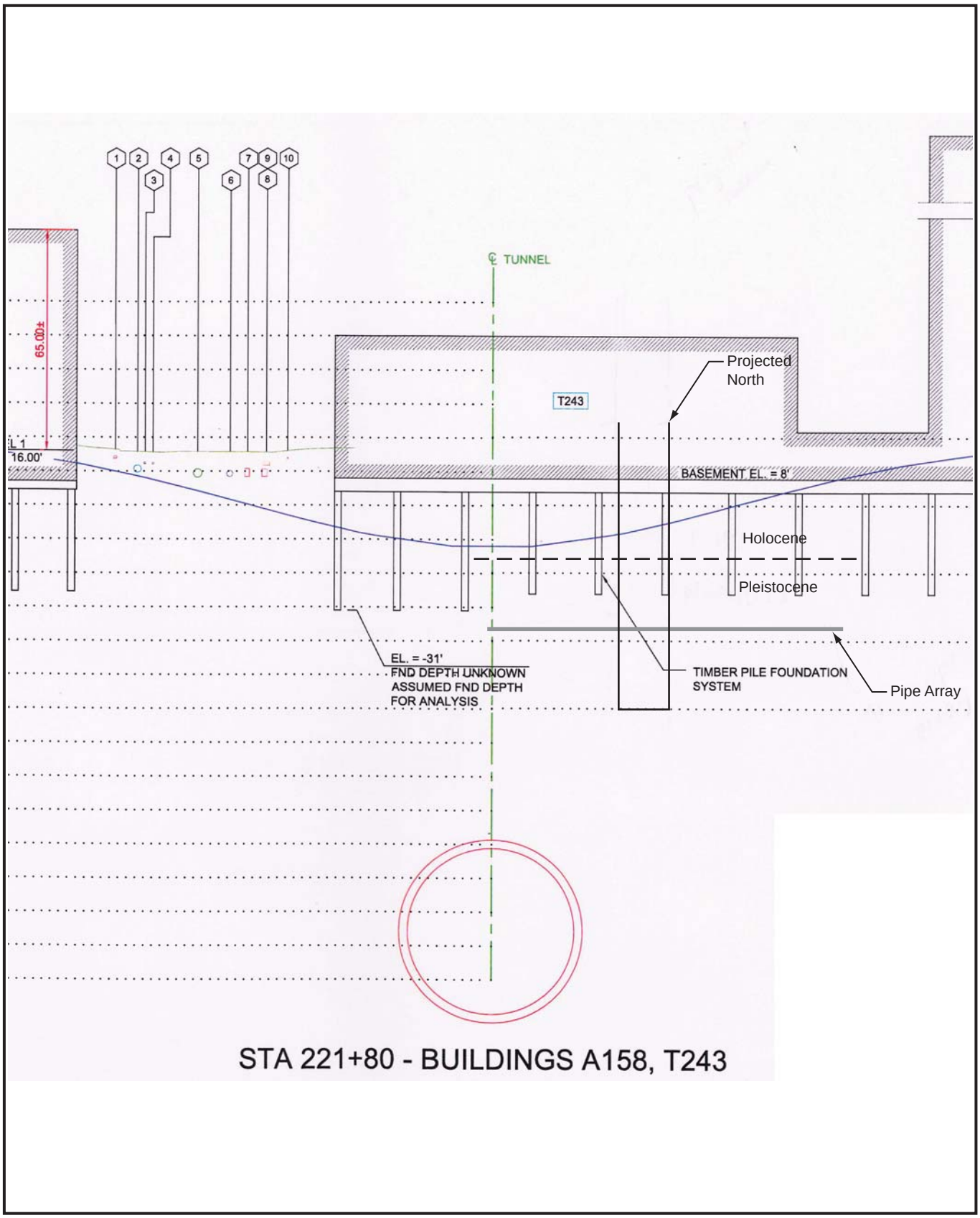
0 40

SCALE IN FEET

Tunnel Settlement Trough

Exhibit 6-5
Compensation Grouting
Buildings A159, T247



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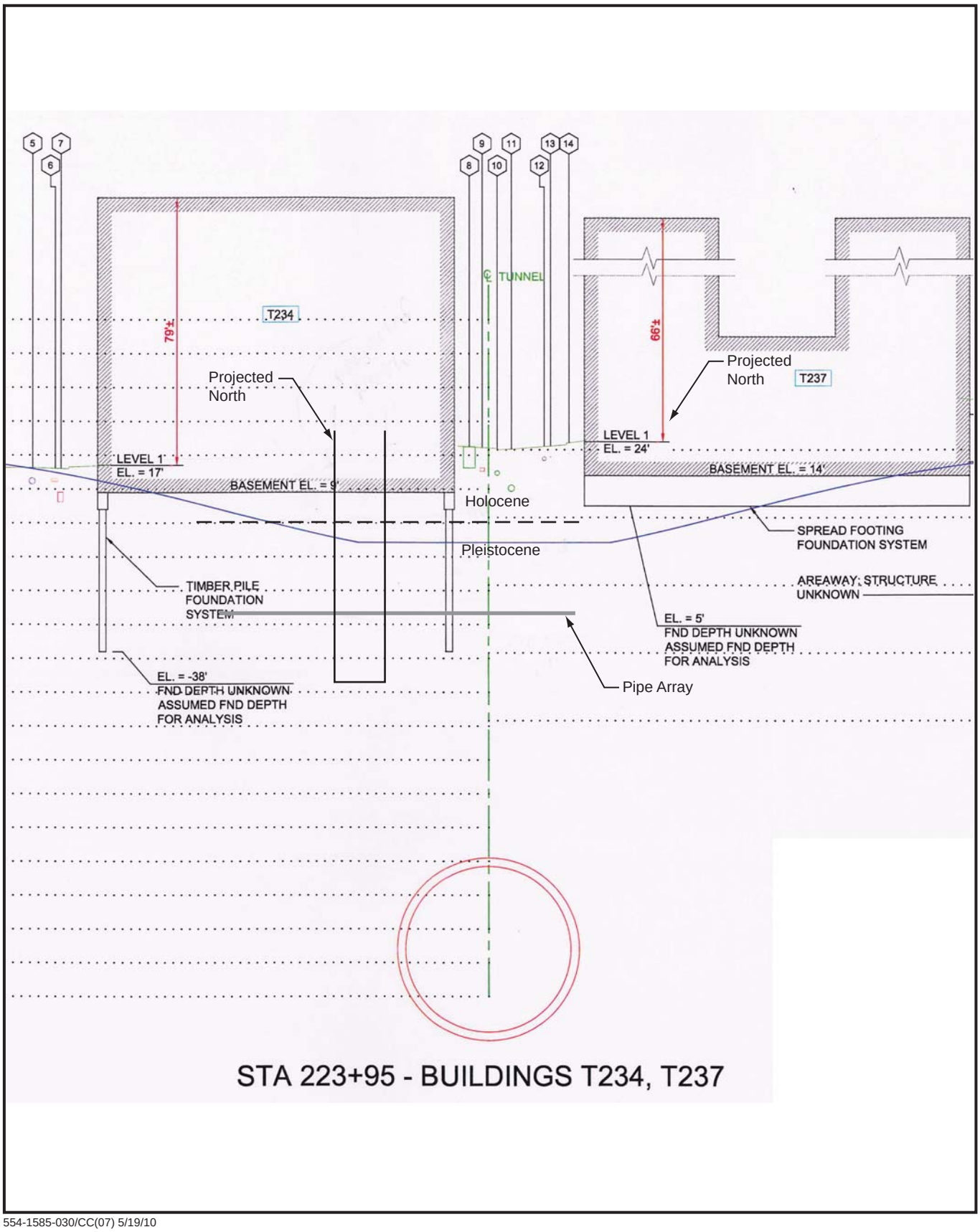
SCALE IN FEET

Tunnel Settlement Trough

Exhibit 6-6
Compensation Grouting
Buildings A158, T243



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SCALE IN FEET

Tunnel Settlement Trough

Exhibit 6-7
Compensation Grouting
Buildings T234, T237

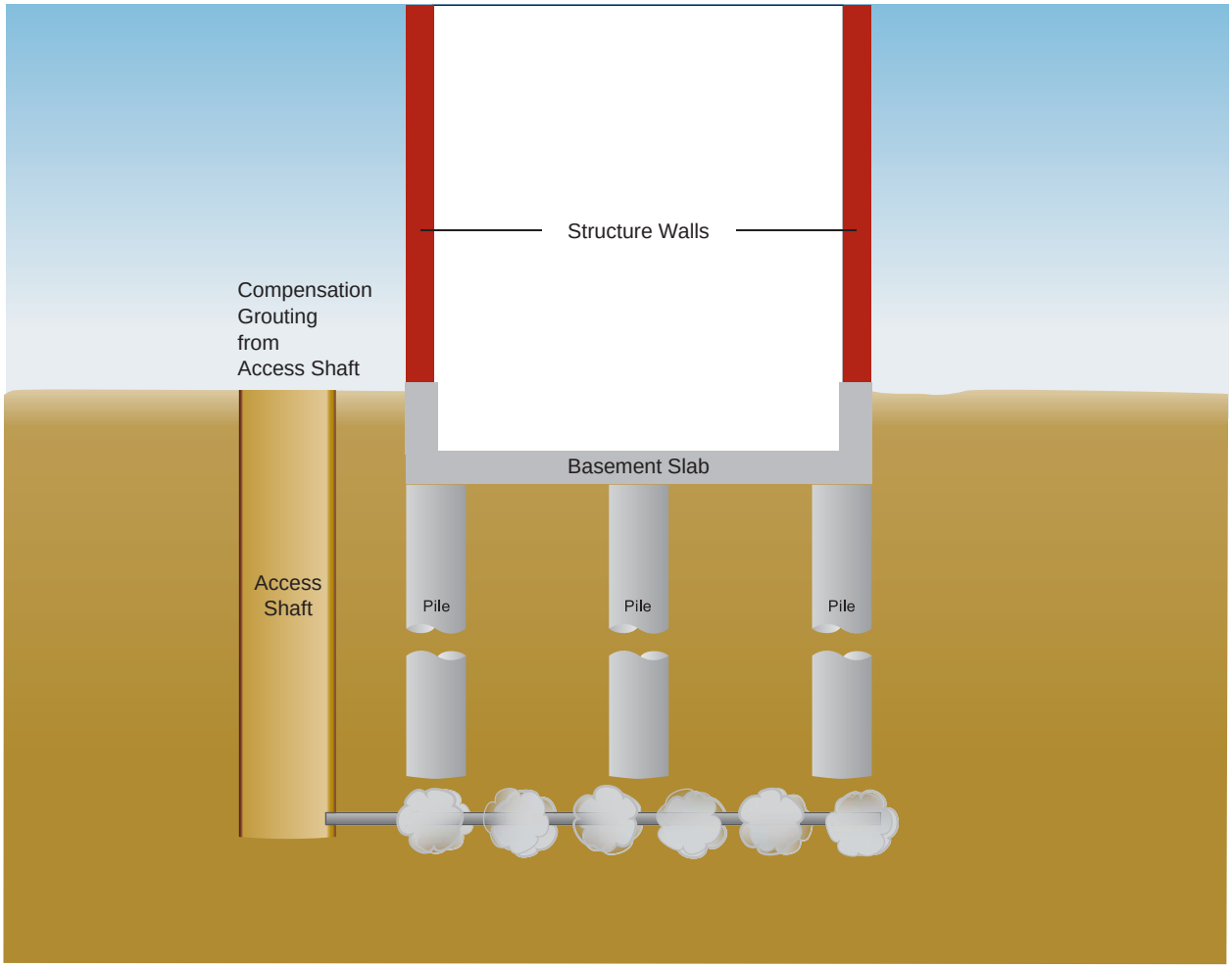

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Exhibit 6-8
Compensation Grouting,
Schematic Drawing

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Chapter 7 CUMULATIVE EFFECTS

Cumulative effects are effects on the environment that result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes these other actions. Cumulative effects can result from individually minor but collectively important actions taking place over time.

Three groups of projects have been evaluated for potential cumulative effects:

- Roadway elements of the Program that are not part of the Bored Tunnel Alternative but are foreseeable future projects as part of the overall Program. These projects include improvements to the Alaskan Way surface street between S. King and Pike Streets, the Elliott/Western Connector from Pike Street to Battery Street, and improvements to the Mercer Street corridor between Fifth Avenue and Elliott Avenue W.
- Non-roadway elements of the Program include development of a promenade and public space along the Alaskan Way surface street, replacement of the Elliott Bay Seawall, establishment of a streetcar line on First Avenue, and enhanced transit service.
- Other major projects that could add to or interact with the project to contribute to cumulative effects include the Mercer corridor improvements east of Fifth Avenue; Sound Transit construction projects; widening of the S. Spokane Street Viaduct; SR 519 Intermodal Access Project, Phase 2; the SR 520 Bridge Replacement and HOV Program; improvements to I-5; and redevelopment projects in the South Lake Union area.

The first two categories of projects, those that are part of the overall Program, are evaluated at a more preliminary level of detail than the Bored Tunnel Alternative because they would have additional environmental review after they are better defined. The analysis consists primarily of noting the historic properties that have already been identified near the projects and discussing the potential for additional properties in the area and for possible effects on the properties. A more detailed cumulative effects analysis is provided in Attachment F.

The Bored Tunnel Alternative would potentially enhance the viability of downtown Seattle, the waterfront, and Pioneer Square by making them more attractive places to work, live, and visit. Removal of the viaduct structure would open up the area now occupied by surface parking to new uses such as the proposed promenade and public space, which may feature amenities such as performance spaces, outdoor cafes, and recreational areas. This dramatic change may lead to building alterations and changes of use in the historic buildings along

Alaskan Way. Many of these historic structures were constructed in relation to the railroads and shipping piers that originally lined the waterfront, and their west facades feature loading docks and blank walls. With increased public activity along the waterfront, owners may seek to adapt their buildings to new uses, such as stores and restaurants.

Any such changes to historic buildings would have to be approved by the Pioneer Square Preservation Board (within that historic district), the Seattle Landmarks Preservation Board (for Seattle landmarks), or the Pike Place Market Historical Commission (within that historic district). However, the potential changes on the waterfront mean that those buildings that are not designated landmarks are at increased risk of demolition or of substantial alteration that may diminish their historic character.

Increased prosperity can also threaten historic buildings due to greater demand for new construction. Strong protective legislation and incentives would be needed to ensure that increased economic activity could enhance the preservation and restoration of historic buildings.

7.1 Trends Leading to Present Conditions of Historic, Cultural, and Archaeological Resources

Native Americans inhabited the Puget Sound region for nearly 11,000 years, although permanent settlements were not developed until approximately 5,000 years ago. Early European mapping from the mid-1870s indicates that the southern portion of the Program area was a series of lagoons with low to no bank shoreline and steep hills behind. To the north was a prairie structure on the hillside between Lake Union and the waterfront north of Denny Hill.

The first American settlers established claims in 1851. From the earliest days of settlement, Seattle residents altered the landscape along Puget Sound to provide better transportation access and encourage the development of commerce and industry. Steep hillsides and surrounding tidelands were challenges to expansion, but by filling, dredging, and leveling, the city created more usable land for urban growth. For a short period at the end of the nineteenth century, industrial, commercial, and residential development took place side by side with the improvement of wharf and railroad facilities on these newly created lands. Soon after the twentieth century began, however, the major transcontinental railroads took control of most of the former tidal flats south of the city, influencing the direction of future growth and establishing patterns that would be in place until after World War II.

The Great Fire of June 1889 also created a great opportunity for the residents of Seattle to remake the Pioneer Square area. New building regulations required fireproof buildings, and many of the buildings in the Pioneer Square Historic

District were built as a result. Before about 1900, Seattle was primarily a place of commerce, shaped by rail transportation and shoreline development for shipping and passenger vessels. After 1900, manufacturing became increasingly important.

To improve development opportunities, hills were regraded (leveled), and much of the soil was used to fill shoreline areas (primarily between 1898 and 1931). A large streetcar network bound city neighborhoods together. By the 1920s, motor vehicles were becoming popular and, in 1941, the streetcar tracks were removed.

World War II transformed Seattle and the Puget Sound region. Its key location made it a significant military base, and the airplane and ship manufacturing industries attracted thousands of new workers. Virtually no civilian construction occurred during the Great Depression and the war (1930s–1940s), and it was not until the 1950s that construction recovered. Residential growth increased in the suburbs, and roadway construction focused on connecting these outlying areas with the city's employment centers. The Alaskan Way Viaduct in the early 1950s was the first of these major projects, followed by I-5 in the 1960s.

Proposals for adapting the city to the primacy of the automobile included additional freeway construction and the demolition of Pioneer Square and the Pike Place Market for roadways and parking. Citizen activists, aided by the 1966 National Historic Preservation Act, halted these projects, and these two neighborhoods were among the nation's first historic districts. Since that time, five more historic districts and nearly 400 individual historic landmarks have been designated.

7.2 Effects From Other Roadway Elements of the Program

7.2.1 Alaskan Way Surface Street Improvements – S. King to Pike Streets

This section of Alaskan Way is bordered by numerous historic properties, including the Washington Street Boat Landing (NRHP and Seattle landmark) and Piers 54 to 57 (Seattle landmark and NRHP-eligible). Between S. King and Columbia Streets, the roadway adjoins the Pioneer Square Historic District and runs through the local historic district. The northern section, near Pike Street, adjoins the Pike Place Market Historic District.

Businesses and residents in these buildings would most likely experience periods of restricted access during the construction of the street improvements, as well as the typical construction effects of noise, dust, and traffic congestion. However, it is probable that the disruptions would not be an adverse effect, as they would not be of long enough duration to affect the long-term viability and maintenance of the historic properties.

Ground-disturbing activities that extend less than 5 feet below the existing grade would have no effect on Native American–related or historic-period archaeological material.

7.2.2 Elliott/Western Connector – Pike Street to Battery Street

Important historic properties in this vicinity include the Pike Place Market Historic District and several NRHP-listed properties near Battery Street (the Hull Building, the Austin Bell Building, and the Barnes Building, as well as the NRHP-eligible Oregon Hotel). Businesses and residents in these buildings may experience periods of limited access during construction, as well as the typical construction effects of noise, dust, and traffic congestion. However, it is probable that the disruptions would not be of long enough duration to affect the long-term viability and maintenance of the historic properties.

Placement of pilings between Virginia and Pike Streets may adversely affect Native American–related or historic-period archaeological material, depending on the depth of the pilings.

7.2.3 Mercer West Project – Fifth Avenue to Elliott Avenue

Seattle Center contains several Seattle landmarks (the Space Needle, the Center House, the Horiuchi Mural, and the Kobe Bell); all of these are also NRHP eligible. It is unlikely that they would be affected by the improvements to Mercer Street. Although there are no designated national or Seattle landmarks west of Seattle Center, the apartment buildings north of Mercer Street between First Avenue W. and the end of W. Roy Street have been identified as a potential national or local historic district. Several of the buildings are also individually eligible for NRHP listing or Seattle landmark designation.

It is unlikely that the corridor improvement project would have direct effects on these properties. Residents would experience the typical road construction effects of limited access, transit disruption, noise, dust, and traffic congestion. However, it is very unlikely that the disruptions would be of long enough duration to affect the long-term viability and maintenance of the historic properties.

Construction near the intersection of W. Mercer Street and Elliott Avenue may adversely affect Native American–related or historic-period archaeological material, depending on the depth of construction.

7.3 Effects From Non-Roadway Elements of the Program

7.3.1 Elliott Bay Seawall Project

The Elliott Bay Seawall needs to be replaced to protect the shoreline along Elliott Bay, including Alaskan Way. It is at risk of failure due to seismic and storm

events. The seawall currently extends from S. Washington Street in the south to Bay Street in the north, a distance of about 8,000 feet. The Elliott Bay Seawall Project limits extend from S. Washington Street in the south to Broad Street in the north (also known as the central seawall).

The seawall has been determined to be eligible for listing in the NRHP. Seawall replacement or extensive repairs would potentially make it ineligible for listing. This loss could be mitigated with typical measures such as documentation and interpretation.

Numerous historic properties are located along the seawall, as on Alaskan Way. The NRHP-listed Washington Street Boat Landing and Piers 54 through 57 (NRHP-eligible and Seattle landmarks) are immediately above the seawall. The southern portion of the seawall is in the local Pioneer Square Historic District. A prolonged period of construction could potentially affect these businesses and property owners severely enough that they would have difficulty properly maintaining their historic properties. These effects could be alleviated by typical measures such as phasing construction and providing building access and business assistance during construction.

Seawall restoration may adversely affect deeply buried Native American–related and historic-period archaeological sites on historic beaches and in historic fill.

7.3.2 Alaskan Way Promenade/Public Space

The effects of constructing a waterfront promenade along Alaskan Way would be similar to those described in Section 7.2.1, Alaskan Way Surface Street Improvements – S. King to Pike Streets. The benefits would potentially be greater if the new promenade attracts more visitors to patronize businesses in the historic piers and other historic properties.

Construction of the waterfront promenade would have no effect on Native American–related or historic-period archaeological sites if ground disturbance is limited to less than 5 fbs.

7.3.3 First Avenue Streetcar Evaluation

The proposed streetcar line on First Avenue, extending from Seattle Center to Pioneer Square, would go through two historic districts (Pike Place Market and Pioneer Square). It would pass numerous NRHP properties, including those in the First Avenue Group (the Alexis Hotel and surrounding buildings), the Holyoke Building, and the old Federal Office Building. However, it is unlikely that the streetcar would affect either the historic properties or any Native American–related or historic-period archaeological sites.

7.3.4 Transit Enhancements

Enhanced transit service would have no effect on either historic properties or Native American–related or historic-period archaeological sites.

7.4 Cumulative Effects of the Project and Other Program Elements

The cumulative effects of the Program on historic properties would be minimal. Its primary effect would be relatively short-term construction effects on the Pioneer Square and Pike Place Market Historic Districts and on historic buildings on the waterfront and in the western part of downtown Seattle. It is unlikely that the construction period would be lengthy enough to lead to deterioration or lack of maintenance.

There is a risk of settlement damage to buildings during tunneling. If this occurs, historic buildings would be repaired according to the Secretary of the Interior's Standards for Rehabilitation of Historic Properties (36 CFR 67.6).

The other projects in the Program would increase the effects noted above for the Bored Tunnel Alternative. They would further enhance the viability of downtown Seattle and the waterfront by adding transportation options, a promenade, and other amenities. These changes could lead to further changes in the use of historic buildings in the vicinity.

There is a risk of damaging Native American and historic-period archaeological sites that may be eligible for the NRHP, depending on the depth and location of ground disturbance. The Program may contribute important information about Native American use of the pre-Seattle landscape and about local urban development over the last 160 years.

7.5 Cumulative Effects of the Project, Other Program Elements, and Other Actions

Other major projects that could add to or interact with the project to contribute to cumulative effects are either completed or in the planning stages. Phase 2 of the SR 529 Intermodal Access Project has been completed. Projects in the planning stages include Mercer Corridor improvements east of Dexter Avenue, Sound Transit construction projects, widening of the S. Spokane Street Viaduct, the SR 520 Bridge Replacement and HOV Program, improvements to I-5, and general redevelopment projects in the South Lake Union area. Each of the planned projects would have to undergo separate environmental review and any applicable permitting. At this time, none of these projects is expected to substantially affect historic properties in this project's APE; therefore, no cumulative effects are expected.

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ATTACHMENT A

Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects

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ATTACHMENT A

Exhibit A-1 shows the properties within the Area of Potential Effects that were built in 1963 or earlier, with their historic designation. Properties are listed generally from south to north, west to east. Eligibility for Seattle landmark designation is only an opinion; it can be confirmed only by the Seattle Landmarks Preservation Board.

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-1	Alaskan Way	Elliott Bay Seawall (Alaskan Way Seawall)	Eligible NRHP
H-2	Alaskan Way/Battery Street	Alaskan Way Viaduct & Battery Street Tunnel	Eligible NRHP
H-3	S. Main Street to Bell Street	Burlington Northern Railway Tunnel (Great Northern Railway Tunnel)	Eligible NRHP
H-4	1526 First Avenue S.	Emerald Market Supply (David Dow and Sons)	Not eligible
H-5	1518 First Avenue S.	McKinnon Furniture (Frederick & Nelson Warehouse)	Eligible NRHP & SL
H-6	1251 First Avenue S.	Great Floors (International Harvester)	Not eligible
H-7	1201 First Avenue S.	Pyramid Alehouse	Not eligible
H-8	1041 First Avenue S.	Gerry Sportswear	Not eligible
H-9	1026 First Avenue S.	Stadium Silver Cloud Inn	PSPD; not eligible NRHP
H-10	1028 First Avenue S.	Hawk's Nest (Maginnis Bottling Works)	PSPD; not eligible NRHP
H-11	1014 First Avenue S.	Olympic Reprographics (M.F. Backus Warehouse)	PSPD; eligible NRHP
H-12	1000 First Avenue S.	Palmer Court (A.L. Palmer Building)	PSPD; eligible NRHP
H-13	902 First Avenue S.	Artists' Gallery of Seattle/ Worldwide Marble & Granite	PSPD; not eligible NRHP
H-14	900 First Avenue S.	Roebling Building	PSPD; eligible NRHP
H-15	820 First Avenue S.	Coastal Environmental Systems	PSPD; not eligible NRHP
H-16	1020–1022 First Avenue S.	E.O. Graves Building	PSPD; eligible NRHP
H-17	553 First Avenue S.	Triangle Hotel	NRHP, SL, PSHD
H-18	505 First Avenue S.	Starbucks	PSHD
H-19	501 First Avenue S.	(Seattle Hardware Annex)	PSHD

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-20	83 S. King Street	83 King Street & garage (Seattle Hardware Co.)	PSHD
H-21	590 First Avenue S.	(Seattle Plumbing Building)	PSHD
H-22	568 First Avenue S.	Provident Building	PSHD
H-23	562 First Avenue S.	The Copy Machine (Bornstein & Sons)	PSHD
H-24	558 First Avenue S.	Fobes Supply Co.	PSHD
H-25	548 First Avenue S.	Elysian Fields/Reedo Building (Carsten Brothers/Nordic Cold Storage)	PSHD
H-26	542 First Avenue S.	Washington Shoe Building	PSHD
H-27	538 First Avenue S.	Sluggers (Kaufman Warehouse)	PSHD
H-28	508–534 First Avenue S.	Florentine Condominiums (Seattle Security Co. Warehouse)	PSHD
H-29	500 First Avenue S.	101 King Street (Norfin Building)	PSHD
H-30	410 Alaskan Way S.	Merrill Place Garage	PSHD
H-31	419 First Avenue S.	Merrill Place (Hambach Building)	PSHD
H-32	411 First Avenue S.	Merrill Place (Seller Building)	PSHD
H-33	401 First Avenue S.	Merrill Place (Schwabacher Hardware Co.)	PSHD
H-34	100 S. King Street	Westland Building	PSHD
H-35	419 Occidental Avenue S.	F.X. McRory's	PSHD
H-36	79 S. Jackson Street	Merrill Place	PSHD
H-37	80 S. Jackson Street	80 S. Jackson Condo (Steinberg Building)	PSHD
H-38	101 S. Jackson Street	Heritage Building	PSHD
H-39	115 S. Jackson Street	Fisher Building	PSHD
H-40	122 S. Jackson Street	Waltham Block	PSHD
H-41	123 S. Jackson Street	Jackson Square Building	PSHD
H-42	316 Alaskan Way S.	Old Seattle Parking Garage	PSHD
H-43	304 Alaskan Way S.	C&H Company (Otto Sturham & Sons)	PSHD
H-44	322 First Avenue S.	Jackson Building	PSHD
H-45	316 First Avenue S.	Seattle Quilt Building	PSHD
H-46	314 First Avenue S.	Nord Building	PSHD
H-47	313 First Avenue S.	Crown Hotel	PSHD
H-48	310 First Avenue S.	Globe Building	NRHP, PSHD
H-49	309 First Avenue S.	Maud Building	PSHD
H-50	301 First Avenue S.	Bread of Life Mission (Matilda Winehill Block)	PSHD
H-51	311½ Occidental Avenue S.	Waltham Block	PSHD
H-52	201 Alaskan Way S.	Pier 48	Not eligible
H-53	75 S. Main Street	Our Home Hotel	PSHD
H-54	76 S. Main Street	Boston Hotel	PSHD

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-55	80 S. Main Street	Argens Safe & Lock Co.	PSHD
H-56	117 S. Main Street	Union Trust Annex	PSHD
H-57	119 S. Main Street	Union Trust Building	PSHD
H-58	212 Alaskan Way S. (80 S. Main Street)	OK Hotel	PSHD
H-59	210 Alaskan Way S.	Seattle Image Setting (People's Supply Company)	PSHD
H-60	201–205 First Avenue S.	J&M Hotel & Café	PSHD
H-61	202 First Avenue S.	Buttnick Building	PSHD
H-62	217-19 First Avenue S.	New England Hotel	PSHD
H-63	216 First Avenue S.	Grand Central (Squire-Latimer Building)	PSHD
H-64	213 First Avenue S.	Artforte Gallery	PSHD
H-65	211 First Avenue S.	Lucky Hotel	PSHD
H-66	209 First Avenue S.	Marathon Building	PSHD
H-67	207 First Avenue S.	Skagit Hotel	PSHD
H-68	206 First Avenue S.	City Loan Building	PSHD
H-69	115 Occidental Avenue S.	Star Theater	PSHD
H-70	109 Occidental Avenue S.	Saveway Market	PSHD
H-71	Foot of Washington Street	Washington Street Boat Landing	NRHP, PSPD
H-72	68 S. Washington Street	Washington Park Building	PSHD
H-73	72 S. Washington Street	Seattle Publishing	PSHD
H-74	77 S. Washington Street	Lutheran Compass Center (Pacific Coast Co.)	PSHD
H-75	81 S. Washington Street	St. Charles Hotel	PSHD
H-76	108 S. Washington Street	Delmar Hotel	PSHD
H-77	116 & 118 S. Washington Street	Scandinavian Hotel & Clancy Building	PSHD
H-78	124 S. Washington St	Last Supper Club (Hotel Interurban)	PSHD
H-79	104 First Avenue S.	Lippy Building	PSHD
H-80	102 First Avenue S.	Olympic Block	PSHD
H-81	114 Alaskan Way S.	Prudential Building	PSHD
H-82	110 Alaskan Way S.	Pioneer Square Hotel (Heffernan Engine Works)	PSHD
H-83	117 First Avenue S.	Maynard Building	PSHD
H-84	112 First Avenue S.	City Club Building	PSHD
H-85	114 First Avenue S.	State Hotel	PSHD
H-86	109–115 First Avenue S.	Terry-Denny Lofts (Northern Hotel)	PSHD
H-87	1 Yesler Way	One Yesler Building (Bedford Hotel)	PSHD
H-88	77 Yesler Way	Pioneer Square Hotel (Yesler Hotel)	PSHD

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-89	76-84 Yesler Way/ 611 Post Avenue	(Travelers Hotel)	PSHD
H-90	90 Yesler Way	606 Post (Post Hotel)	PSHD
H-91	93 Yesler Way 103–107 First Avenue S.	Schwabacher Building	PSHD
H-92	95 Yesler Way	Yesler Building (Bank of Commerce)	PSHD
H-93	109 Yesler Way	Merchants' Café	PSHD
H-94	119 Yesler Way	Korn Building	PSHD
H-95	515 Second Avenue	Parking garage	PSHD
H-96	619 Post Avenue	Seattle Steam	PSHD
H-97	605 First Avenue	Mutual Life Building	PSHD
H-98	606 First Avenue at Yesler Way	Pioneer Building, Pioneer Place & Pergola	NHL, PSHD
H-99	612 First Avenue	Howard Building	PSHD
H-100	616 First Avenue	Lowman & Hanford Building	PSHD
H-102	625 First Avenue	Emerald City Building (K&R/Pioneer Office Equipment)	PSHD
H-103	627 First Avenue	Yam Oriental Rugs (Silver Hotel)	PSHD
H-104	102–110 Cherry Street	Scheuerman Building	PSHD
H-105	107 Cherry Street	Lowman Building	PSHD
H-106	601 Second Avenue	Butler Garage	PSHD
H-107	619 Second Avenue	Broderick Building	PSHD
H-108	619 Western Avenue	Western Building	PSHD
H-109	61 Columbia Street	Polson Building	PSHD
H-110	83 Columbia Street	Journal Building	PSHD
H-111	701–723 First Avenue	All-Rite Parking Garage/US Bank	PSHD
H-112	706 First Avenue	Parking garage	PSHD
H-113	705 Second Avenue	Hoge Building	NRHP, SL
H-115	801 Alaskan Way	Piers 52/53 (Colman Dock)	Not eligible
H-116	809 Western Avenue	Commuter Building Garage (Mutual Creamery)	Not eligible
H-117	815 Western Avenue	Commuter Building (Carstens Building)	Not eligible
H-118	801–821 First Avenue	Colman Building	NRHP, SL
H-119	801 Second Avenue	Norton Building	SL; eligible NRHP
H-120	815 Second Avenue	Key Bank (Bank of California)	SL; eligible NRHP
H-121	821 Second Avenue	Exchange Building	SL; eligible NRHP
H-122	925 Alaskan Way	Fire Station #5	Eligible NRHP & SL

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-123	911 Western Avenue	Maritime Building	Eligible NRHP
H-124	901 First Avenue	Federal Office Building	NRHP
H-125	1001 Alaskan Way	Pier 54 (NPRR 3/Galbraith Dock)	SL; eligible NRHP
H-126	1000–1024 Western Avenue	National Building	NRHP, SL
H-127	1001–1011 First Avenue	Alexis Hotel (Globe Building)	NRHP, SL
H-128	1012 First Avenue	Schoenfeld Furniture Store Building	Eligible NRHP & SL
H-129	1013 First Avenue	Arlington South (Beebe Building)	NRHP, SL
H-130	1018 First Avenue	Holyoke Building	NRHP, SL
H-131	1019–1023 First Avenue	Arlington North (Hotel Cecil)	NRHP, SL
H-132	1015 Second Avenue	Federal Reserve Bank	Eligible NRHP
H-133	1101 Alaskan Way	Pier 55 (NPRR 4/Arlington Dock)	SL; eligible NRHP
H-134	1107 First Avenue (94–96 Spring Street)	Watermark Tower (Colman Building)	SL; not eligible NRHP
H-135	1115–1117 First Avenue	Grand Pacific Hotel	NRHP, SL
H-136	1123 First Avenue	Colonial Hotel	NRHP, SL
H-138	1201 Alaskan Way	Pier 56 (Frank Waterhouse Dock)	SL; eligible NRHP
H-139	1203–1207 Western Avenue	(Olympic Warehouse)	NRHP, SL
H-140	51 University Street	(Pacific Net & Twine Building)	Eligible NRHP & SL
H-141	1206–1212 First Avenue	Freedman's Loans/Money Mart	Not eligible
H-142	1216–1222 First Avenue	Diller Hotel	Eligible NRHP & SL
H-143	1201–1211 Second Avenue	Seneca Building (Brown Building)	Not eligible
H-144	1215 Second Avenue	Galland Building (Stone, Fisher & Lane Department Store)	Not eligible
H-145	1301 Alaskan Way	Pier 57 (John P. Agen's/Milwaukee Dock)	SL; eligible NRHP
H-146	1319 Western Avenue	Seattle Steam (Mutual Light & Heating Company)	Not eligible
H-147	55 Union Street	Shurgard Storage (Diamond Ice & Storage Company)	Not eligible
H-148	84 Union Street (1400 Western Avenue)	Marketside Flats (U.S. Immigration Building)	NRHP, SL
H-149	1315 First Avenue	(Hotel Vendome/Post Edwards Building)	Not eligible
H-150	1414 Alaskan Way	Market Square (Schwabacher Warehouse #2)	Not eligible
H-151	1426 Alaskan Way	Bakun Building (A.C. Frye Company)	Not eligible

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-152	1483 Alaskan Way	Pier 59/Aquarium (Ainsworth & Dunn Pike St. Wharf)	SL; not eligible NRHP
H-153	1401 Western Avenue	Antique Warehouse (G.J. Callahan Warehouse)	Not eligible
H-154	1401 Western Avenue	Post Alley Court	PPMHD
H-155	1420 Western Avenue	Ross Manor	PPMHD
H-156	1430 Western Avenue	La Salle Apartments	PPMHD
H-157	1423 First Avenue	Economy Market	PPMHD
H-158	1426 First Avenue	Showbox	Not eligible
H-159	1501 Western Avenue	Madore Building	Not eligible
H-160	1507 Western Avenue	Fix Building	Eligible NRHP & SL
H-161	1527–1531 Western Avenue	Heritage House/garage	PPMHD (local)
H-162	1500 First Avenue	Broderick Building	Not eligible
H-163	1505 First Avenue	Corner Market	PPMHD
H-164	1510 First Avenue	Déjà Vu Showgirls (S.J. Holmes Building)	Not eligible
H-165	1513 First Avenue	Sanitary Market	PPMHD
H-166	1531 First Avenue	Market House	PPMHD
H-167	1501 Pike Place	Pike Place Market Main Arcade	PPMHD
H-168	1534 Pike Place	Triangle Building	PPMHD
H-169	110 Union Street	Harold Poll Building (Hancock Building)	Not eligible
H-170	1530 Post Alley	Seattle's Best	PPMHD
H-171	1501 Second Avenue	Eitel Building	SL; eligible NRHP
H-172	103 Pike Street	Hahn Building (Elliott Hotel)	Not eligible
H-173	114 Pike Street	Hard Rock Cafe (Liberty Building)	Not eligible
H-174	107 Pine Street	Gatewood Apartments	Eligible NRHP & SL
H-175	119 Pine Street	Doyle Building (J.S. Graham Store)	NRHP, SL
H-176	1600 Pike Place	Garden Center Building	PPMHD
H-177	1601 Second Avenue	Broadacres Building	Not eligible
H-178	1613 Second Avenue	MJA Building (Ames Building)	Not eligible
H-179	1601 Third Avenue	Bon Marché Garage (Circular Ramp Garage)	Not eligible
H-180	86 Pine Street	Inn at the Market	PPMHD
H-181	1900 Pike Place/80 Stewart	Stewart House	PPMHD
H-182	1912 Pike Place	Starbucks Coffee	PPMHD
H-183	1924 Pike Place	Soames Dunn Building	PPMHD
H-184	1928 Pike Place	Champion Building	PPMHD
H-185	1930 Pike Place	Pike & Virginia Building	PPMHD

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-186	1901 First Avenue	Fairmount Apartments	PPMHD
H-187	1915 First Avenue	Alaska Trade Building	NRHP, PPMHD
H-188	1923 First Avenue	Smith Block	PPMHD
H-189	1921 First Avenue	Butterworth Building	NRHP, PPMHD
H-190	1920 First Avenue	Oxford Apartments	Eligible NRHP & SL
H-193	1924 First Avenue	Cipra Building	Not eligible
H-194	1932 First Avenue	Terminal Sales Building	NRHP, SL
H-195	1931 First Avenue	Livingston Baker Apartments	PPMHD
H-196	1937 First Avenue	Virginia Inn (Landes Block)	PPMHD
H-197	1902 Second Avenue	Josephinum (New Washington Hotel)	NRHP, SL
H-198	1915 Second Avenue	Second Avenue Parking Garage (Northwest Building Co. Garage)	Not eligible
H-199	116 Stewart Street	St. Regis (Hotel Archibald)	Not eligible
H-200	1919 Second Avenue	(Hansen Brothers Building)	Not eligible
H-201	1921 Second Avenue	Great Jones Home (Barnett's Auction House)	Not eligible
H-202	1926 Second Avenue	Moore Hotel/Theater	NRHP, SL
H-203	1927 Second Avenue	Terminal Sales Annex (Puget Sound News)	SL; eligible NRHP
H-204	2016 First Avenue	Vogue Hotel	Not eligible
H-205	104 Pine Street	Atwood Apartments	Not eligible
H-206	2000 Second Avenue	Palladian Apartments (Calhoun Hotel)	Eligible NRHP & SL
H-207	1907 Third Avenue	Bergman's (Donohoe Garage)	Eligible NRHP & SL
H-208	1915 Third Avenue	Downtown Mini-Storage (White Garage)	Not eligible
H-209	1921 Third Avenue	Haddon Hall Apartments (Kelley-Gorham Building)	Eligible NRHP & SL
H-210	1925 Third Avenue	Trust Building (Heiden Building)	Eligible NRHP & SL
H-211	2006 Second Avenue	Bushell's Auction House	Not eligible
H-212	2014 Second Avenue	Trust Parking (President Garage)	Not eligible
H-213	2001 Third Avenue	Swifty Printing	Not eligible
H-214	2013–2015 Third Avenue	First Avenue Service Center Shelter	Not eligible
H-215	2019 Third Avenue	Denny Hill Building	Not eligible
H-216	2025 Third Avenue	Pathé Building	Eligible NRHP & SL
H-217	2031 Third Avenue	Jewish Federation of Seattle	Not eligible

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-218	2035 Fourth Avenue	Ralph's Grocery	Not eligible
H-219	2021 Fourth Avenue	Stratford Apartments (Nesika Apartments)	Not eligible
H-220	2033 Fourth Avenue	Jiffy Lube	Not eligible
H-221	2106 Second Avenue	Belltown Service Center	Not eligible
H-222	2122 Second Avenue	Velocity/Saito's (Henry's Garage)	Not eligible
H-223	2132 Second Avenue	Castle Apartments	Eligible NRHP & SL
H-224	2101 Third Avenue	Sig's Barber Shop	Not eligible
H-225	2107 Third Avenue	Brasa (Metropolitan Printing Company)	SL; eligible NRHP
H-226	2118 Third Avenue	National Assoc. of Credit Management (Sam Inch Gotham Garage)	Not eligible
H-227	2124 Third Avenue	Swenson Say Faget (Rex Land Company)	Eligible NRHP & SL
H-228	2132 Third Avenue	Mexican Consulate	Not eligible
H-229	2133 Third Avenue	Markham Building	Not eligible
H-231	2100 Fourth Avenue	Cinerama Theatre	Not eligible
H-232	2116 Fourth Avenue	Dean's Transmissions (Speed Roberts Auto Repair)	Not eligible
H-233	2124 Fourth Avenue	Downtown Seattle Public Health Center	Not eligible
H-234	Fifth Avenue from Pine Street to Seattle Center	Seattle Alweg Monorail	SL; eligible NRHP
H-235	2115 Fifth Avenue	Digital Reproductive Services (Northwest Auto Radio)	Not eligible
H-236	2121 Fifth Avenue	Vacant	Not eligible
H-237	2127 Fifth Avenue	Groundspeak (Kerry Foster Auto Repair)	Not eligible
H-238	2200 Western Avenue	Union Livery Stable	Eligible NRHP & SL
H-239	2218 Western Avenue	Venom (Greenbaum's United Furniture)	Not eligible
H-240	2205 First Avenue	Lewiston Hotel	Eligible NRHP & SL
H-241	2209 First Avenue	Scargo Apartments	Eligible NRHP & SL
H-242	2225 First Avenue	Apex Hotel	Not eligible
H-243	306 Blanchard Street	Cornelius Apartments	Not eligible
H-244	2200 Fourth Avenue	Fourth & Blanchard (Otis Elevator)	Eligible NRHP & SL
H-245	2208 Fourth Avenue	Kaye-Smith Productions (Northern Radio Company)	Not eligible
H-246	2212 Fourth Avenue	Kaye-Smith Productions (Shields Harper)	Not eligible

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-247	2218 Fourth Avenue	Garage (Automotive Service Company)	Not eligible
H-248	2219 Fourth Avenue	Spitfire	Not eligible
H-249	2230 Fourth Avenue	Charlesgate Apartments	Not eligible
H-251	2211 Fifth Avenue	Sprye Domain (Lewis Casing Company)	Not eligible
H-252	2217 Fifth Avenue	(Lyric Theater)	Not eligible
H-253	2218 Fifth Avenue	Wexley School for Girls (Western Type & Printing)	Not eligible
H-254	2221 Fifth Avenue	(Royal Typewriter)	Eligible NRHP & SL
H-255	2231 Fifth Avenue	Seattle Glassblowing	Not eligible
H-256	2235 Fifth Avenue	Vacant (Toledo Scales)	Not eligible
H-257	66 Bell Street	Belltown Lofts	SL; not eligible NRHP
H-258	2315 Western Avenue	Compton Building (Bon Marché Stable)	Eligible NRHP
H-259	2333 Western Avenue	Mars Hill Church (Marine Firemen's Union)	Not eligible
H-260	2301–2305 First Avenue	Oregon Hotel	Eligible NRHP & SL
H-261	2302 Fourth Avenue	Franklin Apartments	Eligible NRHP & SL
H-262	2306 Fourth Avenue	Seattle Micro	Not eligible
H-263	2316 Fourth Avenue	Close Instrument Company	Not eligible
H-264	2334 Fourth Avenue	Fire Station No. 2	SL; eligible NRHP
H-265	2326 Sixth Avenue	Antioch University (Farmers Insurance)	Not eligible
H-266	2331 Seventh Avenue	Midas	Not eligible
H-267	521 Wall Street	Sixth and Wall Building (Seattle Post-Intelligencer)	Not eligible
H-268A	616 Battery Street	Elephant Car Wash	Not eligible
H-268B	616 Battery Street	Elephant Car Wash sign	Eligible NRHP & SL
H-269	566 Denny Way	Walgreen's (Seattle First National Bank)	SL; eligible NRHP
H-270	120 Sixth Avenue N.	Seattle Housing Authority	Eligible NRHP & SL
H-271	113 Dexter Avenue N.	KEXP	Not eligible
H-272	133 Dexter Avenue N.	Willamette Dental	Not eligible
H-273	203 Sixth Avenue N.	Space Needle Corporation	Not eligible
H-274	233 Sixth Avenue N.	ARC of King County	Not eligible
H-275	200 Sixth Avenue N.	Travelodge	Not eligible
H-276	605 Thomas Street	Bianchi Law Firm	Not eligible

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-277	609 Thomas Street	Casa del Rey (Matanela Apartments)	Not eligible
H-278	225 Aurora Avenue N.	Quality Inn (Tropics Motel)	Not eligible
H-279	232 Aurora Avenue N.	Publishers Mailing Service	Not eligible
H-280	203 Dexter Avenue N.	WW Art Gallery	Not eligible
H-281	231 Dexter Avenue N.	Speedy Glass	Not eligible
H-282	516 Broad Street	Ride the Duck	Not eligible
H-283	333 Taylor Avenue N.	Adler Giersch (Harrison Investment Company)	Not eligible
H-284	319 Sixth Avenue N.	Seattle City Light Broad Street Substation	Eligible NRHP & SL
H-286	332 Fifth Avenue N.	Diamond Restaurant & Lounge	Not eligible
H-287	330 Sixth Avenue N.	Launching Pad Building (AAA Washington)	Not eligible
H-288	325 Aurora Avenue N.	Seattle Pacific Hotel (Imperial 400 Motel)	Not eligible
H-289	333 Dexter Avenue N.	King Broadcasting	Not eligible
H-290	408 Aurora Avenue N	Clark Construction Co.	Not eligible
H-291	434 Aurora Avenue N.	Hostess Bakery/Continental Baking Co.	Not eligible
H-292	401 Dexter Avenue N.	Thompson Printing	Not eligible
H-293	407 Dexter Avenue N.	Wright Exhibition Space	Not eligible
H-294	500 Aurora Avenue N.	School of Visual Concepts (J. T. Hardeman Hat Company)	Not eligible
H-295	500 Dexter Avenue N.	Barking Lounge	Not eligible
H-296	501 Dexter Avenue N.	Imigri	Not eligible
H-297	509 Dexter Avenue N.	United Business Supply	Not eligible
H-298	513 Dexter Avenue N.	Glazer's/Phototronics	Not eligible
H-299	522 Dexter Avenue N.	Vacant	Not eligible
H-300	525 Dexter Avenue N.	Goods for the Planet	Not eligible
H-301	530 Dexter Avenue N.	US Bank	Not eligible
H-302	601 Aurora Avenue N.	Church of Scientology	Not eligible
H-303	610 Aurora Avenue N.	Vacant	Not eligible
H-304	620 Aurora Avenue N.	Vacant	Not eligible
H-305	701 John Street	Denny Park Auto Clinic	Not eligible
H-306	721 Aurora Avenue N.	Pagliacci Pizza	Not eligible
H-307	800 Mercer Street	Vacant	Not eligible
H-308	601 Dexter Avenue N.	Copiers Northwest	Not eligible
H-309	700 Dexter Avenue N./ 770 Roy Street	Huletz Electric/Auto Hound	Not eligible
H-310	717 Dexter Avenue N.	European Auto Service	Not eligible
H-311	708 Sixth Avenue N.	Midori Inc.	Not eligible

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-312	701 Dexter Avenue N./ 800 Aloha Street	Seattle Parks Maintenance Facility (Puget Sound Power & Light)	Eligible NR & SL
H-313	701–711 Ninth Avenue N.	Bucca di Beppo/Ducati	Not eligible
H-314	739 Ninth Avenue N.	Maaco	Not eligible
H-315	753 Ninth Avenue N.	KPG Architects	Not eligible
H-316	731 Westlake Avenue N.	Jillian's	Not eligible
H-002A	2108 Western Avenue	Ewing & Clark (Medill Auto Repair)	Not eligible
H-003A	2116 Western Avenue	Elliott Bay Bicycles	Not eligible
H-004A	2100 First Avenue	Patagonia	Not eligible
H-005A	2112 First Avenue	Federal Army-Navy Surplus	Not eligible
H-006A	2119 First Avenue	Mud Bay	Not eligible
H-007A	2121 First Avenue	Cherry Street Coffee House (Colski Building)	Eligible NRHP & SL
H-008A	2132 First Avenue	Taco del Mar/Cellars	Not eligible
H-009A	2117 Second Avenue	D.W. Close (Seattle Radio Supply)	Not eligible
H-010A	2119 Second Avenue	El Rey Apartments	Not eligible
H-011A	2124 Second Avenue	(Hoover Company)	Not eligible
H-012A	2125 Second Avenue	Rivoli Apartments	Eligible NRHP & SL
H-013A	2137 Second Avenue	Zoe's Restaurant	Not eligible
H-014A	2200-2204 First Avenue	Jetway Apartments/E.E. Robbins (Donald/Alexandria Hotel)	Eligible NRHP & SL
H-015A	2212–2216 First Avenue	Kasota Building (Strand Hotel)	Not eligible
H-016A	2218 First Avenue	Tia Lou's (Mattson's Music House)	Not eligible
H-017A	2234 First Avenue	Flying Fish (White's Hitchcock Building)	Not eligible
H-018A	113 Bell Street	Copper Cart (Ice Delivery Company)	Not eligible
H-019A	2200 Second Avenue	Crocodile	Not eligible
H-020A	2205 Second Avenue	Humphrey Apartments	Not eligible
H-021A	2207 Second Avenue	Mayflower Apartments	Not eligible
H-022A	2214 Second Avenue	Tula's	Not eligible
H-023A	2216–2222 Second Avenue	Shorty's	Not eligible
H-024A	2224 Second Avenue	Lava Lounge (Wayne Apartments)	Not eligible
H-025A	2230 Second Avenue	Mama's Mexican Kitchen	Not eligible
H-026A	2231 Second Avenue	Bedlam (Perry's Machine Shop)	Not eligible
H-027A	2235 Second Avenue	Bedlam (Bell Street Studios)	Eligible NRHP & SL
H-028A	2300 First Avenue	Endless Knot/Dorothy Day House (Douglas Hotel)	Not eligible

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-029A	2330 First Avenue	Catholic Seamen's Club (Paramount Studios)	Not eligible
H-030A	2309 Second Avenue	Wasabi Bistro	Not eligible
H-031A	2312 Second Avenue	Roq la Rue (RKO)	Eligible NRHP & SL
H-032A	2319–2323 Second Avenue	Kushibar	Not eligible
H-034A	2322 Second Avenue	Rendezvous/Jewel Box (B.F. Shearer Co.)	Not eligible
H-035A	2324–2326 Second Avenue	Suyama Peterson Deguchi	Not eligible
H-036A	2327 Second Avenue	William Tell Hotel (Lorraine Hotel)	SL; eligible NRHP
H-037A	2331 Second Avenue	Buckley's (MGM-Loew's)	SL; eligible NRHP
H-038A	2334 Second Avenue	Marrakesh	Not eligible
H-039A	304 Bell Street	Adams Apartments	Eligible NRHP & SL
H-040A	314 Bell Street	Vacant	Not eligible
H-041A	2313 Third Avenue	Matt Talbot Center/Traugott Terrace	Not eligible
H-042A	2323 Third Avenue	Binder Products	Not eligible
H-043A	2330 Third Avenue	Seattle Custom Framing	Not eligible
H-044A	2333 Third Avenue	SKB Architects	Not eligible
H-045A	2313 Fourth Avenue	Two Bells Bar and Grill (Two Bells Tavern)	NR eligible
H-046A	2321 Fourth Avenue	Fleming Apartments	Not eligible
H-047A	2325 Fourth Avenue	Community Psychiatric Clinic	Not eligible
H-048A	2407 First Avenue	Form Space Atelier	Not eligible
H-049A	2419 First Avenue	Ace Hotel	Eligible NR & SL
H-050A	87 Wall Street	Ilium Building (Butterfield Trunk Company)	Not eligible
H-051A	2402 Second Avenue	Lexington-Concord Apartments	Eligible NRHP & SL
H-052A	2412–2416 Second Avenue	Windermere	Not eligible
H-053A	2418 Second Avenue	Windermere	Not eligible
H-054A	2401 Third Avenue	US Bank	Eligible NRHP & SL
H-055A	420 Wall Street	Devonshire Apartments	Eligible NRHP & SL
H-056A	500 Wall Street	Archstone Belltown (Grosvenor House)	Eligible NRHP & SL

Exhibit A-1. Inventory of Buildings and Structures 40 or More Years Old Within the Area of Potential Effects (continued)

ID Number	Address	Current Name (Historical Name)	Historic Designation
H-057A	500 Denny Way	Carol Edward, Attorney	Not eligible
H-058A	501 Denny Way	Faulkenbury & Wright Cleaners	Not eligible
H-059A	508 Denny Way	Fat City German Motor Specialties	Not eligible
H-060A	112 Fifth Avenue N.	Vacant	Not eligible
H-061A	118 Fifth Avenue N.	Vacant (Seattle Electric Works)	Not eligible
H-062A	124 Fifth Avenue N.	Vacant	Not eligible
H-063A	131 Taylor Avenue N.	Vacant	Not eligible
H-064A	500 John Street	Graham Lundberg & Peschel	Not eligible
H-065A	206 Fifth Avenue N.	The Funhouse	Not eligible
H-066A	223 Taylor Avenue N.	TW Telecom	Not eligible
H-067A	44 S. Nevada Street	Port of Seattle	Not eligible
H-068A	2320 First Avenue	Barnes Building	NRHP, SL
H-069A	2326 First Avenue	Austin Bell Building	NRHP, SL
H-070A	2401 First Avenue	Hull Building	NRHP, SL
H-071A	2101–2105 First Avenue	Guiry Hotel	NRHP, SL
H-072A	2111 First Avenue	Schillestad Building	NRHP, SL
H-073A	420 Blanchard Street	Windham Apartments	NRHP, SL

NHL=National Historic Landmark; NRHP = National Register of Historic Places; SL = Seattle landmark; PSHD = Pioneer Square Historic District; PSPD = Pioneer Square Preservation District (local); PPMHD = Pike Place Market Historic District.

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ATTACHMENT B

DAHP and Tribal Correspondence

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Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

Urban Corridors Office
401 Second Avenue South, Suite 300
Seattle, WA 98104
206-716-1121/ fax 206-716-1101
TTY: 1-800-833-6388
www.wsdot.wa.gov

April 21, 2009

Dr. Allyson Brooks
State Historic Preservation Officer
Department of Archaeological and Historic Preservation
PO Box 48343
Olympia, WA 98504-8343

Dear Dr. Brooks:

Per provisions of 36 CFR 800.3(a), the Washington State Department of Transportation (WSDOT), acting on behalf of the Federal Highway Administration (FHWA), is initiating consultation related to compliance with Section 106 of the National Historic Preservation Act. The Alaskan Way Viaduct and Seawall Replacement Program (AWVSRP) currently is planning the SR 99 Deep Bored Tunnel Project, a single-bore double-deck tunnel that bypasses the Central Waterfront area of downtown Seattle (see attached project map). Governor Gregoire, King County Executive Sims and Mayor Nickels have recommended replacing the viaduct's central waterfront section with a bored tunnel beneath downtown, a new waterfront surface street, transit investments, and downtown waterfront and city street improvements. The state, county and city departments of transportation are working together to implement the bored tunnel and related projects. Pending final decisions about the full suite of elements to be included in the project, we will be able to define the cultural resources Area of Potential Effects (APE). We then will seek your input and concurrence on the APE definition.

We are initiating consultation with you at this time because we have a geotechnical coring program to establish existing subsurface conditions along the proposed tunnel alignment (see attached Proposed Exploration Plan, 6 plates). Both mud rotary and rotosonic borings are being completed, which produce a split-spoon sedimentary sample or a solid, continuous core, respectively. Several cores will be acquired within the boundaries of the Pioneer Square National Historic District. WSDOT has retained the services of a cultural resources consultant to monitor extraction of the rotosonic cores, examine and log the cores on-site, and segregate core sections they believe may contain information about the archaeological record of historic and perhaps pre-contact Seattle. Core sections of interest are moved to a laboratory where sediments are described and screened to recover any cultural materials. The data collected will be used to supplement previous coring efforts and help plan future coring locations, specifically for archaeology, and to plan for future archaeological investigations within the project's APE.

On behalf of FHWA, WSDOT is pleased to initiate consultation with you and your staff. We will keep you informed about the project on a regular basis, and will provide you with all correspondences between us and the identified concerned Native American tribes and other identified interested parties. We would very much appreciate hearing your comments, and will

answer any questions or concerns you may have related to cultural resources in the project area and vicinity. Please feel free to contact the UCO Environmental Services Director, Allison Hanson, at (206) 716-1136 or HansonA@wsdot.wa.gov, or me at (206) 464-1236 or e-mail at JuellK@wsdot.wa.gov.

Sincerely,

Kenneth E. Juell

Cultural Resources Specialist

cc. Randolph Everett, FHWA w/ attachments
John White, WSDOT UCO w/ attachments
Allison Hanson, WSDOT UCO w/ attachments
Ann Costanza, WSDOT UCO w/o attachments
Angela Freudenstein, WSDOT UCO w/o attachments
Scott Williams, WSDOT HQ w/ attachments
David Mattern, WSDOT UCO w/o attachments

Washington State Department of Transportation

DRAFT - Internal Working Document - DRAFT

This material is conceptual in nature and should be used for planning and discussion purposes only. It is subject to change and will be further developed and refined as part of the Central Waterfront Planning Process.

JANUARY 09

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SEAWALL RECONSTRUCTION

CENTRAL SEAWALL - NORTH SEAWALL

ALASKAN WAY

ALASKAN WAY VIADUCT

BNSF

TUNNEL BORE

BUS TUNNEL

EBI

WESTERN AVE

1ST AVE

2ND AVE

3RD AVE

4TH AVE

5TH AVE

6TH AVE

7TH AVE

8TH AVE

BROAD ST

DENNY WAY

JOHN ST

THOMAS ST

HARRISON ST

MERCER ST

ROY ST

VALLEY ST

DEXTER AVE N

TAYLOR AVE N

NOB HILL AVE N

MINOR AVE N

YALE AVE N

OCCIDENTAL AVE

1ST AVE S

2ND AVE S

3RD AVE S

UTAH AVE S

RADO AVE S

S ATLANTIC ST

S ROYAL BROUGHAM WAY

S KING ST

S JACKSON ST

S MAIN ST

S WASHINGTON ST

TESLER WAY

COLUMBIA ST

MARION ST

MADISON ST

SPRING ST

SENECA ST

UNIVERSITY ST

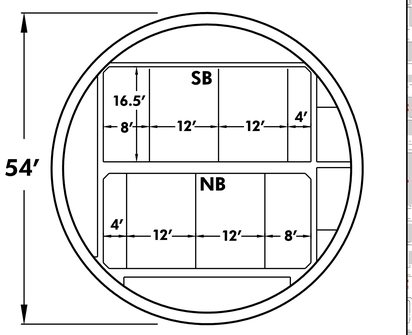
UNION ST

PINE ST

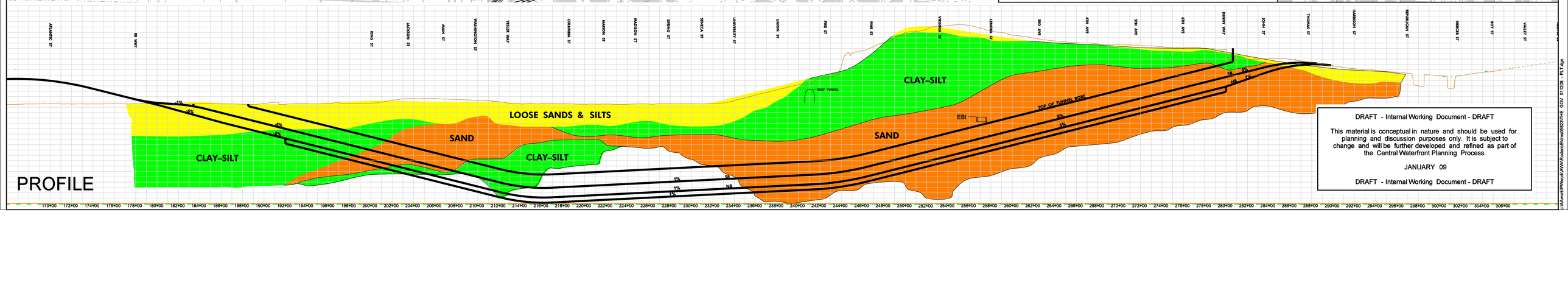
VIRGINIA ST

LENORA ST

SINGLE BORE CROSS SECTION



PROFILE



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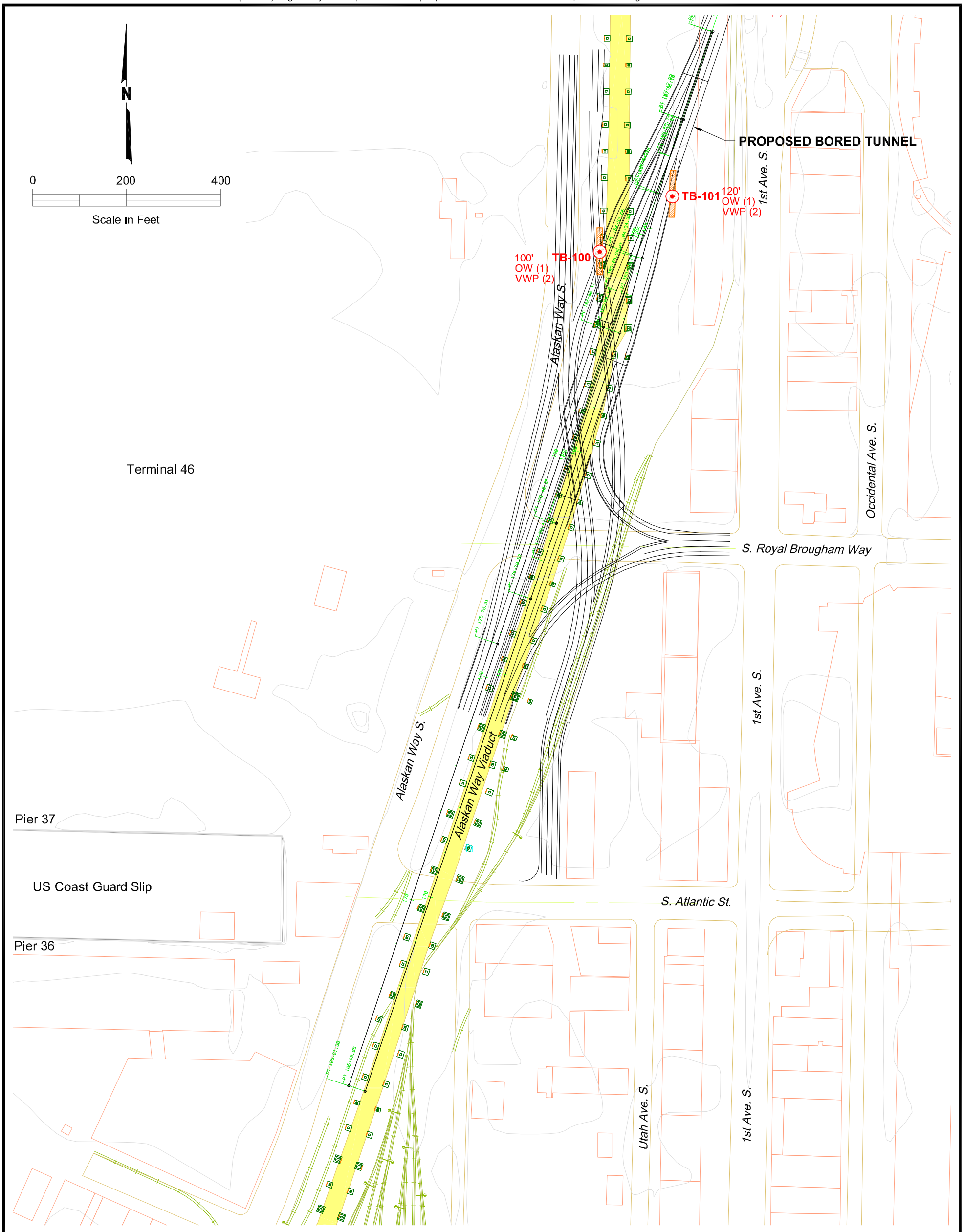

PROPOSED EXPLORATIONS AND LEGEND

- **TB-100** — Proposed Soil Boring and Designation
- **TB-103** — Proposed Sonic Core Boring and Designation
- Proposed Boring Work Zone
- **ALT.** — Alternative Proposed Boring
- * — Proposed Shear Wave Velocity Testing
- 100' — Proposed Depth of Boring
- OW (1) — Proposed Observation Well and Quantity
- VWP (1) — Proposed Vibrating Wire Piezometer and Quantity

DRAFT

NOTES

1. Base map is adapted from City of Seattle GIS data files *topo_all.dwg*, *st_names.dwg*, and *paveedge.dwg*, received 3-11-02; City of Seattle GIS data file *buildings.dwg*, received 3-6-02; and Parsons Brinckerhoff AutoCAD files *BSMP_SO.dwg*, received 11-30-01, and *rail.dwg*, received 5-15-03.
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3. Existing footings are based on Parsons Brinckerhoff files *160073U00ALLUEF000.dwg* , received 6-11-07; *GIS_EX_VIADUCT.dgn* , received 4-9-08; and *160073CSBS00SD200.MST* . received 5-27-08.

FIG. 1
Sheet 1 of 6

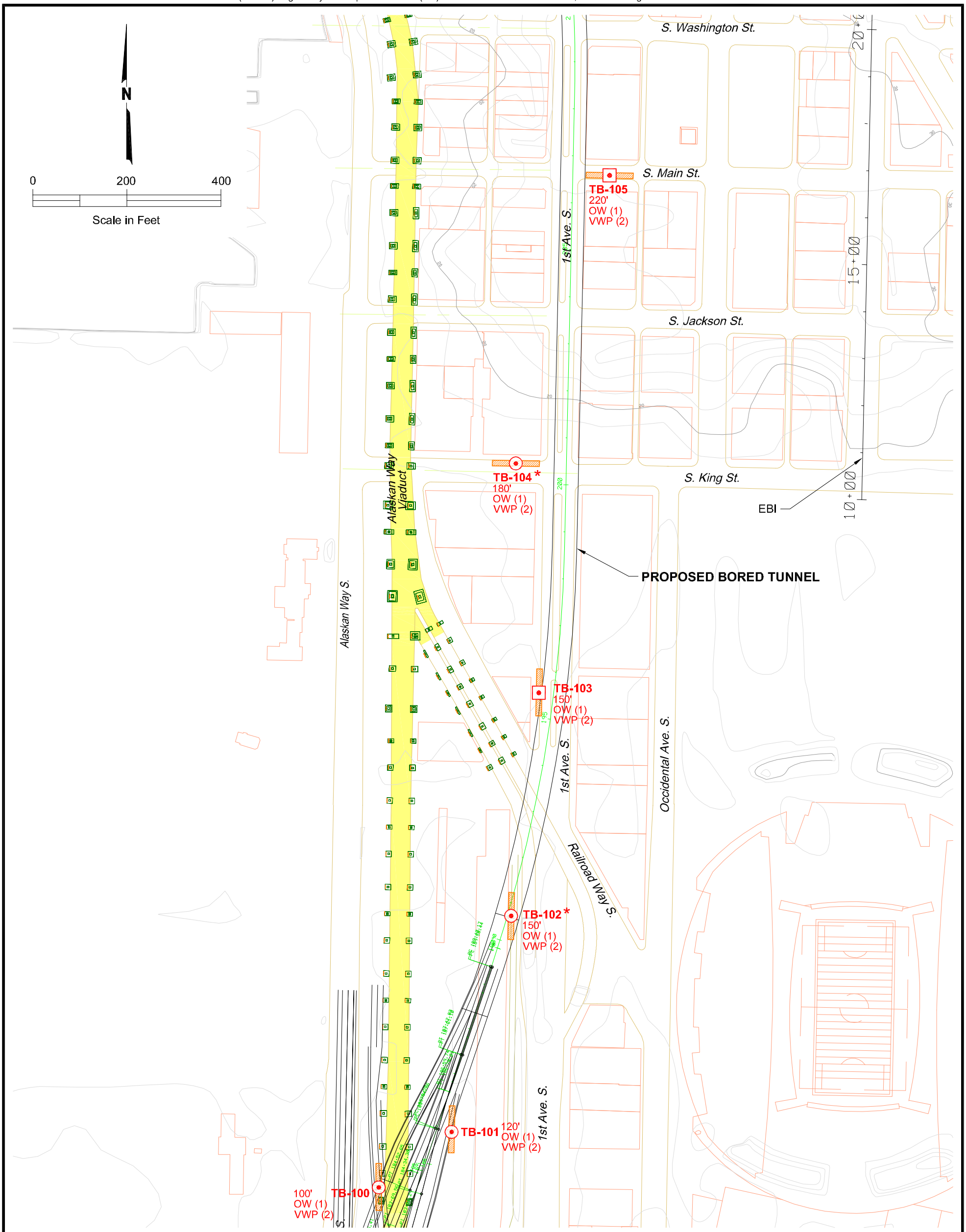
Alaskan Way Viaduct and Seawall Program
Bored Tunnel Project
Seattle, Washington

PROPOSED EXPLORATION PLAN

February 2009 21-1-20840-010

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1
Sheet 1 of 6



PROJECT EXPLORATIONS AND LEGEND

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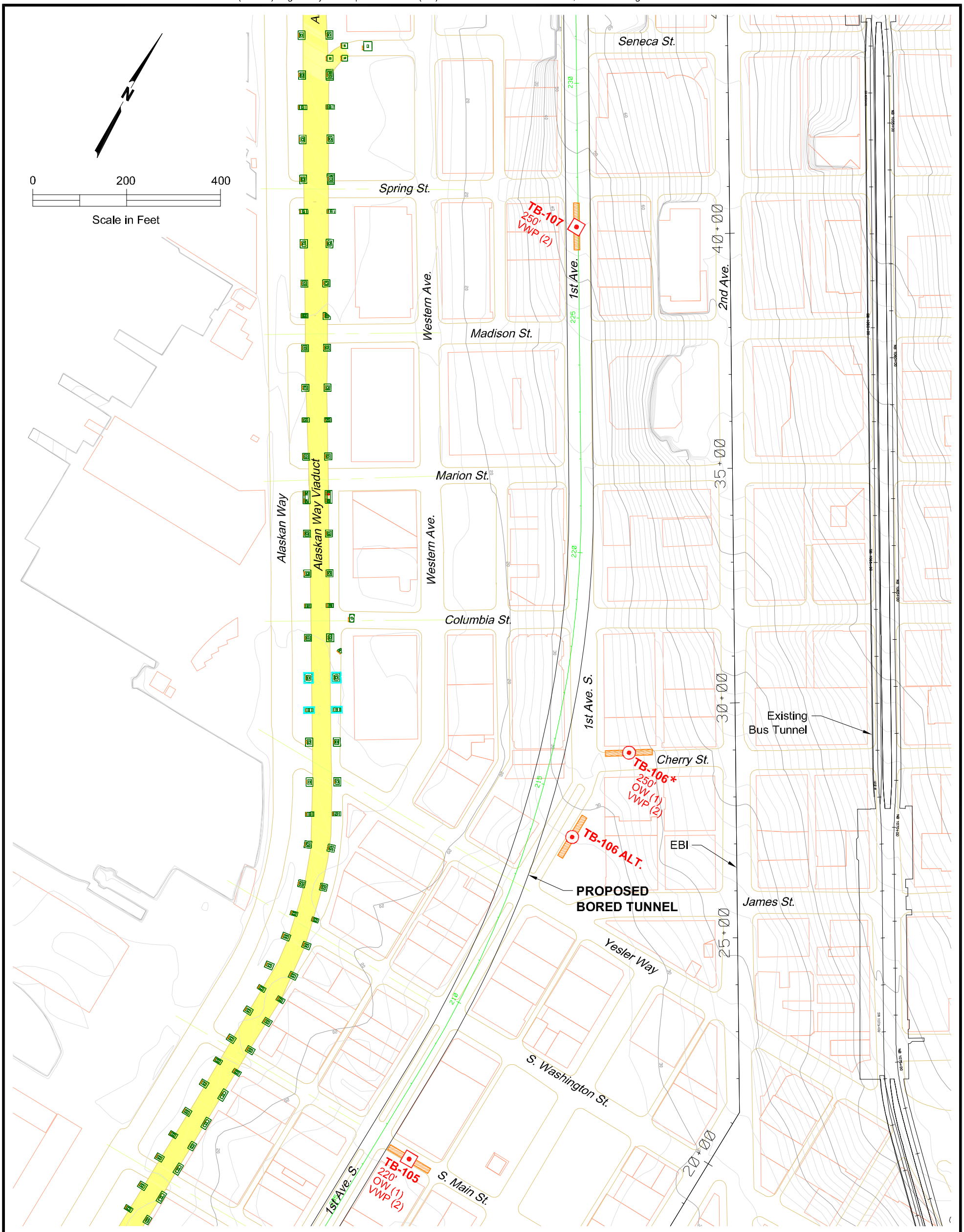
Alaskan Way Viaduct and Seawall Program
Bored Tunnel Project
Seattle, Washington

PROPOSED EXPLORATION PLAN

February 2009 21-1-20840-010

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1
Sheet 2 of 6



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Alaskan Way Viaduct and Seawall Program
Bored Tunnel Project
Seattle, Washington

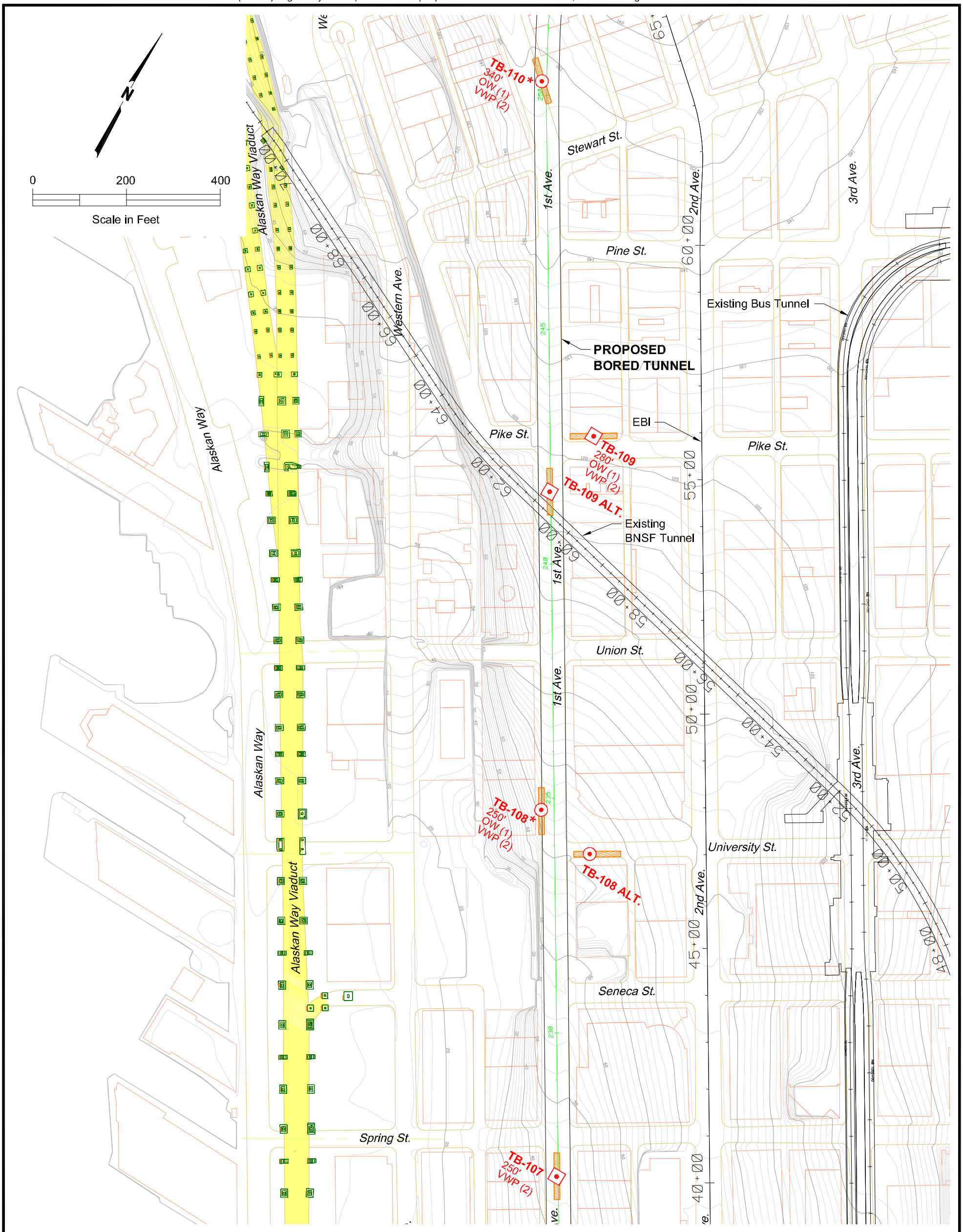
PROPOSED EXPLORATION PLAN

February 2009 21-1-20840-010

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1
Sheet 3 of 6

FIG. 1
Sheet 3 of 6



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Alaskan Way Viaduct and Seawall Program
Bored Tunnel Project
Seattle, Washington

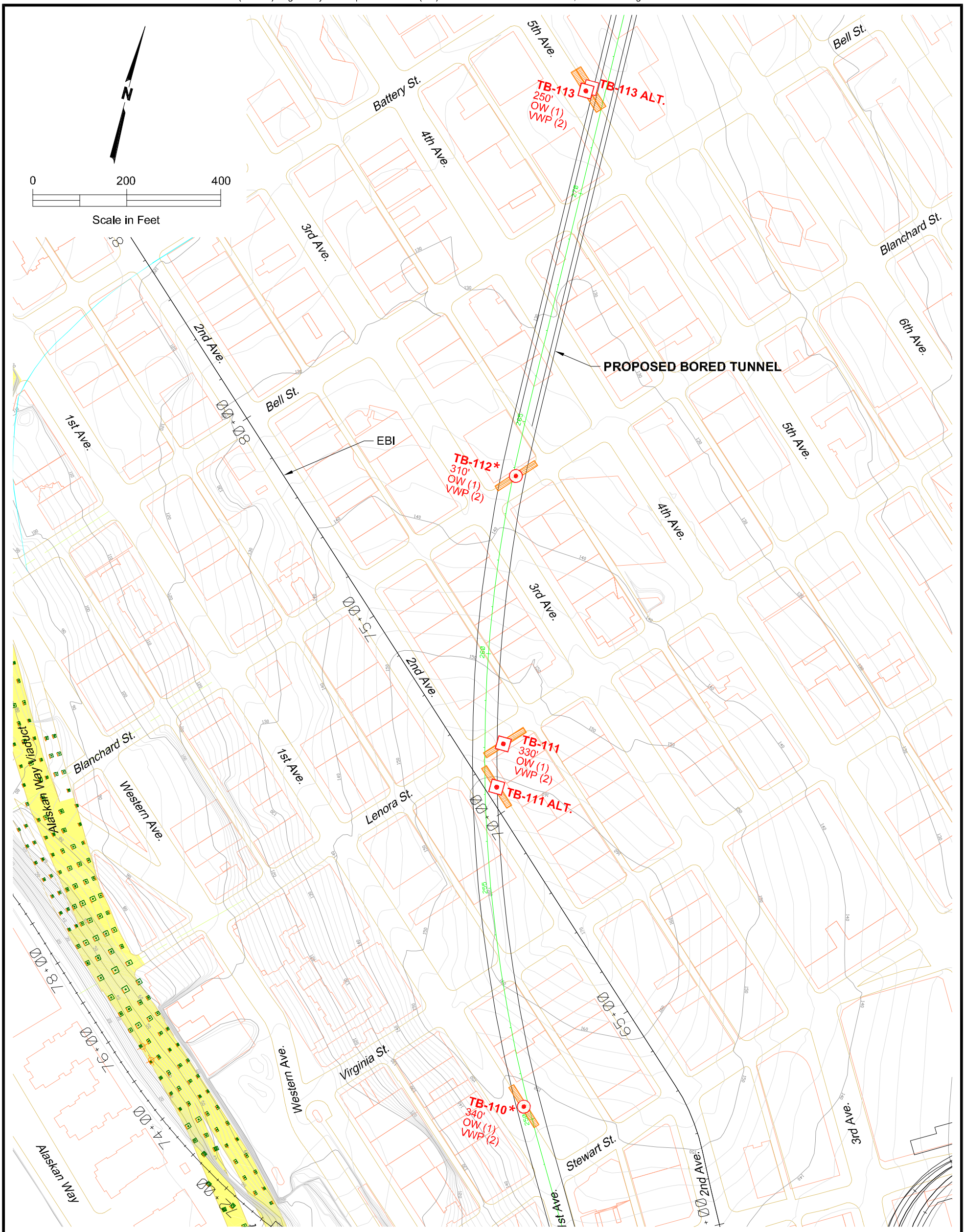
PROPOSED EXPLORATION PLAN

February 2009 21-1-20840-010

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1
Sheet 4 of 6

FIG. 1
Sheet 4 of 6



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Alaskan Way Viaduct and Seawall Program
Bored Tunnel Project
Seattle, Washington

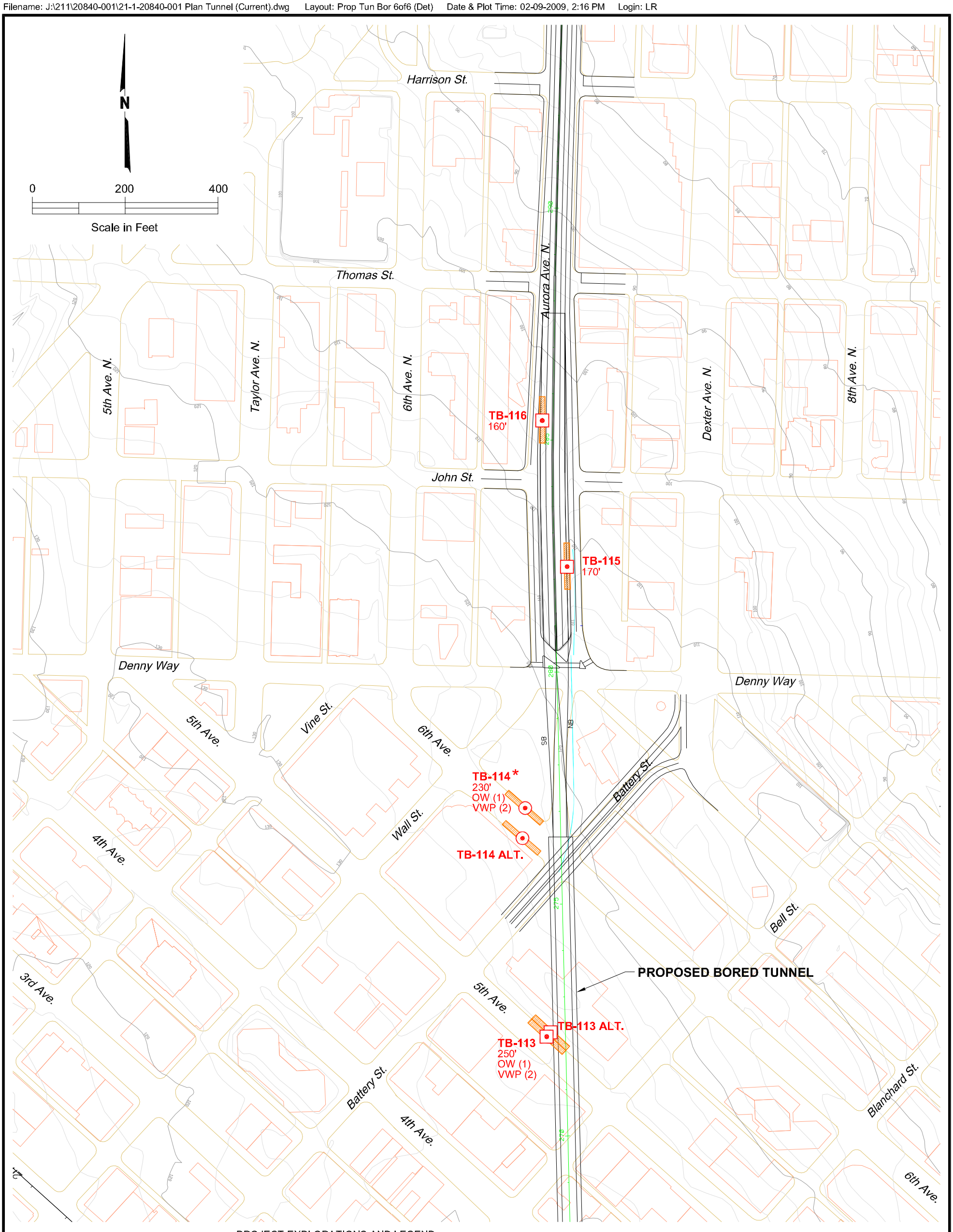
PROPOSED EXPLORATION PLAN

February 2009 21-1-20840-010

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1
Sheet 5 of 6

FIG. 1
Sheet 5 of 6



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Alaskan Way Viaduct and Seawall Program
Bored Tunnel Project
Seattle, Washington

PROPOSED EXPLORATION PLAN

February 2009 21-1-20840-010

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1
Sheet 6 of 6

FIG. 1
Sheet 6 of 6

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

May 12, 2009

Mr. Ken Juell
Cultural Resource Specialist
Washington State Department of Transportation
Northwest Washington Division
Urban Corridors Office
401 Second Avenue South, Suite 560
Seattle, Washington 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: More Information Needed

Dear Mr. Juell:

Thank you for contacting our office. I have reviewed the materials you provided for this project. Thank you for initiating consultation on this important project. Please provide any additional information you have regarding the archaeological review, analysis, interpretation, and curation of any cultural materials associated with the coring project.

I would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available.

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Please contact me should you have any specific questions about our request and we look forward to receiving this material.

Sincerely,

Matthew Sterner, M.A., RPA
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

Northwest Washington Division
401 Second Avenue South, Suite 300
Seattle, WA 98104
206-716-1121/ fax 206-716-1101
TTY: 1-800-833-6388
www.wsdot.wa.gov

August 5, 2009

Dr. Allyson Brooks
State Historic Preservation Officer
Washington Department of Archaeology & Historic Preservation
PO Box 48343
Olympia, WA 98504

Re: Review of Area of Potential Effects (APE) on Alaskan Way Viaduct Replacement (SR 99) Project
DAHP Log # 051209-10-FHWA

Dear Dr. Brooks:

The Washington State Department of Transportation (WSDOT), in cooperation with the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to Section 106 of the National Historic Preservation Act 36 CFR 800.2(c)(3). As you recall, the undertaking would involve replacing the central section of the Alaskan Way Viaduct (SR 99) with a two mile-long deep bored tunnel, extending from South Royal Brougham Way and continuing north under First Avenue to Harrison Street, where it would reconnect to the existing SR 99. The project would also include removal of the Alaskan Way Viaduct in downtown and the decommissioning of Battery Street Tunnel.

WSDOT recently finalized the early engineering 'snapshot' for the Alaskan Way Viaduct Replacement Project, and has defined an Area of Potential Effects (APE) per compliance with Section 106. We are requesting your input on the APE definition, which is shown on the enclosed figure.

The APE was determined based on the geographical extent of the project and the activities that may affect the resources. Preliminary plans show the new bored tunnel extending from the vicinity of S. Royal Brougham Way beneath First Avenue, turning easterly at Stewart Street, and reaching the surface near Thomas Street. Modifications to SR 99 continue to Aloha Street.

Based on current project information, the APE extends horizontally one block on each side of the bored tunnel route, as described above, as well as around demolition and staging areas and other affected sites. To account for the planned removal of the existing viaduct structure, the APE also extends one block east of Alaskan Way and west to the waterfront piers, between S. Royal Brougham Way and Battery Street. Vertically, the APE includes the entirety of the tunnel right-of-way vertically from the ground surface to its maximum depth of excavation at the north and south ends of the tunnel where cut-and-cover trenches will be excavated for the tunnel boring machine (TBM). Above the tunnel, the APE extends only down to the upper five (5) feet of Pleistocene deposits. The vertical APE also includes the area beneath the existing viaduct structure and those areas subject to ground improvements, such as jet grouting.

Thank you for participating in this undertaking as a consulting party, and your assistance in identifying the project APE and any cultural resources known to your organization. We appreciate your response to the proposed APE by September 8; we look forward to meeting with you and discussing this project in more detail.

If you have questions, comments or concerns please contact me at 206-716-1138 or grayc@wsdot.wa.gov. You may also contact Ken Juell, WSDOT Archaeologist at 206-464-1236 or juellk@wsdot.wa.gov or Allison Hanson, Director of Environmental Services at 206-464-1136 or hansona@wsdot.wa.gov.

Sincerely,

Connie Walker Gray
WSDOT Architectural Historian
401 Second Avenue South, Suite 300
Seattle, WA 98104

cc: Randy Everett, FHWA, w/ enclosure
Scott Williams, WSDOT HQ w/enclosure
Ken Juell, WSDOT w/ enclosure

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

August 17, 2009

Ms. Connie Walker Gray
WSDOT Architectural Historian
401 2nd Ave. South, Suite 300
Seattle, Washington 98104

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: Archaeology - APE Concur

Dear Ms. Walker Gray:

We have reviewed the materials forwarded to our office for the Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel project. Thank you for your description of the area of potential effect (APE) for the project. We concur with the definition of the APE. We look forward to the results of your cultural resources investigations, your consultation with the concerned tribes, and further consultation with our agency on this complex undertaking. We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the discipline report when it is available.

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. Thank you for the opportunity to review and comment. If you have any questions, please feel free to contact me.

Sincerely,

Matthew Sterner, M.A., RPA
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

ESO Mega Projects
401 Second Avenue South, Suite 300
Seattle, WA 98104
206-716-1121/ fax 206-716-1101
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October 20, 2009

Dr. Allyson Brooks
State Historic Preservation Officer
Department of Archaeology and Historic Preservation
PO Box 48343
Olympia, Washington 98504-8343

DAHP Log #: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: Review of Discipline Report (DR) for Second Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Dr. Brooks:

Pursuant to 36 CFR 800.2(c)(1), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the Alaskan Way Viaduct Replacement (SR 99) Project.

WSDOT is continuing preparation of a second Supplemental Draft Environmental Impact Statement (SDEIS) to meet the requirements of the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA). This second SDEIS focuses on the potential effects of the Bored Tunnel Alternative and compares the Bored Tunnel Alternative to the two alternatives analyzed in the 2006 SDEIS.

Pursuant to 36 CFR 800.8(a) and 40 CFR 1502.25(a), you will find attached a copy of the draft historic, cultural, and archaeological resources discipline report (Attachment 1) prepared for inclusion in the second SDEIS, which is currently scheduled to be published in March 2010. We seek your review and comment on this document.

The Alaskan Way Viaduct Replacement (SR 99) Project presents unique challenges in regards to historic properties given that access to these resources is restricted by depth below surface, ground water, existing infrastructure, requirements of existing transportation, the need to maintain existing utility service, and the proposed methods of construction. In addition to these challenges, a portion of the project is design-build, which integrates the final design and the construction phases. For these reasons, we are conducting a phased process for the identification and evaluation of historic properties as specified 36 CFR 800.4(b)(2).

Pursuant to 36 CFR 800.4(b)(2), the attached historic, cultural, and archaeological resources discipline report establishes "the likely presence of historic properties within the area of potential effects for each alternative or inaccessible area through background research, consultation and an appropriate level of field investigation." In continued consultation with you, Indian tribes, identified consulting parties, and other interested parties, we intend to develop a memorandum of agreement (MOA) pursuant to 36 CFR 800.6. We believe that this process and this document will be similar to the MOA developed for the Alaskan Way Viaduct, S. Holgate to S. King Replacement (DAHP Log # 012908-06-FHWA) and the project-specific programmatic agreement (PA) developed for the I-405 Corridor. The eventual MOA will resolve all identified adverse effects as well as potential adverse effects identified if this project alternative moves forward.

Within the area of potential effects (APE), we identified 320 historic built environment resources 40 years old and older. Of these, 172 have been previously recorded, and include the NRHP-listed Pioneer Square and Pike Place Market Historic Districts, and the NRHP-eligible Central Waterfront Pier District (Piers 54 through 59). There is one National Historic Landmark within the APE: the Pioneer Building/Pioneer Place/Pergola on 1st Avenue and Yesler Way.

As part of the cultural resources investigation, we surveyed and inventoried 148 built environment resources that had not been previously recorded. Of these, 43 are eligible for listing in the NRHP and 105 are not eligible for listing in the NRHP. At this time, pursuant to 36 CFR 800.4(c)(2), we seek your concurrence with our determinations of eligibility for the NRHP. These buildings, as well as previously recorded resources that are not listed in the NRHP, are listed in the table attached to this letter (Attachment 2) and are detailed in the cultural resources discipline report (Attachment 1), which includes Historic Property Inventory (HPI) forms for the properties not previously recorded. We will hand-deliver a CD, which includes the HPI database files, on Thursday, October 22.

As detailed in Attachment 1, we have identified adverse effects to three historic properties listed on or eligible for listing on the NRHP. In terms of the built environment, this project alternative will have an adverse effect on the NRHP-eligible Alaskan Way Viaduct and Battery Street Tunnel, and the NRHP-listed Triangle (Flatiron) Building in Pioneer Square. In terms of archaeology, this project alternative will have an adverse effect on the Dearborn South Tideland Site (45KI924). Measures to mitigate these adverse effects are outlined in the attached document. These measures would be part of any MOA developed to mitigate the effects of this project alternative.

Given the challenges posed by this project and its current alternatives under consideration, the attached documents are the first steps in our phased process for the identification and evaluation of historic properties. We look forward to continued consultation with you and your office as we move through this process.

Should you have questions or concerns please contact me at 206.716.1121, email bartoyk@wsdot.wa.gov or Environmental Director WSDOT ESO Mega Projects Allison Hanson at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Kevin M. Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects

Enclosures (2): Attachment 1. Section 106: Historic, Cultural, and Archaeological Resources Discipline Report, Alaskan Way Viaduct Replacement Project, Supplemental Draft EIS
Attachment 2. SR 99 Eligibility Recommendations: Buildings and Structures 40 or More Years Old within the Area of Potential Effects

cc: Matthew Sterner, DAHP w/ enclosure
Randy Everett, FHWA w/o enclosure
Ron Paananen, WSDOT AWV w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Megan White, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure

Appendix I
Section 106: Historic, Cultural, and Archaeological Resources Discipline Report
Alaskan Way Viaduct Replacement Project
Supplemental Draft EIS

Lead and Cooperating Agency Review Draft
For Review Only

We respectfully request that the public not be given access to this document because FHWA has determined that this preliminary document is an intergovernmental exchange that may be withheld under the Freedom of Information Act. Premature release of this material to any segment of the public could give some sectors an unfair advantage and would have a chilling effect on intergovernmental coordination and the success of the cooperating agency concept.

SR 99: ALASKAN WAY VIADUCT BORED TUNNEL PROJECT **10/19/2009**

ELIGIBILITY RECOMMENDATIONS: Buildings and Structures 40 or More Years Old within the Area of Potential Effects

Properties already listed in the NRHP or in national historic districts are omitted from this list. Information on properties that have been recorded previously is available at www.dahp..wa.gov/pages/wisaardintro.htm. Copies will be provided on request.

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-1	Alaskan Way	Alaskan Way Seawall	Eligible	Enclosed
H-2	Alaskan Way /Battery Street	Alaskan Way Viaduct & Battery Street Tunnel	Eligible	HAER 2009
H-3	S. Main St. to Bell St.	Burlington Northern Railway Tunnel (Great Northern Railway Tunnel)	Eligible	Enclosed
H-4	1526 1st Ave. S.	Emerald Market Supply (David Dow and Sons)	Not eligible*	Recorded 2008
H-5	1518 1st Ave. S.	McKinnon Furniture (Frederick & Nelson Warehouse)	Eligible	Recorded 2008
H-6	1251 1st Ave. S.	Great Floors (International Harvester)	Not eligible	Recorded 2007
H-7	1201 1st Ave. S.	Pyramid Alehouse	Not eligible	Recorded 2008
H-8	1041 1st Ave. S.	Gerry Sportswear	Not eligible	Recorded 2007
H-10	1028 1st Ave. S.	Hawk's Nest (Maginnis Bottling Works)	Not eligible	Recorded 2008
H-11	1014 1st Ave. S.	Olympic Reprographics (M. F. Backus Warehouse)	Eligible	Recorded 2008
H-12	1000 1st Ave. S.	Palmer Court (A. L. Palmer Building)	Eligible	Recorded 2007
H-13	902 1st Ave. S.	Artists' Gallery of Seattle/ Worldwide Marble & Granite	Not eligible	Recorded 2008
H-14	900 1st Ave. S.	Roebling Building	Eligible	Recorded 2008
H-15	820 1st Ave. S.	Coastal Environmental Systems	Not eligible	Recorded 2008

* Note: NRHP determinations have already been made for previously-recorded properties.

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-16	1020-22 1st Ave. S.	E. O. Graves Building	Eligible	Recorded 2008
H-52	201 Alaskan Way South	Pier 48	Not eligible*	Recorded 2004
H-115	801 Alaskan Way	Piers 52/53 (Colman Dock)	Not eligible	Recorded 2004
H-116	809 Western Ave.	Commuter Building Garage (Mutual Creamery)	Not eligible	Enclosed
H-117	815 Western Ave.	Commuter Building (Carstens Building)	Not eligible	Enclosed
H-119	801 2nd Ave.	Norton Building	Eligible	Enclosed
H-120	815 2nd Ave.	Key Bank (Bank of California)	Eligible	Enclosed
H-121	821 2nd Ave.	Exchange Building	Eligible	Enclosed
H-122	925 Alaskan Way	Fire Station #5	Eligible	Enclosed
H-123	911 Western Ave.	Maritime Building	Eligible	Enclosed
H-125	1001 Alaskan Way	Pier 54 (NPRR 3/Galbraith Dock)	Eligible	Enclosed
H-128	1012 1st Ave.	Schoenfeld Furniture Store Building	Eligible	Enclosed
H-132	1015 2nd Ave.	Federal Reserve Bank	Eligible	Recorded 2008
H-133	1101 Alaskan Way	Pier 55 (NPRR 4/Arlington Dock)	Eligible	Enclosed
H-137	1100 2nd Ave.	Security Pacific Building (J. A. Baillargeon Building)	Eligible	Enclosed
H-138	1201 Alaskan Way	Pier 56 (Frank Waterhouse Dock)	Eligible	Enclosed
H-140	51 University St.	51 University) (Pacific Net & Twine Building)	Eligible	Enclosed
H-141	1206-12 1st Avenue	Freedman's Loans/Money Mart	Not eligible	Enclosed
H-142	1216-1222 1st Avenue	Diller Hotel	Eligible	Enclosed
H-143	1201-1211 2nd Ave.	Seneca Building (Brown Building)	Not eligible	Enclosed
H-144	1215 2nd Ave.	Galland Building (Stone, Fisher & Lane Department Store)	Not eligible	Enclosed

* Note: NRHP determinations have already been made for previously-recorded properties.

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-145	1301 Alaskan Way	Pier 57 (John P. Agen's Dock/Milwaukee Dock)	Eligible	Enclosed
H-146	1319 Western Ave.	Seattle Steam (Mutual Light & Heating Company)	Not eligible	Enclosed
H-147	55 Union St.	Shurgard Storage (Diamond Ice & Storage Company)	Not eligible	Enclosed
H-149	1315 1st Ave.	The Lusty Lady (Hotel Vendome/Post Edwards Building)	Not eligible	Enclosed
H-150	1414 Alaskan Way	Market Square (Schwabacher Warehouse #2)	Not eligible	Enclosed
H-151	1426 Alaskan Way	Bakun Building (A.C. Frye Company)	Not eligible	Enclosed
H-152	1483 Alaskan Way	Pier 59/Aquarium (Pier 8/Ainsworth & Dunn Pike Street Wharf)	Not eligible	Enclosed
H-153	1401 Western Ave.	Antique Warehouse (G.J. Callahan Warehouse)	Not eligible	Enclosed
H-158	1426 1st Ave.	Showbox (Frye Market)	Not eligible	Enclosed
H-159	1501 Western Ave.	Madore Building (Frank L. Green Company)	Not eligible	Enclosed
H-160	1507 Western Ave.	Fix Building	Eligible	Enclosed
H-162	1500 1st Ave.	Broderick Building	Not eligible	Enclosed
H-164	1510 1st Ave.	Déjà Vu Showgirls (S.J. Holmes Building)	Not eligible	Enclosed
H-169	110 Union St.	Harold Poll Building (Hancock Building)	Not eligible	Enclosed
H-171	1501 2nd Ave.	Eitel Building	Eligible	Enclosed
H-172	103 Pike St.	Hahn Building (Elliott Hotel)	Not eligible	Enclosed
H-173	114 Pike St.	Hard Rock Café (Liberty Building)	Not eligible	Enclosed
H-174	107 Pine St.	Gatewood Apartments (Colonnade Hotel)	Eligible	Enclosed
H-177	1601 2nd Ave.	Broadacres Building	Not eligible	Enclosed
H-178	1613 2nd Ave.	MJA Building (Ames Building)	Not eligible	Enclosed
H-180	1601 3rd Ave.	Bon Marche Garage (Circular Ramp Garage)	Not eligible	Enclosed
H-181	300 Pine St.	Macy's (Bon Marché)	Eligible	Enclosed

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-183	414 Stewart St.	Centennial Building (Tyee Building)	Eligible	Enclosed
H-190	1920 1st Ave.	Oxford Apartments	Eligible	Enclosed
H-193	1924 1st Ave.	Cipra Building (Rector Hotel/Madrona Hotel)	Not eligible	Enclosed
H-198	1915 2nd Ave	Second Avenue Parking Garage (Northwest Building Co. Garage)	Not eligible	Enclosed
H-199	116 Stewart St.	St. Regis (Hotel Archibald)	Not eligible	Enclosed
H-200	1919 2nd Ave.	(Hansen Brothers Building)	Not eligible	Enclosed
H-201	1921 2nd Ave.	Great Jones Home (Barnett's Auction House)	Not eligible	Enclosed
H-203	1931 2nd Ave.	Terminal Sales Annex (Puget Sound News)	Eligible	Enclosed
H-204	2016 1st Ave.	Vogue Hotel	Not eligible	Enclosed
H-205	104 Pine St.	Atwood Apartments (Afton Hotel)	Not eligible	Enclosed
H-206	2000 2nd Ave.	Palladian Apartments (Calhoun Hotel)	Eligible	Enclosed
H-207	1907 3rd Ave.	Bergman's (Donohoe Garage)	Not eligible	Enclosed
H-208	1915 3rd Avenue	Downtown Mini-Storage (White Garage)	Not eligible	Enclosed
H-209	1921 3rd Ave.	Haddon Hall Apartments (Kelley-Gorham Building)	Eligible	Enclosed
H-210	1925 3rd Ave.	Trust Building (Heiden Building)	Not eligible	Enclosed
H-211	2006 2nd Ave.	Bushell's Auction House	Not eligible	Enclosed
H-212	2014 2nd Ave.	Trust Parking (President Garage)	Not eligible	Enclosed
H-213	2001 3rd Ave.	Swifty Printing (Bailey Garage)	Not eligible	Enclosed
H-214	2013-15 3rd Ave.	First Avenue Service Center Shelter (Apex Printing)	Not eligible	Enclosed
H-215	2019 3rd Ave.	Denny Hill Building	Not eligible	Enclosed
H-216	2025 3rd Ave.	Pathé Building	Eligible	Enclosed
H-217	2031 3rd Ave.	Jewish Federation	Not eligible	Enclosed

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-218	2035 4th Ave.	Ralph's Grocery	Not eligible	Enclosed
H-219	2021 4th Ave.	Stratford Apartments (Nesika Apartments)	Not eligible	Enclosed
H-220	2033 4th Ave.	Jiffy Lube	Not eligible	Enclosed
H-221	2106 2nd Ave.	Belltown Center	Not eligible	Enclosed
H-222	2122 2nd Ave.	Velocity/Saito's (Henry's Garage)	Not eligible	Enclosed
H-223	2132 2nd Ave.	Castle Apartments	Eligible	Enclosed
H-224	2101 3rd Ave.	Sig's Barber Shop	Not eligible	Enclosed
H-225	2107 3rd Ave.	Brasa (Metropolitan Press Printing Company)	Eligible	Enclosed
H-226	2118 3rd Ave.	National Assoc. of Credit Management (Sam Inch Gotham Garage)	Not eligible	Enclosed
H-227	2124 3rd Ave.	Swenson Say Faget (Rex Land Company)	Not eligible	Enclosed
H-228	2132 3rd Ave.	Mexican Consulate (Brewer & Cone)	Not eligible	Enclosed
H-229	2133 3rd Ave.	Markham Building	Not eligible	Enclosed
H-231	2100 4th Ave.	Cinerama Theatre	Eligible	Enclosed
H-232	2116 4th Ave.	Dean's Transmissions (Speedy Roberts Auto Repair)	Not eligible	Enclosed
H-233	2124 4th Ave.	Downtown Seattle Public Health Center	Not eligible	Enclosed
H-234	5th Ave. from Pine St. to Seattle Center	Seattle Alweg Monorail	Eligible	Enclosed
H-235	2115 5th Ave.	Digital Reproductive Services (Northwest Auto Radio)	Not eligible	Enclosed
H-236	2121 5th Ave.	Vacant	Not eligible	Enclosed
H-237	2127 5th Ave.	Groundspeak (Kerry Foster Auto Repair)	Not eligible	Enclosed
H-238	2200 Western Ave.	Union Livery Stable	Eligible	Enclosed
H-239	2218 Western Ave.	Venom (Greenbaum's United Furniture)	Not eligible	Enclosed

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-240	2201 1st Ave.	Lewiston Hotel	Eligible	Enclosed
H-241	2209 1st Ave.	Scargo Apartments	Eligible*	Recorded 2009
H-242	2225 1st Ave.	Apex Hotel	Not eligible	Enclosed
H-243	306 Blanchard St.	Cornelius Apartments	Eligible	Enclosed
H-244	2200 4the Ave.	4th & Blanchard (Otis Elevator)	Eligible	Enclosed
H-245	2208 4the Ave.	Kaye-Smith Productions (Northern Radio Company)	Not eligible	Enclosed
H-246	2212 4the Ave.	Kaye-Smith Productions (Shields Harper)	Not eligible	Enclosed
H-247	2218 4the Ave.	Garage (Automotive Service Company)	Not eligible	Enclosed
H-248	2219 4th Ave.	Spitfire (Tasty Lunch)	Not eligible	Enclosed
H-249	2230 4th Avenue	Charlesgate Apartments	Eligible	Enclosed
H-251	2211 5th Ave.	Spry Domain (Lewis Casing Company)	Not eligible	Enclosed
H-252	2217 5th Ave.	(Lyric Theater)	Not eligible	Enclosed
H-253	2218 5th Ave.	Wexley School for Girls (Sterling Engraving)	Not eligible	Enclosed
H-254	2221 5th Ave.	Marvin Stein (Royal Typewriter)	Not eligible	Enclosed
H-255	2225 5th Ave.	Seattle Glassblowing	Not eligible	Enclosed
H-256	2235 5th Ave.	Zum (Toledo Scales)	Not eligible	Enclosed
H-257	66 Bell St./ 2307 Western Ave.	Belltown Lofts (Empire Laundry)	Not eligible	Enclosed
H-258	2315 Western Ave.	Bon Marche Stable (Compton Building)	Eligible	Enclosed
H-259	2333 Western Ave.	Mars Hill Church (Marine Firemen's Union)	Not eligible	Enclosed
H-260	2301-05 1st Ave.	Oregon Hotel	Eligible	Enclosed
H-261	2302 4th Ave.	Franklin Apartments	Eligible	Enclosed

* Note: NRHP determinations have already been made for previously-recorded properties.

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-262	2306 4th Ave.	Seattle Micro	Not eligible	Enclosed
H-263	2316 4th Ave.	Close Instrument Company	Not eligible	Enclosed
H-264	2318 4th Ave.	Fire Station #2	Eligible	Enclosed
H-265	2326 6th Ave.	Antioch University (Farmers Insurance)	Not eligible	Enclosed
H-266	2331 7th Ave.	Midas	Not eligible	Enclosed
H-267	521 Wall St.	6th and Wall Building (Seattle Post-Intelligencer)	Not eligible	Enclosed
H-268A	616 Battery St.	Elephant Car Wash	Not eligible	Enclosed
H-268B	616 Battery St.	Elephant Car Wash Sign	Eligible	Enclosed
H-269	566 Denny Way	Walgreen's (Seattle First National Bank)	Eligible	Enclosed
H-270	120 6th Ave. N.	Seattle Housing Authority	Eligible	Enclosed
H-271	113 Dexter Ave. N.	KEXP	Not eligible	Enclosed
H-272	133 Dexter Ave. N.	Willamette Dental	Not eligible	Enclosed
H-273	203 6th Ave. N.	Space Needle Corporation	Not eligible	Enclosed
H-274	233 6th Ave. N.	ARC of King County	Not eligible	Enclosed
H-275	200 6th Ave. N.	Travelodge	Not eligible	Enclosed
H-276	605 Thomas St.	Bianchi Law Firm	Not eligible	Enclosed
H-277	609 Thomas St.	Casa del Rey (Matanela Apartments)	Not eligible	Enclosed
H-278	225 Aurora Ave. N.	Quality Inn (Tropics Motel)	Not eligible	Enclosed
H-279	232 Aurora Ave. N.	Publishers Mailing Service	Not eligible	Enclosed
H-280	203 Dexter Ave. N.	WW Art Gallery	Not eligible	Enclosed
H-281	231 Dexter Ave. N.	Speedy Auto Glass	Not eligible	Enclosed
H-282	516 Broad St.	Ride the Duck	Not eligible	Enclosed

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-283	333 Taylor Ave. N.	Adler Giersch (Harrison Investment Company)	Not eligible	Enclosed
H-284	319 6th Ave. N.	Seattle City Light	Eligible	Enclosed
H-286	332 5th Ave. N.	Diamond Restaurant & Lounge	Not eligible	Enclosed
H-287	330 6th Ave. N.	AAA Washington (former)	Not eligible	Enclosed
H-288	325 Aurora Ave. N.	Seattle Pacific Hotel (Imperial 400 Motel)	Not eligible	Enclosed
H-289	333 Dexter Ave. N.	King Broadcasting	Not eligible	Enclosed
H-290	408 Aurora Ave. N	Clark Construction Co.	Not eligible	Enclosed
H-291	434 Aurora N.	Hostess Bakery/Continental Baking Co.	Not eligible	Enclosed
H-292	401 Dexter Ave. N.	Thompson Printing	Not eligible	Enclosed
H-293	407 Dexter Ave. N.	Wright Exhibition Space	Not eligible	Enclosed
H-294	500 Aurora N.	School of Visual Concepts (J. T. Hardeman Hat Company)	Not eligible	Enclosed
H-295	500 Dexter Ave. N.	Barking Lounge	Not eligible*	Recorded 2007
H-296	501 Dexter Ave. N.	Imigri	Not eligible	Recorded 2007
H-297	509 Dexter Ave N.	United Business Supply	Not eligible	Recorded 2007
H-298	513 Dexter Ave N.	Glazer's/Phototronics	Not eligible	Recorded 2007
H-299	522 Dexter Ave. N.	Gilbert & Sullivan Society	Not eligible	Recorded 2007
H-300	525 Dexter Ave. N.	Goods for the Planet	Not eligible	Recorded 2007
H-301	530 Dexter Ave. N.	US Bank	Not eligible	Recorded 2007
H-302	601 Aurora Ave. N.	Church of Scientology(Bendix Equipment)	Not eligible	Enclosed
H-303	610 Aurora N.	Vacant	Not eligible	Enclosed
H-304	620 Aurora Ave. N.	Vacant	Not eligible	Enclosed

* Note: NRHP determinations have already been made for previously-recorded properties.

#	Address	Current Name (Historic Name)	NRHP Determination	HPI Form
H-305	701 John St.	Denny Park Auto Clinic	Not eligible	Enclosed
H-306	721 Aurora Ave. N.	Pagliacci Pizza	Not eligible	Enclosed
H-307	800 Mercer St.	Vacant	Not eligible*	Recorded 2007
H-308	601-15 Dexter Ave N.	Copiers Northwest	Not eligible	Recorded 2007
H-309	700 Dexter Ave N./770 Roy St.	Huletz Auto Electric/Auto Hound	Not eligible	Recorded 2007
H-310	717 Dexter Ave N.	European Auto Service	Not eligible	Enclosed
H-311	708 6th Ave. N.	Midori Inc	Not eligible	Enclosed
H-312	800 Aloha St.	Seattle Parks Maintenance Facility (Puget Sound Power & Light)	Eligible	Enclosed
H-313	701-11 9th Ave. N.	Bucca di Beppo/Ducati	Not eligible	Recorded 2007
H-314	739-45 9th Ave. N.	Maaco	Not eligible	Enclosed
H-315	753 9th Ave. N.	KPG Architects	Not eligible	Enclosed
H-316	731 Westlake Ave. N.	Jillian's Billiard Club (Art Marble Company)	Not eligible	Enclosed

* NRHP determinations have already been made on previously-recorded properties.

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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October 22, 2009

Dr. Allyson Brooks
State Historic Preservation Officer
Department of Archaeology and Historic Preservation
PO Box 48343
Olympia, Washington 98504-8343

DAHP Log #: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: Transmittal of Historic Property Inventory Forms and Database Files

Dear Dr. Brooks:

Pursuant to 36 CFR 800.2(c)(1), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the Alaskan Way Viaduct Replacement (SR 99) Project.

As noted in Kevin Bartoy's October 20, 2009 letter to your office, we are submitting the hard copies of the Historic Property Inventory (HPI) forms, as well as a CD containing the files on the DAHP HPI database. The enclosed table of properties summarizes the resources that were surveyed as part of the cultural resources investigation.

As Mr. Bartoy noted in his October 20 letter, we surveyed and inventoried 148 built environment resources that had not been previously recorded. Of these, 43 are eligible for listing in the NRHP and 105 are not eligible for listing in the NRHP. At this time, pursuant to 36 CFR 800.4(c)(2), we seek your concurrence on our determinations of eligibility and non-eligibility for the NRHP for these recorded historic properties within the APE for the project.

If you have questions or concerns please contact me at 206.716.1138, email grayc@wsdot.wa.gov or Environmental Director WSDOT ESO Mega Projects Allison Hanson at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

~~Connie~~ Walker Gray
Cultural Resources Specialist
WSDOT ESO Mega Projects

cc: Matthew Sterner, DAHP
Randy Everett, FHWA
Ron Paananen, WSDOT
Allison Hanson, WSDOT
Megan White, WSDOT
Scott Williams, WSDOT

SR 99: ALASKAN WAY VIADUCT BORED TUNNEL PROJECT **10/19/2009**

ELIGIBILITY RECOMMENDATIONS: Buildings and Structures 40 or More Years Old within the Area of Potential Effects

Properties already listed in the NRHP or in national historic districts are omitted from this list. Information on properties that have been recorded previously is available at www.dahp..wa.gov/pages/wisaardintro.htm. Copies will be provided on request.

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-1	Alaskan Way	Alaskan Way Seawall	Eligible	Enclosed
H-2	Alaskan Way /Battery Street	Alaskan Way Viaduct & Battery Street Tunnel	Eligible	HAER 2009
H-3	S. Main St. to Bell St.	Burlington Northern Railway Tunnel (Great Northern Railway Tunnel)	Eligible	Enclosed
H-4	1526 1st Ave. S.	Emerald Market Supply (David Dow and Sons)	Not eligible*	Recorded 2008
H-5	1518 1st Ave. S.	McKinnon Furniture (Frederick & Nelson Warehouse)	Eligible	Recorded 2008
H-6	1251 1st Ave. S.	Great Floors (International Harvester)	Not eligible	Recorded 2007
H-7	1201 1st Ave. S.	Pyramid Alehouse	Not eligible	Recorded 2008
H-8	1041 1st Ave. S.	Gerry Sportswear	Not eligible	Recorded 2007
H-10	1028 1st Ave. S.	Hawk's Nest (Maginnis Bottling Works)	Not eligible	Recorded 2008
H-11	1014 1st Ave. S.	Olympic Reprographics (M. F. Backus Warehouse)	Eligible	Recorded 2008
H-12	1000 1st Ave. S.	Palmer Court (A. L. Palmer Building)	Eligible	Recorded 2007
H-13	902 1st Ave. S.	Artists' Gallery of Seattle/ Worldwide Marble & Granite	Not eligible	Recorded 2008
H-14	900 1st Ave. S.	Roebling Building	Eligible	Recorded 2008
H-15	820 1st Ave. S.	Coastal Environmental Systems	Not eligible	Recorded 2008

* Note: NRHP determinations have already been made for previously-recorded properties.

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-16	1020-22 1st Ave. S.	E. O. Graves Building	Eligible	Recorded 2008
H-52	201 Alaskan Way South	Pier 48	Not eligible*	Recorded 2004
H-115	801 Alaskan Way	Piers 52/53 (Colman Dock)	Not eligible	Recorded 2004
H-116	809 Western Ave.	Commuter Building Garage (Mutual Creamery)	Not eligible	Enclosed
H-117	815 Western Ave.	Commuter Building (Carstens Building)	Not eligible	Enclosed
H-119	801 2nd Ave.	Norton Building	Eligible	Enclosed
H-120	815 2nd Ave.	Key Bank (Bank of California)	Eligible	Enclosed
H-121	821 2nd Ave.	Exchange Building	Eligible	Enclosed
H-122	925 Alaskan Way	Fire Station #5	Eligible	Enclosed
H-123	911 Western Ave.	Maritime Building	Eligible	Enclosed
H-125	1001 Alaskan Way	Pier 54 (NPRR 3/Galbraith Dock)	Eligible	Enclosed
H-128	1012 1st Ave.	Schoenfeld Furniture Store Building	Eligible	Enclosed
H-132	1015 2nd Ave.	Federal Reserve Bank	Eligible	Recorded 2008
H-133	1101 Alaskan Way	Pier 55 (NPRR 4/Arlington Dock)	Eligible	Enclosed
H-137	1100 2nd Ave.	Security Pacific Building (J. A. Baillargeon Building)	Eligible	Enclosed
H-138	1201 Alaskan Way	Pier 56 (Frank Waterhouse Dock)	Eligible	Enclosed
H-140	51 University St.	51 University) (Pacific Net & Twine Building)	Eligible	Enclosed
H-141	1206-12 1st Avenue	Freedman's Loans/Money Mart	Not eligible	Enclosed
H-142	1216-1222 1st Avenue	Diller Hotel	Eligible	Enclosed
H-143	1201-1211 2nd Ave.	Seneca Building (Brown Building)	Not eligible	Enclosed
H-144	1215 2nd Ave.	Galland Building (Stone, Fisher & Lane Department Store)	Not eligible	Enclosed

* Note: NRHP determinations have already been made for previously-recorded properties.

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-145	1301 Alaskan Way	Pier 57 (John P. Agen's Dock/Milwaukee Dock)	Eligible	Enclosed
H-146	1319 Western Ave.	Seattle Steam (Mutual Light & Heating Company)	Not eligible	Enclosed
H-147	55 Union St.	Shurgard Storage (Diamond Ice & Storage Company)	Not eligible	Enclosed
H-149	1315 1st Ave.	The Lusty Lady (Hotel Vendome/Post Edwards Building)	Not eligible	Enclosed
H-150	1414 Alaskan Way	Market Square (Schwabacher Warehouse #2)	Not eligible	Enclosed
H-151	1426 Alaskan Way	Bakun Building (A.C. Frye Company)	Not eligible	Enclosed
H-152	1483 Alaskan Way	Pier 59/Aquarium (Pier 8/Ainsworth & Dunn Pike Street Wharf)	Not eligible	Enclosed
H-153	1401 Western Ave.	Antique Warehouse (G.J. Callahan Warehouse)	Not eligible	Enclosed
H-158	1426 1st Ave.	Showbox (Frye Market)	Not eligible	Enclosed
H-159	1501 Western Ave.	Madore Building (Frank L. Green Company)	Not eligible	Enclosed
H-160	1507 Western Ave.	Fix Building	Eligible	Enclosed
H-162	1500 1st Ave.	Broderick Building	Not eligible	Enclosed
H-164	1510 1st Ave.	Déjà Vu Showgirls (S.J. Holmes Building)	Not eligible	Enclosed
H-169	110 Union St.	Harold Poll Building (Hancock Building)	Not eligible	Enclosed
H-171	1501 2nd Ave.	Eitel Building	Eligible	Enclosed
H-172	103 Pike St.	Hahn Building (Elliott Hotel)	Not eligible	Enclosed
H-173	114 Pike St.	Hard Rock Café (Liberty Building)	Not eligible	Enclosed
H-174	107 Pine St.	Gatewood Apartments (Colonnade Hotel)	Eligible	Enclosed
H-177	1601 2nd Ave.	Broadacres Building	Not eligible	Enclosed
H-178	1613 2nd Ave.	MJA Building (Ames Building)	Not eligible	Enclosed
H-180	1601 3rd Ave.	Bon Marche Garage (Circular Ramp Garage)	Not eligible	Enclosed
H-181	300 Pine St.	Macy's (Bon Marché)	Eligible	Enclosed

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-183	414 Stewart St.	Centennial Building (Tyee Building)	Eligible	Enclosed
H-190	1920 1st Ave.	Oxford Apartments	Eligible	Enclosed
H-193	1924 1st Ave.	Cipra Building (Rector Hotel/Madrona Hotel)	Not eligible	Enclosed
H-198	1915 2nd Ave	Second Avenue Parking Garage (Northwest Building Co. Garage)	Not eligible	Enclosed
H-199	116 Stewart St.	St. Regis (Hotel Archibald)	Not eligible	Enclosed
H-200	1919 2nd Ave.	(Hansen Brothers Building)	Not eligible	Enclosed
H-201	1921 2nd Ave.	Great Jones Home (Barnett's Auction House)	Not eligible	Enclosed
H-203	1931 2nd Ave.	Terminal Sales Annex (Puget Sound News)	Eligible	Enclosed
H-204	2016 1st Ave.	Vogue Hotel	Not eligible	Enclosed
H-205	104 Pine St.	Atwood Apartments (Afton Hotel)	Not eligible	Enclosed
H-206	2000 2nd Ave.	Palladian Apartments (Calhoun Hotel)	Eligible	Enclosed
H-207	1907 3rd Ave.	Bergman's (Donohoe Garage)	Not eligible	Enclosed
H-208	1915 3rd Avenue	Downtown Mini-Storage (White Garage)	Not eligible	Enclosed
H-209	1921 3rd Ave.	Haddon Hall Apartments (Kelley-Gorham Building)	Eligible	Enclosed
H-210	1925 3rd Ave.	Trust Building (Heiden Building)	Not eligible	Enclosed
H-211	2006 2nd Ave.	Bushell's Auction House	Not eligible	Enclosed
H-212	2014 2nd Ave.	Trust Parking (President Garage)	Not eligible	Enclosed
H-213	2001 3rd Ave.	Swifty Printing (Bailey Garage)	Not eligible	Enclosed
H-214	2013-15 3rd Ave.	First Avenue Service Center Shelter (Apex Printing)	Not eligible	Enclosed
H-215	2019 3rd Ave.	Denny Hill Building	Not eligible	Enclosed
H-216	2025 3rd Ave.	Pathé Building	Eligible	Enclosed
H-217	2031 3rd Ave.	Jewish Federation	Not eligible	Enclosed

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-218	2035 4th Ave.	Ralph's Grocery	Not eligible	Enclosed
H-219	2021 4th Ave.	Stratford Apartments (Nesika Apartments)	Not eligible	Enclosed
H-220	2033 4th Ave.	Jiffy Lube	Not eligible	Enclosed
H-221	2106 2nd Ave.	Belltown Center	Not eligible	Enclosed
H-222	2122 2nd Ave.	Velocity/Saito's (Henry's Garage)	Not eligible	Enclosed
H-223	2132 2nd Ave.	Castle Apartments	Eligible	Enclosed
H-224	2101 3rd Ave.	Sig's Barber Shop	Not eligible	Enclosed
H-225	2107 3rd Ave.	Brasa (Metropolitan Press Printing Company)	Eligible	Enclosed
H-226	2118 3rd Ave.	National Assoc. of Credit Management (Sam Inch Gotham Garage)	Not eligible	Enclosed
H-227	2124 3rd Ave.	Swenson Say Faget (Rex Land Company)	Not eligible	Enclosed
H-228	2132 3rd Ave.	Mexican Consulate (Brewer & Cone)	Not eligible	Enclosed
H-229	2133 3rd Ave.	Markham Building	Not eligible	Enclosed
H-231	2100 4th Ave.	Cinerama Theatre	Eligible	Enclosed
H-232	2116 4th Ave.	Dean's Transmissions (Speedy Roberts Auto Repair)	Not eligible	Enclosed
H-233	2124 4th Ave.	Downtown Seattle Public Health Center	Not eligible	Enclosed
H-234	5th Ave. from Pine St. to Seattle Center	Seattle Alweg Monorail	Eligible	Enclosed
H-235	2115 5th Ave.	Digital Reproductive Services (Northwest Auto Radio)	Not eligible	Enclosed
H-236	2121 5th Ave.	Vacant	Not eligible	Enclosed
H-237	2127 5th Ave.	Groundspeak (Kerry Foster Auto Repair)	Not eligible	Enclosed
H-238	2200 Western Ave.	Union Livery Stable	Eligible	Enclosed
H-239	2218 Western Ave.	Venom (Greenbaum's United Furniture)	Not eligible	Enclosed

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-240	2201 1st Ave.	Lewiston Hotel	Eligible	Enclosed
H-241	2209 1st Ave.	Scargo Apartments	Eligible*	Recorded 2009
H-242	2225 1st Ave.	Apex Hotel	Not eligible	Enclosed
H-243	306 Blanchard St.	Cornelius Apartments	Eligible	Enclosed
H-244	2200 4the Ave.	4th & Blanchard (Otis Elevator)	Eligible	Enclosed
H-245	2208 4the Ave.	Kaye-Smith Productions (Northern Radio Company)	Not eligible	Enclosed
H-246	2212 4the Ave.	Kaye-Smith Productions (Shields Harper)	Not eligible	Enclosed
H-247	2218 4the Ave.	Garage (Automotive Service Company)	Not eligible	Enclosed
H-248	2219 4th Ave.	Spitfire (Tasty Lunch)	Not eligible	Enclosed
H-249	2230 4th Avenue	Charlesgate Apartments	Eligible	Enclosed
H-251	2211 5th Ave.	Spry Domain (Lewis Casing Company)	Not eligible	Enclosed
H-252	2217 5th Ave.	(Lyric Theater)	Not eligible	Enclosed
H-253	2218 5th Ave.	Wexley School for Girls (Sterling Engraving)	Not eligible	Enclosed
H-254	2221 5th Ave.	Marvin Stein (Royal Typewriter)	Not eligible	Enclosed
H-255	2225 5th Ave.	Seattle Glassblowing	Not eligible	Enclosed
H-256	2235 5th Ave.	Zum (Toledo Scales)	Not eligible	Enclosed
H-257	66 Bell St./ 2307 Western Ave.	Belltown Lofts (Empire Laundry)	Not eligible	Enclosed
H-258	2315 Western Ave.	Bon Marche Stable (Compton Building)	Eligible	Enclosed
H-259	2333 Western Ave.	Mars Hill Church (Marine Firemen's Union)	Not eligible	Enclosed
H-260	2301-05 1st Ave.	Oregon Hotel	Eligible	Enclosed
H-261	2302 4th Ave.	Franklin Apartments	Eligible	Enclosed

* Note: NRHP determinations have already been made for previously-recorded properties.

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-262	2306 4th Ave.	Seattle Micro	Not eligible	Enclosed
H-263	2316 4th Ave.	Close Instrument Company	Not eligible	Enclosed
H-264	2318 4th Ave.	Fire Station #2	Eligible	Enclosed
H-265	2326 6th Ave.	Antioch University (Farmers Insurance)	Not eligible	Enclosed
H-266	2331 7th Ave.	Midas	Not eligible	Enclosed
H-267	521 Wall St.	6th and Wall Building (Seattle Post-Intelligencer)	Not eligible	Enclosed
H-268A	616 Battery St.	Elephant Car Wash	Not eligible	Enclosed
H-268B	616 Battery St.	Elephant Car Wash Sign	Eligible	Enclosed
H-269	566 Denny Way	Walgreen's (Seattle First National Bank)	Eligible	Enclosed
H-270	120 6th Ave. N.	Seattle Housing Authority	Eligible	Enclosed
H-271	113 Dexter Ave. N.	KEXP	Not eligible	Enclosed
H-272	133 Dexter Ave. N.	Willamette Dental	Not eligible	Enclosed
H-273	203 6th Ave. N.	Space Needle Corporation	Not eligible	Enclosed
H-274	233 6th Ave. N.	ARC of King County	Not eligible	Enclosed
H-275	200 6th Ave. N.	Travelodge	Not eligible	Enclosed
H-276	605 Thomas St.	Bianchi Law Firm	Not eligible	Enclosed
H-277	609 Thomas St.	Casa del Rey (Matanela Apartments)	Not eligible	Enclosed
H-278	225 Aurora Ave. N.	Quality Inn (Tropics Motel)	Not eligible	Enclosed
H-279	232 Aurora Ave. N.	Publishers Mailing Service	Not eligible	Enclosed
H-280	203 Dexter Ave. N.	WW Art Gallery	Not eligible	Enclosed
H-281	231 Dexter Ave. N.	Speedy Auto Glass	Not eligible	Enclosed
H-282	516 Broad St.	Ride the Duck	Not eligible	Enclosed

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-283	333 Taylor Ave. N.	Adler Giersch (Harrison Investment Company)	Not eligible	Enclosed
H-284	319 6th Ave. N.	Seattle City Light	Eligible	Enclosed
H-286	332 5th Ave. N.	Diamond Restaurant & Lounge	Not eligible	Enclosed
H-287	330 6th Ave. N.	AAA Washington (former)	Not eligible	Enclosed
H-288	325 Aurora Ave. N.	Seattle Pacific Hotel (Imperial 400 Motel)	Not eligible	Enclosed
H-289	333 Dexter Ave. N.	King Broadcasting	Not eligible	Enclosed
H-290	408 Aurora Ave. N	Clark Construction Co.	Not eligible	Enclosed
H-291	434 Aurora N.	Hostess Bakery/Continental Baking Co.	Not eligible	Enclosed
H-292	401 Dexter Ave. N.	Thompson Printing	Not eligible	Enclosed
H-293	407 Dexter Ave. N.	Wright Exhibition Space	Not eligible	Enclosed
H-294	500 Aurora N.	School of Visual Concepts (J. T. Hardeman Hat Company)	Not eligible	Enclosed
H-295	500 Dexter Ave. N.	Barking Lounge	Not eligible*	Recorded 2007
H-296	501 Dexter Ave. N.	Imigri	Not eligible	Recorded 2007
H-297	509 Dexter Ave N.	United Business Supply	Not eligible	Recorded 2007
H-298	513 Dexter Ave N.	Glazer's/Phototronics	Not eligible	Recorded 2007
H-299	522 Dexter Ave. N.	Gilbert & Sullivan Society	Not eligible	Recorded 2007
H-300	525 Dexter Ave. N.	Goods for the Planet	Not eligible	Recorded 2007
H-301	530 Dexter Ave. N.	US Bank	Not eligible	Recorded 2007
H-302	601 Aurora Ave. N.	Church of Scientology(Bendix Equipment)	Not eligible	Enclosed
H-303	610 Aurora N.	Vacant	Not eligible	Enclosed
H-304	620 Aurora Ave. N.	Vacant	Not eligible	Enclosed

* Note: NRHP determinations have already been made for previously-recorded properties.

#	Address	Current Name (Historic Name)	NRHP Recommendation	HPI Form
H-305	701 John St.	Denny Park Auto Clinic	Not eligible	Enclosed
H-306	721 Aurora Ave. N.	Pagliacci Pizza	Not eligible	Enclosed
H-307	800 Mercer St.	Vacant	Not eligible*	Recorded 2007
H-308	601-15 Dexter Ave N.	Copiers Northwest	Not eligible	Recorded 2007
H-309	700 Dexter Ave N./770 Roy St.	Huletz Auto Electric/Auto Hound	Not eligible	Recorded 2007
H-310	717 Dexter Ave N.	European Auto Service	Not eligible	Enclosed
H-311	708 6th Ave. N.	Midori Inc	Not eligible	Enclosed
H-312	800 Aloha St.	Seattle Parks Maintenance Facility (Puget Sound Power & Light)	Eligible	Enclosed
H-313	701-11 9th Ave. N.	Bucca di Beppo/Ducati	Not eligible	Recorded 2007
H-314	739-45 9th Ave. N.	Maaco	Not eligible	Enclosed
H-315	753 9th Ave. N.	KPG Architects	Not eligible	Enclosed
H-316	731 Westlake Ave. N.	Jillian's Billiard Club (Art Marble Company)	Not eligible	Enclosed

* NRHP determinations have already been made on previously-recorded properties.

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

November 18, 2009

Mr. Kevin Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects
401 Second Ave. South, Suite 300
Seattle, WA 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: Review Comments on Draft Discipline Report

Dear Mr. Bartoy:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP) and providing a copy of the Draft Cultural Resources Discipline Report for the Central Waterfront, Deep-Bore Tunnel portion of the Alaskan Way Viaduct project. The discipline report has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication.

I will restrict my comments to those portions of the discipline report that pertain to the archaeological component of the project. Discussions regarding the built environment resources associated with the project will most likely be directed to you from Mr. Russell Holter, built-environment compliance reviewer here at DAHP.

Regarding the archaeological component of the report, I have the following comments at present:

- The report discusses the "potential" for both prehistoric and historical-period materials in pages 63–69. Additional discussions that justify these assertions, elaborate on what types of resources or other features might be encountered, and generally discusses the 'adequacy' of the archaeological investigations to date do not appear in the discussion. It is difficult to assess the adequacy of the work that has been completed to date when that data does not effectively appear in the document. Normally, the submittal of a discipline report is preceded by a cultural resources survey report or similar document that contains the technical data by which reviewers can adequately assess and evaluate the adequacy of the investigation. Since no such document was produced for this project, I would have to say that the report does not allow us the opportunity to effectively determine if the archaeological survey/investigation is adequate.

- There is insufficient discussion of the extent and damage that will be caused by 'soil improvements' that are slated for the project.
- The accompanying cover letter implies that the only archaeological resource that may be affected by the project is the Dearborn South Tidelands Site (45KI924). What about those resources presented on page 69 that are not associated with 45KI924? Is the report contending that WSDOT has gathered sufficient information on these properties to identify them as discreet archaeological properties and is ready to propose specific mitigation for direct or indirect project impacts?

My overall feeling is that the report devotes considerable time and effort is discussing mitigation measures for a cultural resources universe that has not yet been defined. Until the adequacy of the survey level investigation for the project has been concurred upon by DAHP, any discussion of mitigation or next steps is premature.

Please note that DAHP requires that all historic property inventory and archaeological site forms be provided to our office electronically. If you have not registered for a copy of the database, please log onto our website at www.dahp.wa.gov and go to the Survey/Inventory page for more information and a registration form. To assist you in conducting a survey, DAHP has developed a set of cultural resource reporting guidelines. You can obtain a copy of these guidelines from our website. Finally, please note that effective Nov. 2, 2009, DAHP requires that all cultural resource reports be submitted in PDF format on a labeled CD along with an unbound paper copy. For further information please go to http://www.dahp.wa.gov/documents/CR_ReportPDF_Requirement.pdf.

Thank you for the opportunity to review and comment.

Sincerely,

Matthew Sterner, M.A., RPA
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

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November 24, 2009

Mr. Kevin Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects
401 Second Ave. South, Suite 300
Seattle, WA 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: More Information Needed

Dear Mr. Bartoy:

Thank you for contacting our office. I have reviewed the materials you provided for this project. We have reviewed the 176 inventory forms associated with properties within the Area of Potential Effect for this undertaking. Of those 176 forms we concur with your consultant's professional opinion that 43 properties are eligible for listing to the National Register of Historic Places. We also concur that 118 properties are not eligible for listing to the National Register of Historic Places. This leaves 15 properties where consultation under Section 106 should continue before a determination is made as to the undertakings affects. These 15 properties are as follows:

H-3	Great Northern RR Tunnel*	S Main to Bell St.
H-137	The JA Baillargeon Building*	1100 2nd Ave
H-160	The Fix Building	1507 Western
H-207	The Donohoe Garage	1907 3rd Ave
H-210	The Heiden Building	1925 3rd Ave
H-219	The Nesika Apartments*	2021 4th Ave
H-227	The Rex Land Company	2124 3rd Ave
H-231	The Cinerama	2100 4th Ave
H-243	The Cornelius Apartments	306 Blanchard
H-249	The Charlesgate Apartments	2230 4th Ave
H-254	The Royal Typewriter Building	2221 5th Ave
H-258	The Compton Building*	2315 Western
H-276	The Bianchi Law Offices	605 Thomas
H-284	The Seattle City Light Building*	319 6th Ave
H-291	The Continental Baking Company	434 Aurora

* The form was missing or incomplete

In order to complete our review we request additional information be provided as to how your consultant arrived at their conclusions. For the Nesika Apartments, the photo links to the Historic Property Inventory Database was either broken or the photos were left off the database.

I would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available. These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Please contact me should you have any specific questions about our request and we look forward to receiving this material.

Please note that DAHP requires that all historic property inventory and archaeological site forms be provided to our office electronically in PDF format on a CD along with an unbound copy of your report. Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,

Russell Holter
Project Compliance Reviewer
(360) 586-3533
russell.holter@dahp.wa.gov

Cc: Matthew Sterner (DAHP)
Karen Gordon (Seattle)

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

ESO Mega Projects
401 Second Avenue South, Suite 300
Seattle, WA 98104
206-716-1121/ fax 206-716-1101
TTY: 1-800-833-6388
www.wsdot.wa.gov

December 8, 2009

Dr. Allyson Brooks
State Historic Preservation Officer
Washington Department of Archaeology & Historic Preservation
PO Box 48343
Olympia, WA 98504

Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project
DAHP Log # 051209-10-FHWA

Dear Dr. Brooks:

The Washington State Department of Transportation (WSDOT), in cooperation with the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(1).

WSDOT is preparing to undertake another phase of geotechnical coring to establish existing subsurface conditions along the proposed tunnel alignment. We previously sent you the geotechnical exploration plan for Phase 1 of this effort and notified you of the implementation of Phase 2 earlier this fall. The current coring represents Phase 3 of this effort. Attached to this letter, you will find location information for this Phase 3 coring effort.

WSDOT has retained the services of a cultural resources consultant to monitor extraction of the sonic core borings, which produce a continuous sample in contrast to the mud rotary borings which produce a split-spoon sedimentary sample. In addition to monitoring the consultant will examine and log the cores on-site, and segregate core sections they believe may contain information about the archaeological record for later analysis. Core sections of interest will be moved to a laboratory where sediments will be described and screened to recover any cultural materials. The data collected will be used to supplement previous coring efforts and help plan future coring locations, specifically for archaeology, and to plan for future archaeological investigations within the project's Area of Potential Effects.

If you would be interested in observing this process, please do not hesitate to contact me so that we can arrange a time when the field operations are underway. We would appreciate hearing your comments, and will answer any questions or concerns you may have related to the coring program.

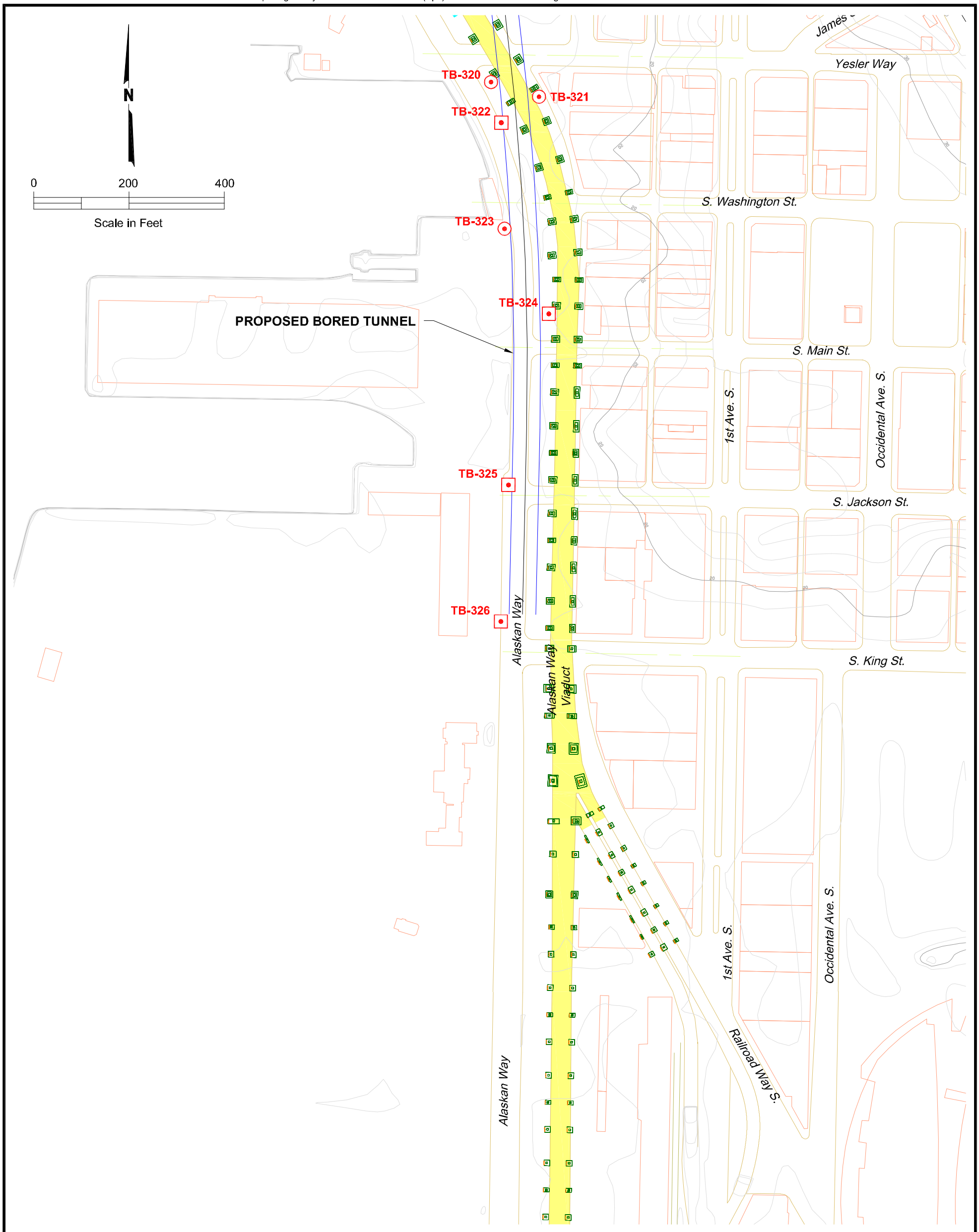
Should you have questions or concerns please contact me at 206.716.1121, email bartoyk@wsdot.wa.gov, or Allison Hanson (Environmental Services Director for Mega-Projects) at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Kevin M. Bartoy
WSDOT Cultural Resources Specialist
ESO Mega Projects

Enclosure: Proposed Phase 3 Boring Plan Maps (5 pages)

cc: Matt Sterner, DAHP, w/ enclosure
Randy Everett, FHWA
Allison Hanson, WSDOT
Scott Williams, WSDOT



PROJECT EXPLORATIONS AND LEGEND

- Proposed Soil Borings
- Proposed Sonic Core Borings
- Proposed Air Rotary Borings
- Proposed Shear Wave Velocity Testing
- Geoprobes Performed (2001 - 2009)
- Soil Borings (2001 - 2009)
- Sonic Core Borings (2001 - 2009)
- Cone Penetration Test Probes (2001 - 2008)
- Explorations Shown in Blue Have Groundwater Monitoring Devices (Wells Or Vibrating Wire Piezometers)

Superscripts:
- W Well Installed
- * Shear Wave Velocity Measurements Obtained
- P Pressuremeter Tests Performed
- V Vane Shear Tests Performed

PREVIOUS BORINGS BY OTHERS

- Boring Less than 50' Deep
- Boring Between 50'-100' Deep
- Boring More than 100' Deep

DRAFT

NOTES

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Alaskan Way Viaduct and Seawall Program
Central Waterfront Tunnel
Seattle, Washington

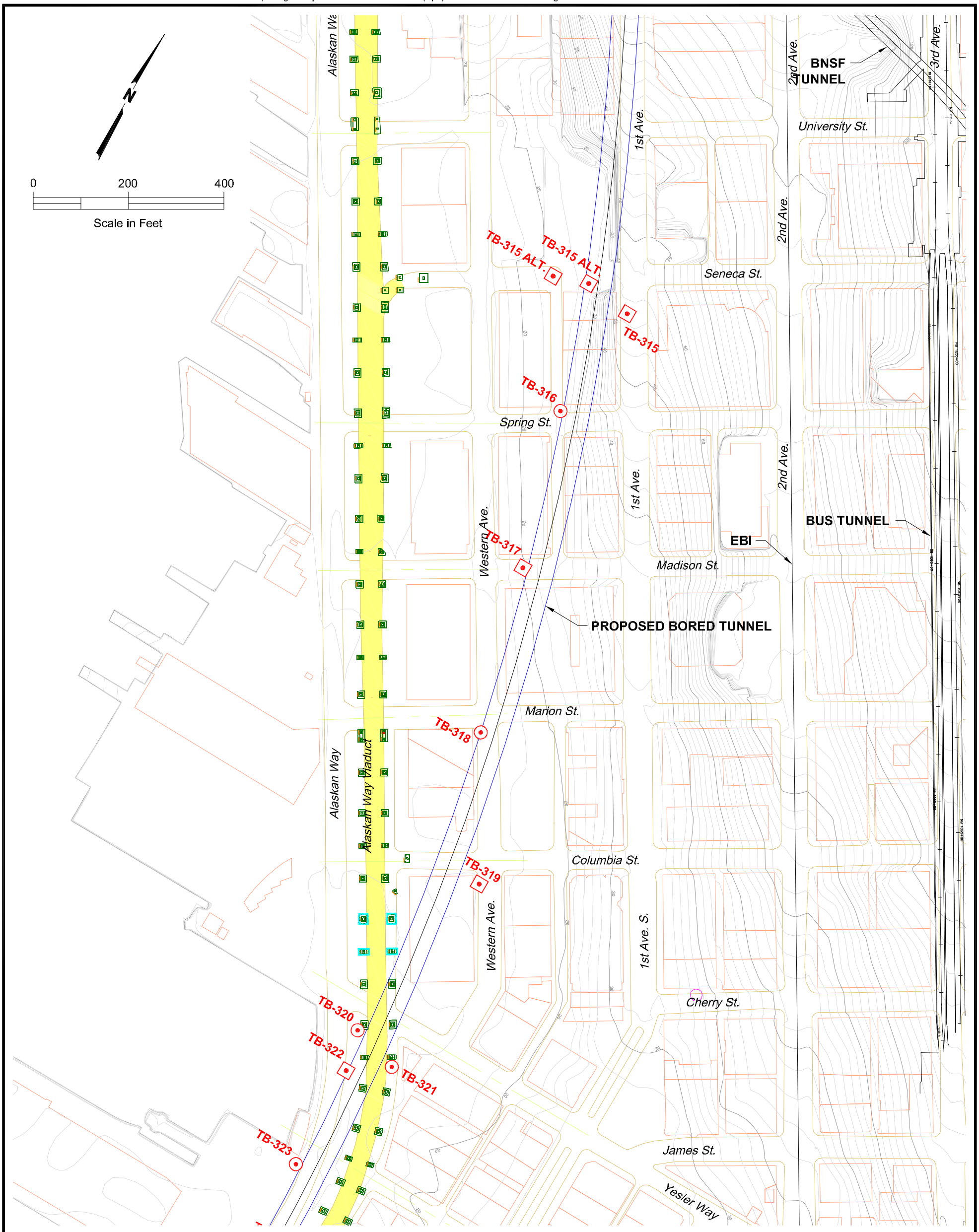
SITE AND EXPLORATION PLAN

November 2009 21-1-20840-073

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 2
Sheet 1 of 5

FIG. 2
Sheet 1 of 5



PROJECT EXPLORATIONS AND LEGEND

- Proposed Soil Borings
- Proposed Sonic Core Borings
- Proposed Air Rotary Borings
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PREVIOUS BORINGS BY OTHERS

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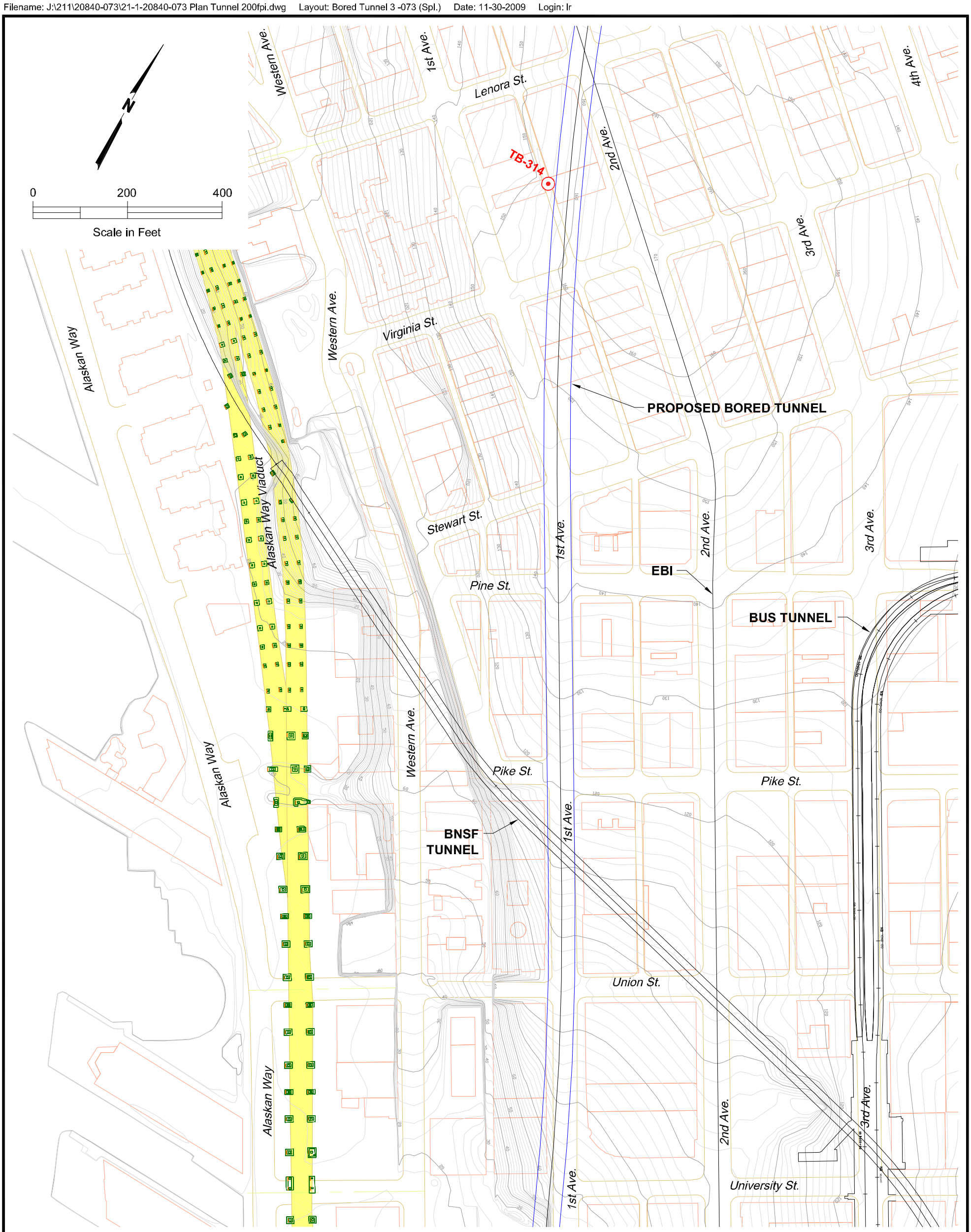

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SITE AND EXPLORATION PLAN

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Geotechnical and Environmental Consultants

FIG. 2
Sheet 3 of 5

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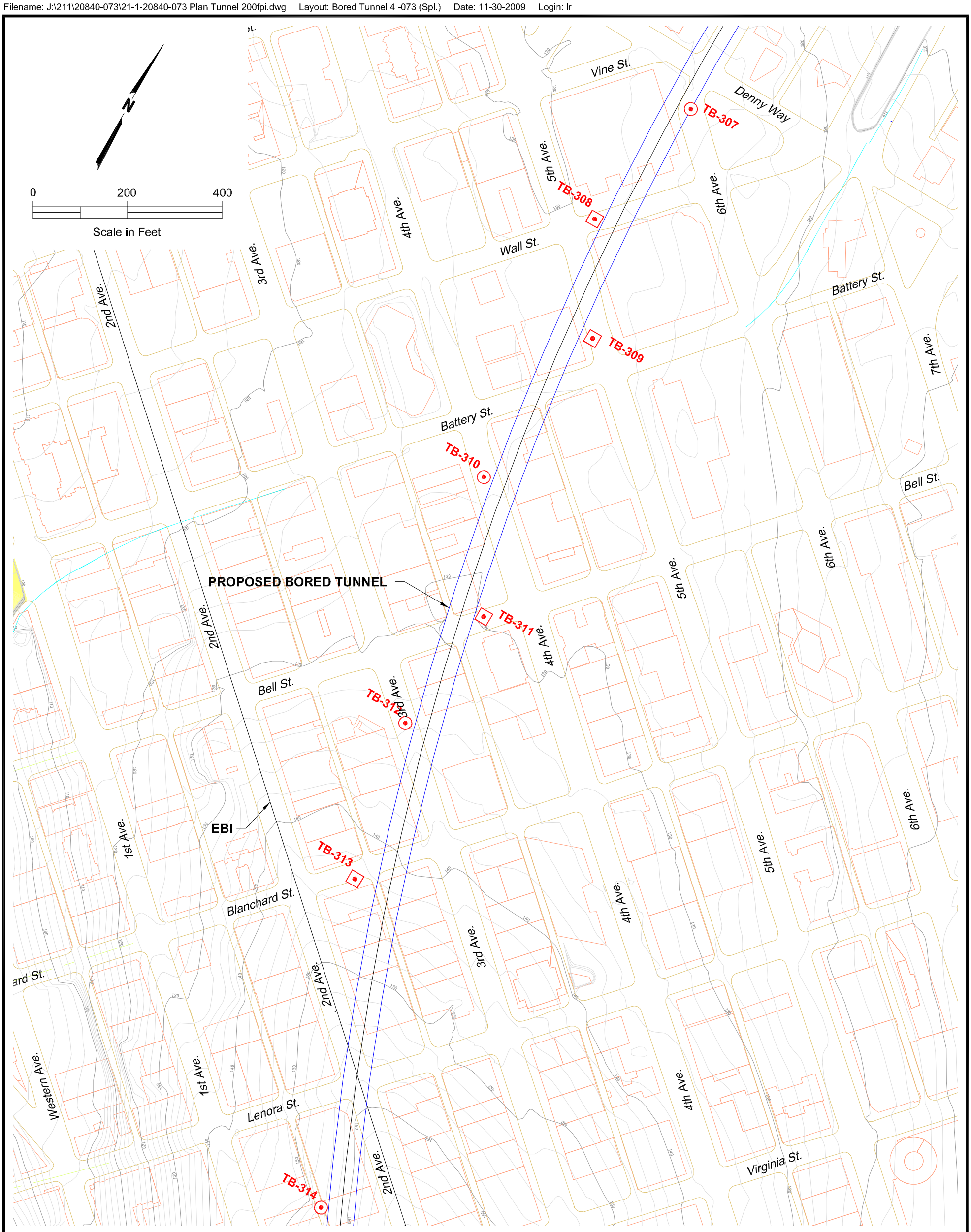
Sheet 3 of 5

Filename: J:\211\20840-073\21-1-20840-073 Plan Tunnel 200fpi.dwg Layout: Bored Tunnel 4 -073 (Spl.) Date: 11-30-2009 Login: lr



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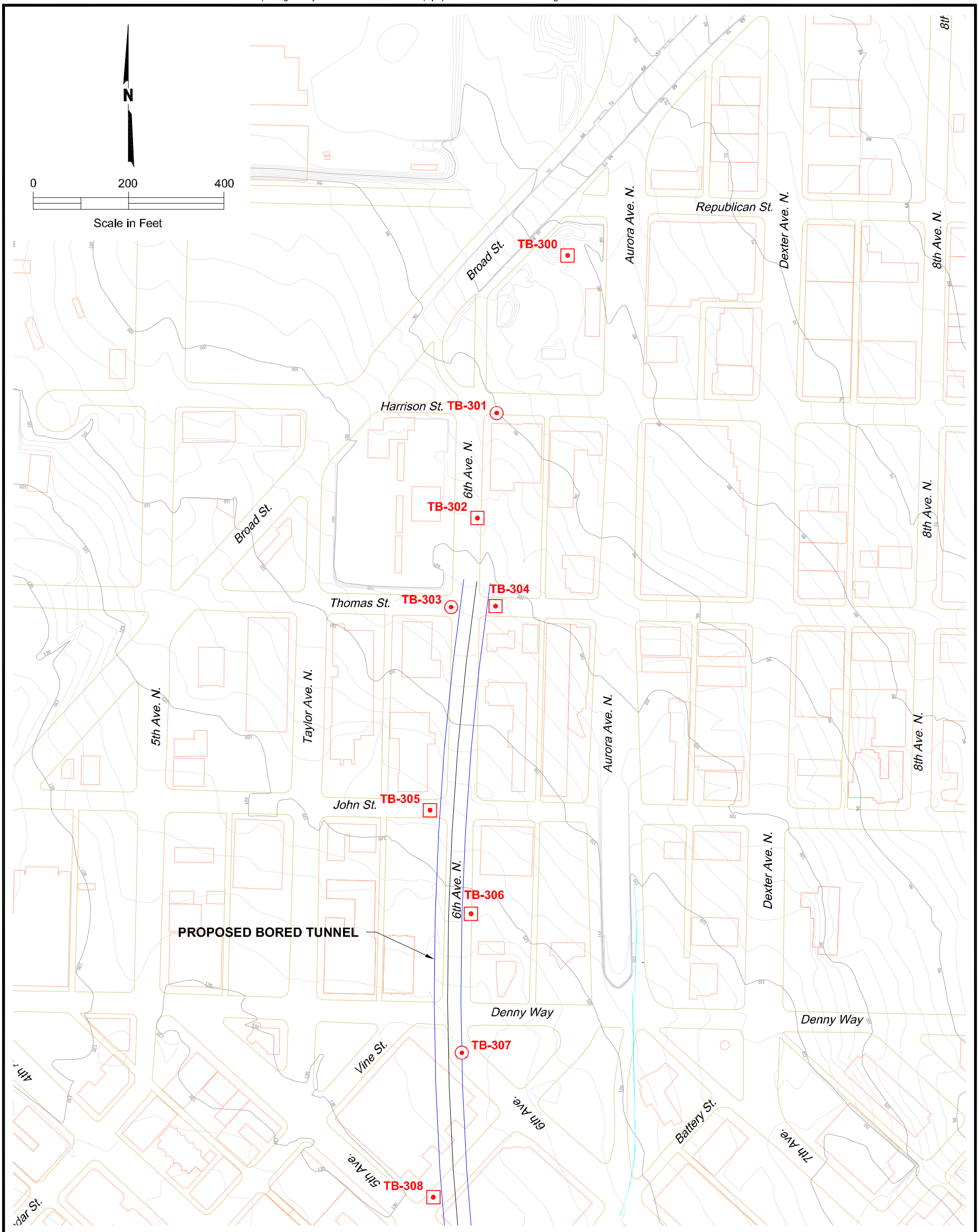

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Central Waterfront Tunnel
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FIG. 2
Sheet 5 of 5

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Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

ESO Mega Projects
401 Second Avenue South, Suite 300
Seattle, WA 98104
206-716-1121/ fax 206-716-1101
TTY: 1-800-833-6388
www.wsdot.wa.gov

December 8, 2009

Dennis Lewarch
The Suquamish Tribe
PO Box 498
Suquamish , WA 98392

Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project

Dear Dennis Lewarch:

The Washington State Department of Transportation (WSDOT), in cooperation with the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2).

WSDOT is preparing to undertake another phase of geotechnical coring to establish existing subsurface conditions along the proposed tunnel alignment. We previously sent you the geotechnical exploration plan for Phase 1 of this effort and notified you of the implementation of Phase 2 earlier this fall. The current coring represents Phase 3 of this effort. Attached to this letter, you will find location information for this Phase 3 coring effort.

WSDOT has retained the services of a cultural resources consultant to monitor extraction of the sonic core borings, which produce a continuous sample in contrast to the mud rotary borings which produce a split-spoon sedimentary sample. In addition to monitoring the consultant will examine and log the cores on-site, and segregate core sections they believe may contain information about the archaeological record for later analysis. Core sections of interest will be moved to a laboratory where sediments will be described and screened to recover any cultural materials. The data collected will be used to supplement previous coring efforts and help plan future coring locations, specifically for archaeology, and to plan for future archaeological investigations within the project's Area of Potential Effects.

If you would be interested in observing this process, please do not hesitate to contact me so that we can arrange a time when the field operations are underway. We would appreciate hearing your comments, and will answer any questions or concerns you may have related to the coring program.

Should you have questions or concerns please contact me at 206.716.1121, email bartoyk@wsdot.wa.gov, or Allison Hanson (Environmental Services Director for Mega-Projects) at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Kevin M. Bartoy
WSDOT Cultural Resources Specialist
ESO Mega Projects

Enclosure: Proposed Phase 3 Boring Plan Maps (5 pages)

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December 8, 2009

Laura Murphy
Muckleshoot Indian Tribe
39015 172nd Avenue SE
Auburn, WA 98092

Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project

Dear Laura Murphy:

The Washington State Department of Transportation (WSDOT), in cooperation with the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2).

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Sincerely,

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WSDOT Cultural Resources Specialist
ESO Mega Projects

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December 8, 2009

Cindy Spiry
Snoqualmie Nation
PO Box 969
8130 Railroad Avenue, Suite 103
Snoqualmie, WA 98065

Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project

Dear Cindy Spiry:

The Washington State Department of Transportation (WSDOT), in cooperation with the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2).

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December 8, 2009

Ray Mullen
Snoqualmie Nation
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Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project

Dear Ray Mullen:

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December 8, 2009

Hank Gobin
Tulalip Tribes
7515 Totem Beach Road
Tulalip, WA 98271-9694

Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project

Dear Hank Gobin:

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December 8, 2009

Tim Brewer
Tulalip Tribes
7515 Totem Beach Road
Tulalip, WA 98271-9694

Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project

Dear Tim Brewer:

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December 8, 2009

Cecile Hansen
Duwamish Tribe
4717 W. Marginal Way
Seattle, WA 98106-1514

Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project

Dear Chairwoman Hansen:

The Washington State Department of Transportation (WSDOT), in cooperation with the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2).

WSDOT is preparing to undertake another phase of geotechnical coring to establish existing subsurface conditions along the proposed tunnel alignment. We previously sent you the geotechnical exploration plan for Phase 1 of this effort and notified you of the implementation of Phase 2 earlier this fall. The current coring represents Phase 3 of this effort. Attached to this letter, you will find location information for this Phase 3 coring effort.

WSDOT has retained the services of a cultural resources consultant to monitor extraction of the sonic core borings, which produce a continuous sample in contrast to the mud rotary borings which produce a split-spoon sedimentary sample. In addition to monitoring the consultant will examine and log the cores on-site, and segregate core sections they believe may contain information about the archaeological record for later analysis. Core sections of interest will be moved to a laboratory where sediments will be described and screened to recover any cultural materials. The data collected will be used to supplement previous coring efforts and help plan future coring locations, specifically for archaeology, and to plan for future archaeological investigations within the project's Area of Potential Effects.

If you would be interested in observing this process, please do not hesitate to contact me so that we can arrange a time when the field operations are underway. We would appreciate hearing your comments, and will answer any questions or concerns you may have related to the coring program.

Should you have questions or concerns please contact me at 206.716.1121, email bartoyk@wsdot.wa.gov, or Allison Hanson (Environmental Services Director for Mega-Projects) at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Kevin M. Bartoy
WSDOT Cultural Resources Specialist
ESO Mega Projects

Enclosure: Proposed Phase 3 Boring Plan Maps (5 pages)

cc: Matt Sterner, DAHP, w/ enclosure
Randy Everett, FHWA w/ enclosure
Allison Hanson, WSDOT w/ enclosure
Scott Williams, WSDOT w/ enclosure
Megan Beeby, WSDOT w/ enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

ESO Mega Projects
401 Second Avenue South, Suite 300
Seattle, WA 98104
206-716-1121/ fax 206-716-1101
TTY: 1-800-833-6388
www.wsdot.wa.gov

December 8, 2009

Johnson Meninick
Confederated Tribes and Bands of the Yakama Nation
PO Box 151
Toppenish, WA 98948

Re: Update on Geotechnical Coring Work for Alaskan Way Viaduct Replacement Project

Dear Johnson Meninick:

The Washington State Department of Transportation (WSDOT), in cooperation with the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2).

WSDOT is preparing to undertake another phase of geotechnical coring to establish existing subsurface conditions along the proposed tunnel alignment. We previously sent you the geotechnical exploration plan for Phase 1 of this effort and notified you of the implementation of Phase 2 earlier this fall. The current coring represents Phase 3 of this effort. Attached to this letter, you will find location information for this Phase 3 coring effort.

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Sincerely,

Kevin M. Bartoy
WSDOT Cultural Resources Specialist
ESO Mega Projects

Enclosure: Proposed Phase 3 Boring Plan Maps (5 pages)

cc: Matt Sterner, DAHP, w/ enclosure
Randy Everett, FHWA w/ enclosure
Allison Hanson, WSDOT w/ enclosure
Scott Williams, WSDOT w/ enclosure
Megan Beeby, WSDOT w/ enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

ESO Mega Projects
999 3rd Avenue, Suite 2424
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206-716-1220/ fax 206-716-1101
TTY: 1-800-833-6388
www.wsdot.wa.gov

February 4, 2010

Dr. Allyson Brooks
State Historic Preservation Officer
Washington Department of Archaeology & Historic Preservation
PO Box 48343
Olympia, WA 98504

Log: **051209-10-FHWA**
Property: **Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel**
Re: **Comment Request for Revised Area of Potential Effects (APE)**

Dear Dr. Brooks:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(1). As you are aware, recent value engineering efforts have led us to a redesign of the north and south portal locations as well as the alignment for the proposed bored tunnel. WSDOT, on behalf of FHWA, seeks your comment on the revised Area of Potential Effects (APE), which reflects the adjusted tunnel alignment.

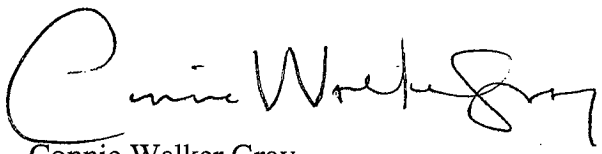
The enclosed graphic, titled "Area of Potential Effects," illustrates the revised APE, including potential staging areas. The horizontal APE, which extends one block on each side of the bored tunnel route, has not changed substantially; the primary adjustment is on the north end of the APE, which now incorporates more of the Belltown neighborhood. The vertical APE at the north and south ends of the tunnel where cut-and-cover trenches will be excavated for the tunnel boring machine (TBM) includes the entirety of the tunnel right-of-way from the ground surface to its maximum depth of excavation. Above the bored tunnel, the vertical APE extends from the ground surface to the upper five feet of Pleistocene deposits.

The other enclosed graphic, titled "SR 99 DEIS-2 Configuration," illustrates the new portal locations and tunnel alignment as well as a profile of the proposed bored tunnel. Potential construction staging areas indicated on the enclosed APE map include:

- Terminal 106
- Terminal 25
- I-90 HOV Ramp Site (S. Royal Brougham Way and 6th Avenue South)
- Fischer Site (S. Atlantic and 4th Avenue South)
- I-90 Ramp Site (S. Royal Brougham Way and 4th Avenue South)
- 1st Avenue South Bridge site

Thank you for your ongoing interest and participation in this undertaking, We look forward to your comment on the revised APE for this project by March 10, 2010. If you have questions, comments or concerns please contact me at 206-521-5631, email grayc@wsdot.wa.gov or you may also contact Kevin Bartoy, WSDOT Archaeologist at 206-521-5628 or bartoyk@wsdot.wa.gov.

Sincerely,



Connie Walker Gray
WSDOT Cultural Resources Specialist

New Address
999 3rd Avenue, Suite 2424
Seattle, WA 98104

cc: Randy Everett, FHWA, w/ enclosure
Allyson Brooks, SHPO w/enclosure
Scott Williams, WSDOT HQ w/enclosure
Allison Hanson, WSDOT, w/ enclosure
Kevin Bartoy, WSDOT, w/ enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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February 5, 2010

Honorable Cecile Hansen
Duwamish Tribe
4705 West Marginal Way
Seattle, Washington 98106

Re: Comment Request for Revised Area of Potential Effects (APE) for Alaskan Way Viaduct Bored Tunnel Alternative

Dear Chairwoman Hansen:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2). Recent value engineering efforts have led to a redesign of the north and south portal locations as well as the alignment for the proposed bored tunnel. WSDOT, on behalf of FHWA, seeks your comment on the revised Area of Potential Effects (APE), which reflects the adjusted tunnel alignment.

Attachment 1, titled "Area of Potential Effects," illustrates the revised APE, including potential staging areas. The horizontal APE, which extends one block on each side of the bored tunnel route, has not changed substantially; the primary adjustment is on the north end of the APE, which now incorporates more of the Belltown neighborhood. The vertical APE at the north and south ends of the tunnel where cut-and-cover trenches will be excavated for the tunnel boring machine (TBM) includes the entirety of the tunnel right-of-way from the ground surface to its maximum depth of excavation. Above the bored tunnel, the vertical APE extends from the ground surface to the upper five feet of Pleistocene deposits.

Attachment 2, titled "SR 99 DEIS-2 Configuration," illustrates the new portal locations and tunnel alignment as well as a profile of the proposed bored tunnel.

WSDOT respectfully requests your review and comment by March 10, 2010. Comments can be sent to Kevin Bartoy and his contact information is below.

Should you have questions or concerns please contact Kevin Bartoy (WSDOT Cultural Resources Specialist) at 206.491.9242, email bartoyk@wsdot.wa.gov, or Allison Hanson (Environmental Services Director for Mega Projects) at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Attachment 1. Map of Area of Potential Effects
Attachment 2. SR 99 DEIS-2 Configuration

cc. Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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February 5, 2010

Honorable Charlotte Williams
Muckleshoot Tribe
39015 172nd Avenue SE
Auburn, Washington 98092

Re: Comment Request for Revised Area of Potential Effects (APE) for Alaskan Way Viaduct Bored Tunnel Alternative

Dear Chairwoman Williams:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2). Recent value engineering efforts have led to a redesign of the north and south portal locations as well as the alignment for the proposed bored tunnel. WSDOT, on behalf of FHWA, seeks your comment on the revised Area of Potential Effects (APE), which reflects the adjusted tunnel alignment.

Attachment 1, titled "Area of Potential Effects," illustrates the revised APE, including potential staging areas. The horizontal APE, which extends one block on each side of the bored tunnel route, has not changed substantially; the primary adjustment is on the north end of the APE, which now incorporates more of the Belltown neighborhood. The vertical APE at the north and south ends of the tunnel where cut-and-cover trenches will be excavated for the tunnel boring machine (TBM) includes the entirety of the tunnel right-of-way from the ground surface to its maximum depth of excavation. Above the bored tunnel, the vertical APE extends from the ground surface to the upper five feet of Pleistocene deposits.

Attachment 2, titled "SR 99 DEIS-2 Configuration," illustrates the new portal locations and tunnel alignment as well as a profile of the proposed bored tunnel.

WSDOT respectfully requests your review and comment by March 10, 2010. Comments can be sent to Kevin Bartoy and his contact information is below.

Should you have questions or concerns please contact Kevin Bartoy (WSDOT Cultural Resources Specialist) at 206.491.9242, email bartoyk@wsdot.wa.gov, or Allison Hanson (Environmental Services Director for Mega Projects) at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Attachment 1. Map of Area of Potential Effects
Attachment 2. SR 99 DEIS-2 Configuration

cc. Laura Murphy, Muckleshoot Tribe w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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February 5, 2010

Honorable Joseph Mullen
Snoqualmie Tribe
PO Box 969
Snoqualmie, Washington 98065

Re: Comment Request for Revised Area of Potential Effects (APE) for Alaskan Way Viaduct Bored Tunnel Alternative

Dear Chairman Mullen:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2). Recent value engineering efforts have led to a redesign of the north and south portal locations as well as the alignment for the proposed bored tunnel. WSDOT, on behalf of FHWA, seeks your comment on the revised Area of Potential Effects (APE), which reflects the adjusted tunnel alignment.

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Attachment 2, titled "SR 99 DEIS-2 Configuration," illustrates the new portal locations and tunnel alignment as well as a profile of the proposed bored tunnel.

WSDOT respectfully requests your review and comment by March 10, 2010. Comments can be sent to Kevin Bartoy and his contact information is below.

Should you have questions or concerns please contact Kevin Bartoy (WSDOT Cultural Resources Specialist) at 206.491.9242, email bartoyk@wsdot.wa.gov, or Allison Hanson (Environmental Services Director for Mega Projects) at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Attachment 1. Map of Area of Potential Effects
Attachment 2. SR 99 DEIS-2 Configuration

cc. Ray Mullen, Snoqualmie Tribe w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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February 5, 2010

Honorable Leonard Forsman
Suquamish Tribe
PO Box 498
Suquamish, Washington 98292

Re: Comment Request for Revised Area of Potential Effects (APE) for Alaskan Way Viaduct Bored Tunnel Alternative

Dear Chairman Forsman:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2). Recent value engineering efforts have led to a redesign of the north and south portal locations as well as the alignment for the proposed bored tunnel. WSDOT, on behalf of FHWA, seeks your comment on the revised Area of Potential Effects (APE), which reflects the adjusted tunnel alignment.

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Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Attachment 1. Map of Area of Potential Effects
Attachment 2. SR 99 DEIS-2 Configuration

cc. Dennis Lewarch, Suquamish Tribe w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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Seattle, WA 98104
206-521-5628/ fax 206-716-1101
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www.wsdot.wa.gov

February 5, 2010

Honorable Melvin R. Sheldon
Tulalip Tribes
6406 Marine Drive
Tulalip, Washington 98271

Re: Comment Request for Revised Area of Potential Effects (APE) for Alaskan Way Viaduct Bored Tunnel Alternative

Dear Chairman Sheldon:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2). Recent value engineering efforts have led to a redesign of the north and south portal locations as well as the alignment for the proposed bored tunnel. WSDOT, on behalf of FHWA, seeks your comment on the revised Area of Potential Effects (APE), which reflects the adjusted tunnel alignment.

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Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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Seattle, WA 98104
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TTY: 1-800-833-6388
www.wsdot.wa.gov

February 5, 2010

Honorable Ralph Sampson, Jr.
Yakama Nation
PO Box 151
Toppenish, Washington 98948

Re: Comment Request for Revised Area of Potential Effects (APE) for Alaskan Way Viaduct Bored Tunnel Alternative

Dear Chairman Sampson:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(2). Recent value engineering efforts have led to a redesign of the north and south portal locations as well as the alignment for the proposed bored tunnel. WSDOT, on behalf of FHWA, seeks your comment on the revised Area of Potential Effects (APE), which reflects the adjusted tunnel alignment.

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Sincerely,

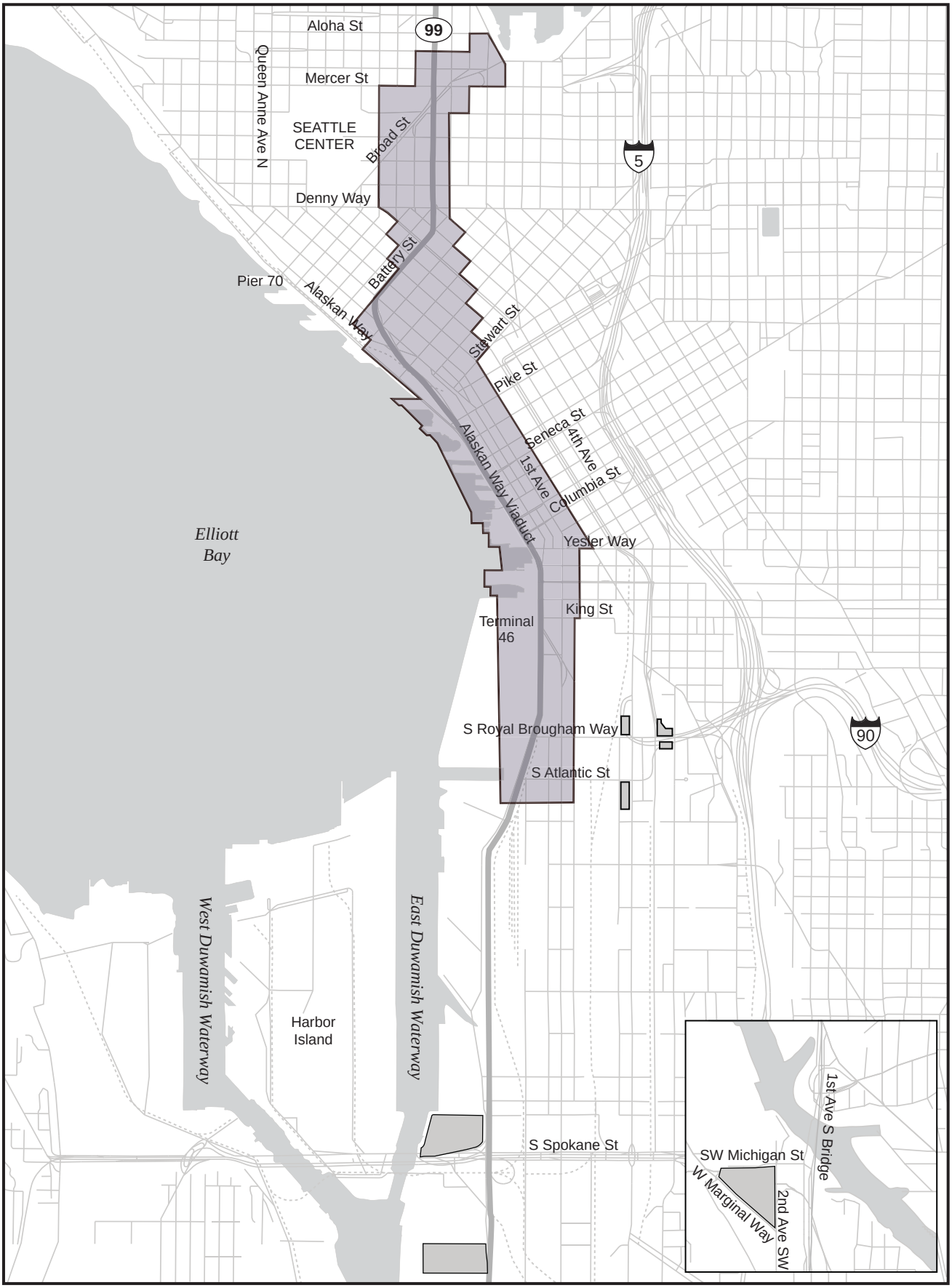
Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Attachment 1. Map of Area of Potential Effects
Attachment 2. SR 99 DEIS-2 Configuration

cc. Hank Gobin, Tulalip Tribes w/ enclosure
Timothy Brewer, Tulalip Tribes w/ enclosure
Richard Young, Tulalip Tribes w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

Attachment 1. Map of Area of Potential Effects
Attachment 2. SR 99 DEIS-2 Configuration

cc. Johnson Meninick, Yakama Nation w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure



554-1585-030/CC(07) 1/28/10

N

0 2,400

SCALE IN FEET

Area of Potential Effect

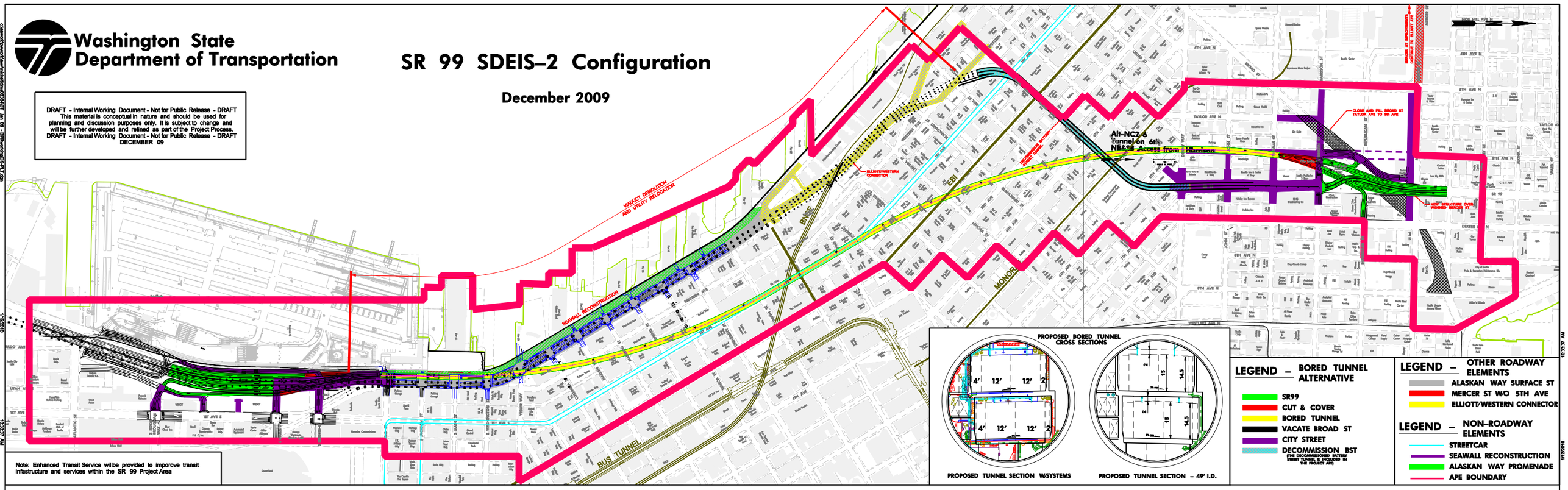
Washington State Department of Transportation

SR 99 SDEIS–2 Configuration

December 2009

DRAFT - Internal Working Document - Not for Public Release - DRAFT
This material is conceptual in nature and should be used for planning and discussion purposes only. It is subject to change and will be further developed and refined as part of the Project Process.
DRAFT - Internal Working Document - Not for Public Release - DRAFT
DECEMBER 09

Note: Enhanced Transit Service will be provided to improve transit infastructure and services within the SR 99 Project Area



PROPOSED BORED TUNNEL CROSS SECTIONS

LEGEND – BORED TUNNEL ALTERNATIVE

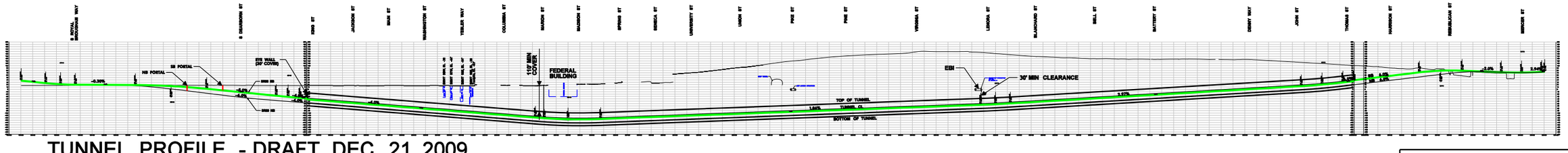
- SR99
- CUT & COVER
- BORED TUNNEL
- VACATE BROAD ST
- CITY STREET
- DECOMMISSION BST (THE DECOMMISSIONED BATTERY STREET TUNNEL IS INCLUDED IN THE PROJECT APE)

LEGEND – OTHER ROADWAY ELEMENTS

- ALASKAN WAY SURFACE ST
- MERCER ST W/O 5TH AVE
- ELLIOTT/WESTERN CONNECTOR

LEGEND – NON–ROADWAY ELEMENTS

- STREETCAR
- SEAWALL RECONSTRUCTION
- ALASKAN WAY PROMENADE
- APE BOUNDARY



TUNNEL PROFILE - DRAFT DEC 21 2009

DRAFT - Internal Working Document - Not for Public Release - DRAFT
This material is conceptual in nature and should be used for planning and discussion purposes only. It is subject to change and will be further developed and refined as part of the Project Process.
DRAFT - Internal Working Document - Not for Public Release - DRAFT
DECEMBER 09

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

February 23, 2010

Mr. Kevin Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects
999 3rd Avenue, Suite 2424
Seattle, WA 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: Archaeology – More Information Needed

Dear Mr. Bartoy:

We have reviewed the materials forwarded to our office for the Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel project. Thank you for your description of the revised area of potential effect (APE) for the project. I would like to request clarification regarding the extent of the APE in the area of the Battery St. Tunnel. Since the ultimate disposition of the Battery St. Tunnel has not yet been determined following the completion of the deep-bore tunnel, I would request justification for the northern boundary of the APE remaining along Battery St. Dismantling or destruction of the Battery St Tunnel could result in vibration or other damage to adjacent National Register of Historic Property (NRHP)-listed or eligible structures. Please revisit the APE boundary in this portion of the project area and resubmit with justifications to our office for review and comment.

We look forward to the results of your cultural resources survey efforts, your consultation with the concerned tribes, and receiving the survey report. We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available.

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised.

Please note that DAHP requires that all historic property inventory and archaeological site forms be provided to our office electronically. If you have not registered for a copy of the database, please log onto our website at www.dahp.wa.gov and go to the Survey/Inventory page for more information and a registration form. To assist you in conducting a survey, DAHP has developed a set of cultural resource reporting guidelines. You can obtain a copy of these guidelines from our website. Finally, please note that

effective Nov. 2, 2009, DAHP requires that all cultural resource reports be submitted in PDF format on a labeled CD along with an unbound paper copy. For further information please go to http://www.dahp.wa.gov/documents/CR_ReportPDF_Requirement.pdf.

Thank you for the opportunity to review and comment. If you have any questions, please feel free to contact me.

Sincerely,

Matthew Sterner, M.A.
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

ESO Mega Projects
999 3rd Avenue, Suite 2424
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April 1, 2010

Dr. Allyson Brooks
State Historic Preservation Officer
Washington Department of Archaeology & Historic Preservation
PO Box 48343
Olympia, WA 98504

Log: **051209-10-FHWA**
Property: **Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel**
Re: **Comment Request for Revised Area of Potential Effects (APE)**

Dear Dr. Brooks:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(1). Thank you for the letter from Matthew Sterner dated February 23, 2010, regarding the Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel APE. Mr. Sterner requested additional information about the decommissioning of the Battery Street Tunnel (BST) and recommended including properties above and immediately north of the BST within the APE. We appreciate the comment, and have expanded the APE per Mr. Sterner's suggestion, as you will note in the attached map.

Furthermore, a current description of the BST decommissioning is provided here. The decommissioning will use crushed rubble recycled from the existing Viaduct to fill the tunnel approximately two-thirds full. Then, low-strength concrete slurry will be pumped in from above to solidify the tunnel. Businesses and residents may experience short-term effects from truck traffic due to this activity, but no long-term effects are expected. Additional analysis of this activity, as well as other effects from this project, will be included in the forthcoming Cultural Resources Discipline Report.

Thank you for your ongoing interest and participation in this undertaking. We look forward to your comment on the revised APE for this project by May 3, 2010. If you

have questions, comments or concerns please contact me at 206-521-5631, email grayc@wsdot.wa.gov or you may also contact Kevin Bartoy, WSDOT Archaeologist at 206-521-5628 or bartoyk@wsdot.wa.gov.

Sincerely,

Connie Walker Gray
WSDOT Cultural Resources Specialist

cc: Randy Everett, FHWA, w/ enclosure
Scott Williams, WSDOT HQ w/enclosure
Allison Hanson, WSDOT, w/ enclosure
Kevin Bartoy, WSDOT, w/ enclosure

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

April 28, 2010

Ms. Connie Walker-Gray
WSDOT ESO Mega Projects
999 3rd Avenue, Suite 2424
Seattle, WA 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: Archaeology - APE Concur

Dear Ms. Walker-Gray:

We have reviewed the materials forwarded to our office for the Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel project. Thank you for your description of the revised area of potential effect (APE) for the project. We concur with the definition of the revised APE. We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available.

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised.

Please note that DAHP requires that all historic property inventory and archaeological site forms be provided to our office electronically. Please also note that effective Nov. 2, 2009, DAHP requires that all cultural resource reports be submitted in PDF format on a labeled CD along with an unbound paper copy. For more, please go to http://www.dahp.wa.gov/documents/CR_ReportPDF_Requirement.pdf.

Thank you for the opportunity to review and comment. If you have any questions, please feel free to contact me.

Sincerely,

Matthew Sterner, M.A.
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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May 5, 2010

Honorable Cecile Hansen
Duwamish Tribe
4705 West Marginal Way
Seattle, WA 98106

Re: Comment Request for Revised Area of Potential Effect (APE) for Alaskan Way Viaduct Replacement Project Bored Tunnel Alternative

Dear Chairwoman Hansen:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2 (c)(2) of the National Historic Preservation Act.

We are writing to inform you that we have revised the Area of Potential Effects (APE) for this project in order to consider potential above-ground effects associated with the decommissioning of the Battery Street Tunnel (BST). The decommissioning will use crushed rubble recycled from the existing Viaduct to fill the tunnel approximately two-thirds full. Then, low-strength concrete slurry will be pumped in from above to solidify the tunnel. Businesses and residents may experience short-term effects from truck traffic due to this activity, but no long-term effects are expected.

The enclosed graphic illustrates the revised APE, including potential staging areas. We are currently working on identifying historic properties within the revised APE, and will then consider the undertaking's effects on historic properties. This analysis will be presented in the Cultural Resources Discipline Report, which will be available for review and comment later this spring. Upon submittal of the report, we will be coordinating with the Section 106 consulting parties and scheduling a meeting to provide an overview of the project and a venue for questions and comments.

Thank you for your ongoing interest and participation in this undertaking. We look forward to continuing consultation with you, and will provide you with a copy of the Cultural Resources Discipline Report when it becomes available. In the meantime, if you

have questions, comments or concerns please contact Kevin Bartoy, WSDOT Cultural Resources Specialist, at 206-521-5628, email bartoyk@wsdot.wa.gov or Allison Hanson (Environmental Services Director for Mega Projects) at 206-282-5279, email hansona@wsdot.wa.gov.

Sincerely,

Ron Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

cc: Randy Everett, FHWA
Matthew Sterner, DAHP
Scott Williams, WSDOT
Kevin Bartoy, WSDOT
Allison Hanson, WSDOT

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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May 5, 2010

Honorable Charlotte Williams
Muckleshoot Tribe
39015 172nd Avenue SE
Auburn, WA 98092

Re: Comment Request for Revised Area of Potential Effect (APE) for Alaskan Way Viaduct Replacement Project Bored Tunnel Alternative

Dear Chairwoman Williams:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2 (c)(2) of the National Historic Preservation Act.

We are writing to inform you that we have revised the Area of Potential Effects (APE) for this project in order to consider potential above-ground effects associated with the decommissioning of the Battery Street Tunnel (BST). The decommissioning will use crushed rubble recycled from the existing Viaduct to fill the tunnel approximately two-thirds full. Then, low-strength concrete slurry will be pumped in from above to solidify the tunnel. Businesses and residents may experience short-term effects from truck traffic due to this activity, but no long-term effects are expected.

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Thank you for your ongoing interest and participation in this undertaking. We look forward to continuing consultation with you, and will provide you with a copy of the Cultural Resources Discipline Report when it becomes available. In the meantime, if you

have questions, comments or concerns please contact Kevin Bartoy, WSDOT Cultural Resources Specialist, at 206-521-5628, email bartoyk@wsdot.wa.gov or Allison Hanson (Environmental Services Director for Mega Projects) at 206-282-5279, email hansona@wsdot.wa.gov.

Sincerely,

Ron Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

cc: Laura Murphy, Muckleshoot Tribe
Randy Everett, FHWA
Matthew Sterner, DAHP
Scott Williams, WSDOT
Kevin Bartoy, WSDOT
Allison Hanson, WSDOT

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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May 5, 2010

Honorable Joseph Mullen
Snoqualmie Tribe
PO Box 969
Snoqualmie, WA 98065

Re: Comment Request for Revised Area of Potential Effect (APE) for Alaskan Way Viaduct Replacement Project Bored Tunnel Alternative

Dear Chairman Mullen:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2 (c)(2) of the National Historic Preservation Act.

We are writing to inform you that we have revised the Area of Potential Effects (APE) for this project in order to consider potential above-ground effects associated with the decommissioning of the Battery Street Tunnel (BST). The decommissioning will use crushed rubble recycled from the existing Viaduct to fill the tunnel approximately two-thirds full. Then, low-strength concrete slurry will be pumped in from above to solidify the tunnel. Businesses and residents may experience short-term effects from truck traffic due to this activity, but no long-term effects are expected.

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Thank you for your ongoing interest and participation in this undertaking. We look forward to continuing consultation with you, and will provide you with a copy of the Cultural Resources Discipline Report when it becomes available. In the meantime, if you

have questions, comments or concerns please contact Kevin Bartoy, WSDOT Cultural Resources Specialist, at 206-521-5628, email bartoyk@wsdot.wa.gov or Allison Hanson (Environmental Services Director for Mega Projects) at 206-282-5279, email hansona@wsdot.wa.gov.

Sincerely,

Ron Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

cc: Ray Mullen, Snoqualmie Tribe
Randy Everett, FHWA
Matthew Sterner, DAHP
Scott Williams, WSDOT
Kevin Bartoy, WSDOT
Allison Hanson, WSDOT

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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May 5, 2010

Honorable Leonard Forsman
Suquamish Tribe
PO Box 498
Suquamish, WA 98292

Re: Comment Request for Revised Area of Potential Effect (APE) for Alaskan Way Viaduct Replacement Project Bored Tunnel Alternative

Dear Chairman Forsman:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2 (c)(2) of the National Historic Preservation Act.

We are writing to inform you that we have revised the Area of Potential Effects (APE) for this project in order to consider potential above-ground effects associated with the decommissioning of the Battery Street Tunnel (BST). The decommissioning will use crushed rubble recycled from the existing Viaduct to fill the tunnel approximately two-thirds full. Then, low-strength concrete slurry will be pumped in from above to solidify the tunnel. Businesses and residents may experience short-term effects from truck traffic due to this activity, but no long-term effects are expected.

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have questions, comments or concerns please contact Kevin Bartoy, WSDOT Cultural Resources Specialist, at 206-521-5628, email bartoyk@wsdot.wa.gov or Allison Hanson (Environmental Services Director for Mega Projects) at 206-282-5279, email hansona@wsdot.wa.gov.

Sincerely,

Ron Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

cc: Dennis Lewarch, Suquamish Tribe
Randy Everett, FHWA
Matthew Sterner, DAHP
Scott Williams, WSDOT
Kevin Bartoy, WSDOT
Allison Hanson, WSDOT

Washington State Department of Transportation
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May 5, 2010

Honorable Melvin R. Sheldon
Tulalip Tribe
6406 Marine Drive
Tulalip, WA 98271

Re: Comment Request for Revised Area of Potential Effect (APE) for Alaskan Way Viaduct Replacement Project Bored Tunnel Alternative

Dear Chairman Sheldon:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2 (c)(2) of the National Historic Preservation Act.

We are writing to inform you that we have revised the Area of Potential Effects (APE) for this project in order to consider potential above-ground effects associated with the decommissioning of the Battery Street Tunnel (BST). The decommissioning will use crushed rubble recycled from the existing Viaduct to fill the tunnel approximately two-thirds full. Then, low-strength concrete slurry will be pumped in from above to solidify the tunnel. Businesses and residents may experience short-term effects from truck traffic due to this activity, but no long-term effects are expected.

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Thank you for your ongoing interest and participation in this undertaking. We look forward to continuing consultation with you, and will provide you with a copy of the Cultural Resources Discipline Report when it becomes available. In the meantime, if you

have questions, comments or concerns please contact Kevin Bartoy, WSDOT Cultural Resources Specialist, at 206-521-5628, email bartoyk@wsdot.wa.gov or Allison Hanson (Environmental Services Director for Mega Projects) at 206-282-5279, email hansona@wsdot.wa.gov.

Sincerely,

Ron Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

cc: Hank Gobin, Tulalip Tribes
Timothy Brewer, Tulalip Tribes
Richard Young, Tulalip Tribes
Randy Everett, FHWA
Matthew Sterner, DAHP
Scott Williams, WSDOT
Kevin Bartoy, WSDOT
Allison Hanson, WSDOT

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May 5, 2010

Honorable Ralph Sampson, Jr.
Yakama Nation
PO Box 151
Toppenish, WA 98948

Re: Comment Request for Revised Area of Potential Effect (APE) for Alaskan Way Viaduct Replacement Project Bored Tunnel Alternative

Dear Chairman Sampson:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2 (c)(2) of the National Historic Preservation Act.

We are writing to inform you that we have revised the Area of Potential Effects (APE) for this project in order to consider potential above-ground effects associated with the decommissioning of the Battery Street Tunnel (BST). The decommissioning will use crushed rubble recycled from the existing Viaduct to fill the tunnel approximately two-thirds full. Then, low-strength concrete slurry will be pumped in from above to solidify the tunnel. Businesses and residents may experience short-term effects from truck traffic due to this activity, but no long-term effects are expected.

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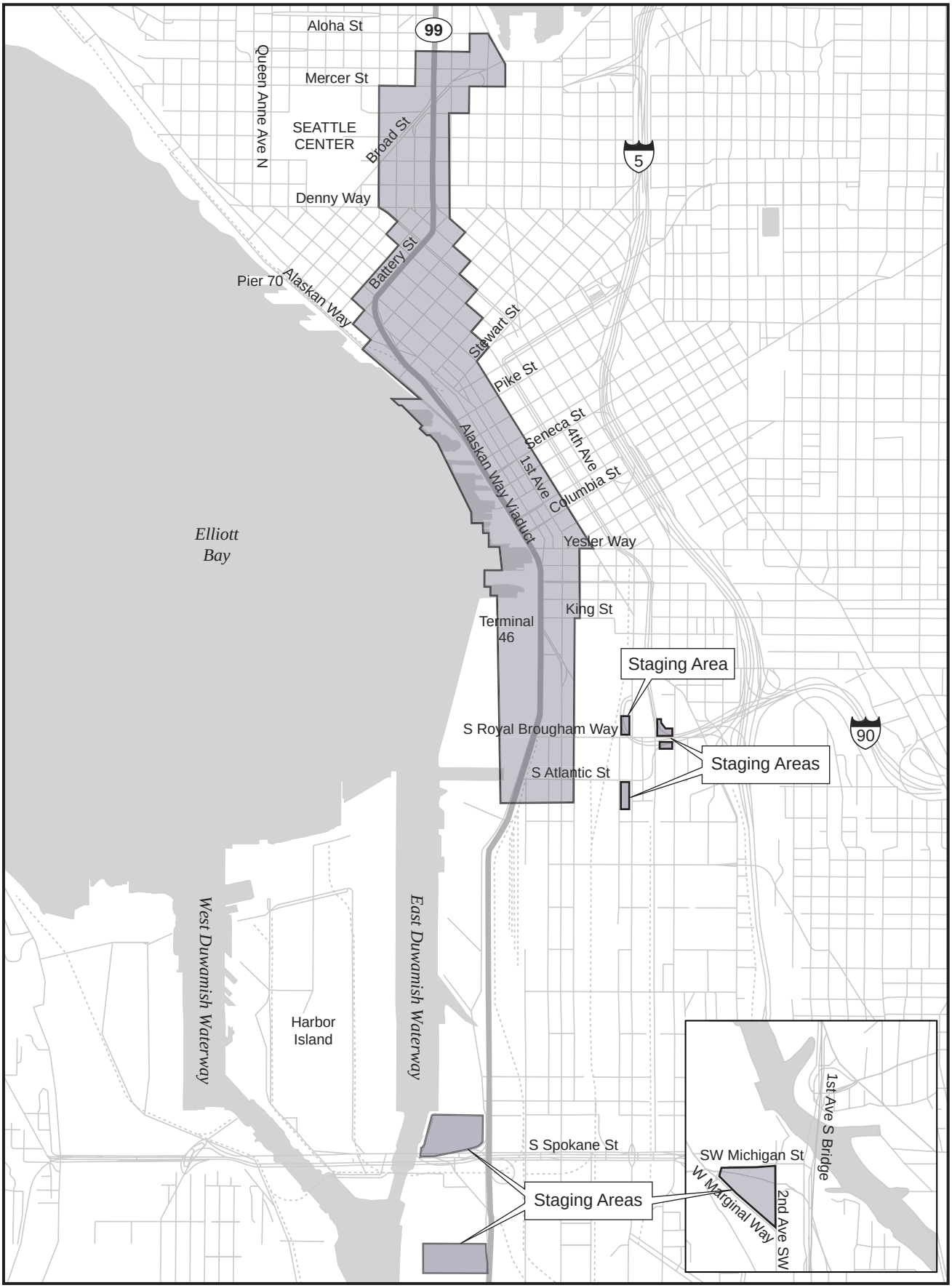
Thank you for your ongoing interest and participation in this undertaking. We look forward to continuing consultation with you, and will provide you with a copy of the Cultural Resources Discipline Report when it becomes available. In the meantime, if you

have questions, comments or concerns please contact Kevin Bartoy, WSDOT Cultural Resources Specialist, at 206-521-5628, email bartoyk@wsdot.wa.gov or Allison Hanson (Environmental Services Director for Mega Projects) at 206-282-5279, email hansona@wsdot.wa.gov.

Sincerely,

Ron Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

cc: Johnson Meninick, Yakama Nation
Randy Everett, FHWA
Matthew Sterner, DAHP
Scott Williams, WSDOT
Kevin Bartoy, WSDOT
Allison Hanson, WSDOT



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SCALE IN FEET

Alaskan Way Viaduct Replacement Project Area of Potential Effect

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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May 24, 2010

Dr. Allyson Brooks
State Historic Preservation Officer (SHPO)
Department of Archaeology and Historic Preservation (DAHP)
PO Box 48343
Olympia, Washington 98504-8343

DAHP Log #:	**051209-10-FHWA**
Property:	**Alaskan Way Viaduct Replacement Project**
Re:	**Review of Discipline Report (DR) for Second Supplemental Draft Environmental Impact Statement (SDEIS), Determination of NRHP Eligibility for the Built Environment, and Determination of Adverse Effect**

Dear Dr. Brooks:

Pursuant to 36 CFR 800.2(c)(1), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the SR 99 Alaskan Way Viaduct Replacement Project. WSDOT is preparing a second Supplemental Draft Environmental Impact Statement (SDEIS) to meet the requirements of the National Environmental Policy Act (NEPA). This second SDEIS focuses on the potential effects of the Bored Tunnel Alternative.

Pursuant to 36 CFR 800.8(c) and 40 CFR 1502.25(a), you will find attached a copy of the draft historic, cultural, and archaeological resources discipline report (Attachment 1) prepared for inclusion in the second SDEIS, which is currently scheduled to be published in October 2010. We seek your review and comment on this document.

The Alaskan Way Viaduct Replacement Project presents unique challenges in regards to historic properties given that access to archaeological resources is restricted by depth below surface, ground water, existing infrastructure, requirements of existing transportation, the need to maintain existing utility service, and the proposed methods of construction. In addition to these challenges, a portion of the project is design-build, which integrates the final design and the construction phases. For these reasons, we are conducting a phased process for the identification and evaluation of historic properties as specified 36 CFR 800.4(b)(2).

Pursuant to 36 CFR 800.4(b)(2), the attached historic, cultural, and archaeological resources discipline report establishes "the likely presence of historic properties within the area of potential effects for each alternative or inaccessible area through background research, consultation and an appropriate level of field investigation." In continued consultation with SHPO, DAHP, tribes, consulting parties, and other interested parties, we intend to develop a memorandum of agreement

(MOA) pursuant to 36 CFR 800.6. The eventual MOA will resolve identified adverse effects as well as potential adverse effects identified if the Bored Tunnel Alternative is the selected alternative in the Record of Decision.

As part of the cultural resources investigation, all historic built environment resources within the Area of Potential Effects (APE) were evaluated and recorded. Within the APE there known previously recorded resources, including the NRHP-listed Pioneer Square and Pike Place Market Historic Districts, and the NRHP-eligible Central Waterfront Pier District (Piers 54 through 59). There is one National Historic Landmark within the APE: the Pioneer Building/Pioneer Place/Pergola on 1st Avenue and Yesler Way.

In a letter dated October 20, 2009, WSDOT, on behalf of FHWA, made determinations of eligibility to the National Register of Historic Places (NRHP) for all historic built environment resources within the APE. In a November 24, 2009 letter from Mr. Russell Holter, DAHP concurred with the NRHP determinations for 161 properties within the APE. Mr. Holter requested additional information and/or justification of NRHP eligibility for 15 resources. With this submittal, we are continuing consultation on those 15 properties, and we are resubmitting those forms with the following NRHP eligibility determinations:

Great Northern Railroad Tunnel, S. Main to Bell Streets – NRHP eligible
The J.A. Baillargeon Building, 1100 2nd Avenue – NRHP eligible (two buildings)
The Fix Building, 1507 Western – not NRHP eligible
The Donohoe Garage, 1907 3rd Avenue – NRHP eligible
The Heiden Building, 1925 3rd Avenue – NRHP eligible
The Nesika Apartments, 2021 4th Avenue – not NRHP eligible
The Rex Land Company, 2124 3rd Avenue – not NRHP eligible
The Cinerama, 2100 4th Avenue – not NRHP eligible
The Cornelius Apartments, 306 Blanchard – not NRHP eligible
The Charlesgate Apartments, 2230 4th Avenue – not NRHP eligible
The Royal Typewriter Building, 2221 5th Avenue – not NRHP eligible
The Compton Building, 2315 Western - NRHP eligible
The Bianchi Law Offices, 605 Thomas Street – not NRHP eligible
The Seattle City Light Building, 319 6th Avenue - NRHP eligible
The Continental Baking Company, 434 Aurora Avenue – not NRHP eligible

Furthermore, as you are aware, we have revised the APE to accommodate new areas that might be affected by the realigned bored tunnel, as well as identified construction staging areas. There are 64 additional buildings within the new APE. WSDOT, on behalf of FHWA, has determined that 15 of these newly identified buildings are NRHP-eligible.

All buildings, structures, and objects have been recorded on Washington State Historic Property Inventory (HPI) forms, which are included in this submittal in printed form (Attachment 2), with database files on the accompanying CD. At this time, pursuant to 36 CFR 800.4(c)(2), we seek your concurrence with our determinations of eligibility for the NRHP.

This undertaking will adversely affect historic properties. As detailed in Attachment 1, we have identified adverse effects to four historic properties listed on or eligible for listing on the NRHP. In terms of the built environment, this project alternative will have an adverse effect on the NRHP-eligible Alaskan Way Viaduct and Battery Street Tunnel, as well as the Western Building and Polson Building, which are contributing elements to the Pioneer Square National Historic District.

In terms of archaeology, this project alternative will have an adverse effect on the Dearborn South Tideland Site (45KI924). Pursuant to 36 CFR 800.8(c)(v), measures to mitigate these adverse effects are outlined in the attached document. These measures would be part of any MOA developed in consultation with SHPO, DAHP, tribes, consulting parties, and other interested parties to mitigate the effects of this project alternative.

Given the challenges posed by this project and its current alternatives under consideration, the attached documents begin our phased process for the identification and evaluation of historic properties. We look forward to continued consultation with you and your office as we move through this process.

Should you have questions or concerns please contact me at 206.521.5628, email bartoyk@wsdot.wa.gov or Environmental Director WSDOT ESO Mega Projects Allison Hanson at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Kevin M. Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects

Enclosures (2): Attachment 1. Section 106: Historic, Cultural, and Archaeological Resources Discipline Report, Alaskan Way Viaduct Replacement Project, Supplemental Draft EIS
Attachment 2. SR 99 Eligibility Determinations: Buildings and Structures 40 or More Years Old within the Area of Potential Effects

cc: Matthew Sterner, DAHP w/ enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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May 24, 2010

Honorable Cecile Hansen
Duwamish Tribe
4705 West Marginal Way
Seattle, Washington 98106

Re: SR 99 Alaskan Way Viaduct Replacement Project, Review of Discipline Report (DR) for Second Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Chairwoman Hansen:

Pursuant to 36 CFR 800.2(c)(2), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the SR 99 Alaskan Way Viaduct Replacement Project. WSDOT is preparing a second Supplemental Draft Environmental Impact Statement (SDEIS) to meet the requirements of the National Environmental Policy Act (NEPA). This second SDEIS focuses on the potential effects of the Bored Tunnel Alternative.

Pursuant to 36 CFR 800.8(c) and 40 CFR 1502.25(a), you will find attached a copy of the draft historic, cultural, and archaeological resources discipline report (Attachment 1) prepared for inclusion in the second SDEIS, which is currently scheduled to be published in October 2010. We seek your review and comment on this document.

The Alaskan Way Viaduct Replacement Project presents unique challenges in regards to historic properties given that access to archaeological resources is restricted by depth below surface, ground water, existing infrastructure, requirements of existing transportation, the need to maintain existing utility service, and the proposed methods of construction. In addition to these challenges, a portion of the project is design-build, which integrates the final design and the construction phases. For these reasons, we are conducting a phased process for the identification and evaluation of historic properties as specified 36 CFR 800.4(b)(2).

Pursuant to 36 CFR 800.4(b)(2), the attached historic, cultural, and archaeological resources discipline report establishes "the likely presence of historic properties within the area of potential effects for each alternative or inaccessible area through background research, consultation and an appropriate level of field investigation." In continued consultation with SHPO, DAHP, tribes, consulting parties, and other interested parties, we intend to develop a memorandum of agreement (MOA) pursuant to 36 CFR 800.6. The eventual MOA will resolve identified adverse effects as well as potential adverse effects identified if the Bored Tunnel Alternative is the selected alternative in the Record of Decision.

As part of the cultural resources investigation, all historic built environment resources within the Area of Potential Effects (APE) were evaluated and recorded. Within the APE there known

previously recorded resources, including the NRHP-listed Pioneer Square and Pike Place Market Historic Districts, and the NRHP-eligible Central Waterfront Pier District (Piers 54 through 59). There is one National Historic Landmark within the APE: the Pioneer Building/Pioneer Place/Pergola on 1st Avenue and Yesler Way.

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Furthermore, as you are aware, we have revised the APE to accommodate new areas that might be affected by the realigned bored tunnel, as well as identified construction staging areas. There are 64 additional buildings within the new APE. WSDOT, on behalf of FHWA, has determined that 15 of these newly identified buildings are NRHP-eligible.

As detailed in Attachment 1, we have identified adverse effects to four historic properties listed on or eligible for listing on the NRHP. In terms of the built environment, this project alternative will have an adverse effect on the NRHP-eligible Alaskan Way Viaduct and Battery Street Tunnel, as well as the Western Building and Polson Building, which are contributing elements to the Pioneer Square National Historic District. In terms of archaeology, this project alternative will have an adverse effect on the Dearborn South Tideland Site (45KI924), a historic-period archaeological site associated with the commercial development of the area of former tide flats south of S. King Street. Pursuant to 36 CFR 800.8(c)(v), measures to mitigate these adverse effects are outlined in the attached document. These measures would be part of any MOA developed in consultation with SHPO, DAHP, tribes, consulting parties, and other interested parties to mitigate the effects of this project alternative.

Given the challenges posed by this project and its current alternatives under consideration, the attached documents are the first steps in our phased process for the identification and evaluation of historic properties. We look forward to continued consultation with you as we move through this process.

Should you have questions or concerns please contact WSDOT ESO Mega Projects Archaeologist Kevin Bartoy at 206.521.5628, email bartoyk@wsdot.wa.gov or Environmental Director WSDOT ESO Mega Projects Allison Hanson at 206.382.5279, email hansona@wsdot.wa.gov.

Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Enclosures: Attachment 1. Section 106: Historic, Cultural, and Archaeological Resources Discipline Report, Alaskan Way Viaduct Replacement Project, Supplemental Draft EIS

cc. Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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May 24, 2010

Honorable Virginia Cross
Muckleshoot Tribe
39015 172nd Avenue SE
Auburn, Washington 98092

Re: SR 99 Alaskan Way Viaduct Replacement Project, Review of Discipline Report (DR) for Second Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Chairwoman Cross:

Pursuant to 36 CFR 800.2(c)(2), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the SR 99 Alaskan Way Viaduct Replacement Project. WSDOT is preparing a second Supplemental Draft Environmental Impact Statement (SDEIS) to meet the requirements of the National Environmental Policy Act (NEPA). This second SDEIS focuses on the potential effects of the Bored Tunnel Alternative.

Pursuant to 36 CFR 800.8(c) and 40 CFR 1502.25(a), you will find attached a copy of the draft historic, cultural, and archaeological resources discipline report (Attachment 1) prepared for inclusion in the second SDEIS, which is currently scheduled to be published in October 2010. We seek your review and comment on this document.

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Pursuant to 36 CFR 800.4(b)(2), the attached historic, cultural, and archaeological resources discipline report establishes "the likely presence of historic properties within the area of potential effects for each alternative or inaccessible area through background research, consultation and an appropriate level of field investigation." In continued consultation with SHPO, DAHP, tribes, consulting parties, and other interested parties, we intend to develop a memorandum of agreement (MOA) pursuant to 36 CFR 800.6. The eventual MOA will resolve identified adverse effects as well as potential adverse effects identified if the Bored Tunnel Alternative is the selected alternative in the Record of Decision.

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previously recorded resources, including the NRHP-listed Pioneer Square and Pike Place Market Historic Districts, and the NRHP-eligible Central Waterfront Pier District (Piers 54 through 59). There is one National Historic Landmark within the APE: the Pioneer Building/Pioneer Place/Pergola on 1st Avenue and Yesler Way.

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Furthermore, as you are aware, we have revised the APE to accommodate new areas that might be affected by the realigned bored tunnel, as well as identified construction staging areas. There are 64 additional buildings within the new APE. WSDOT, on behalf of FHWA, has determined that 15 of these newly identified buildings are NRHP-eligible.

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Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Enclosures: Attachment 1. Section 106: Historic, Cultural, and Archaeological Resources Discipline Report, Alaskan Way Viaduct Replacement Project, Supplemental Draft EIS

cc. Laura Murphy, Muckleshoot Tribe w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

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May 24, 2010

Honorable Joseph Mullen
Snoqualmie Tribe
PO Box 969
Snoqualmie, Washington 98065

Re: SR 99 Alaskan Way Viaduct Replacement Project, Review of Discipline Report (DR) for Second Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Chairman Mullen:

Pursuant to 36 CFR 800.2(c)(2), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the SR 99 Alaskan Way Viaduct Replacement Project. WSDOT is preparing a second Supplemental Draft Environmental Impact Statement (SDEIS) to meet the requirements of the National Environmental Policy Act (NEPA). This second SDEIS focuses on the potential effects of the Bored Tunnel Alternative.

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Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

Enclosures: Attachment 1. Section 106: Historic, Cultural, and Archaeological Resources Discipline Report, Alaskan Way Viaduct Replacement Project, Supplemental Draft EIS

cc. Ray Mullen, Snoqualmie Tribe w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

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May 24, 2010

Honorable Leonard Forsman
Suquamish Tribe
PO Box 498
Suquamish, Washington 98292

Re: SR 99 Alaskan Way Viaduct Replacement Project, Review of Discipline Report (DR) for Second Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Chairman Forsman:

Pursuant to 36 CFR 800.2(c)(2), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the SR 99 Alaskan Way Viaduct Replacement Project. WSDOT is preparing a second Supplemental Draft Environmental Impact Statement (SDEIS) to meet the requirements of the National Environmental Policy Act (NEPA). This second SDEIS focuses on the potential effects of the Bored Tunnel Alternative.

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Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

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cc. Dennis Lewarch, Suquamish Tribe w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
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May 24, 2010

Honorable Melvin R. Sheldon
Tulalip Tribes
6406 Marine Drive
Tulalip, Washington 98271

Re: SR 99 Alaskan Way Viaduct Replacement Project, Review of Discipline Report (DR) for Second Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Chairman Sheldon:

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Sincerely,

Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

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cc. Hank Gobin, Tulalip Tribes w/ enclosure
Timothy Brewer, Tulalip Tribes w/ enclosure
Richard Young, Tulalip Tribes w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
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May 24, 2010

Honorable Ralph Sampson, Jr.
Yakama Nation
PO Box 151
Toppenish, Washington 98948

Re: SR 99 Alaskan Way Viaduct Replacement Project, Review of Discipline Report (DR) for Second Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Chairman Sampson:

Pursuant to 36 CFR 800.2(c)(2), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the SR 99 Alaskan Way Viaduct Replacement Project. WSDOT is preparing a second Supplemental Draft Environmental Impact Statement (SDEIS) to meet the requirements of the National Environmental Policy Act (NEPA). This second SDEIS focuses on the potential effects of the Bored Tunnel Alternative.

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Ronald Paananen
Administrator
Alaskan Way Viaduct and Seawall Replacement Program

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cc. Johnson Meninick, Yakama Nation w/ enclosure
Matthew Sterner, DAHP w/o enclosure
Randy Everett, FHWA w/o enclosure
Allison Hanson, WSDOT w/o enclosure
Scott Williams, WSDOT w/o enclosure
Megan Cotton, WSDOT w/o enclosure

Appendix I

Section 106: Historic, Cultural, and Archaeological Resources Discipline Report

Alaskan Way Viaduct Replacement Project

Supplemental Draft EIS

Lead and Cooperating Agency Review Draft

For Review Only

We respectfully request that the public not be given access to this document because FHWA has determined that this preliminary document is an intergovernmental exchange that may be withheld under the Freedom of Information Act. Premature release of this material to any segment of the public could give some sectors an unfair advantage and would have a chilling effect on intergovernmental coordination and the success of the cooperating agency concept.

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

June 17, 2010

Mr. Kevin Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects
999 3rd Avenue, Suite 2424
Seattle, WA 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: More Information Needed

Dear Mr. Bartoy:

Thank you for contacting our office and providing a copy of the discipline report for the second supplemental draft environmental impact statement for the Alaskan Way Viaduct Replacement project. I have completed my review of the report. I have a number of comments on the document and will discuss below some additional materials and/or steps that are required in order to complete our review.

I would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

- I understand from Mr. Russell Holter, that disagreements remain surrounding eligibility of a number of buildings within the area of potential effect (APE) for the project. My understanding is that Mr. Holter's letter of June 14th indicated DAHP's lack of eligibility concurrence at this time on two of the properties within the APE (the Royal Typewriter and Rex Land Company Buildings) and the need for continued discussions regarding the Bianchi Law Firm Building.
- I also understand from Mr. Holter that issues involving misassigned and duplicated field identification numbers for some of the newly identified properties have not yet been resolved.
- Formal concurrence on the eligibility of the 64 additional buildings within the expanded APE will occur when resolution to the outstanding disagreements is completed.
- Regarding impacts from the project on archaeological resources that either exist or may exist in the APE, we feel the list provided on page 5 of the report is incomplete. From an archaeological perspective, the list indicates only a single archaeological resource (45KI924) and fails to mention or account for the numerous other known or presumed archaeological resources that exist or may exist within the APE. The report does not address the eligibility of or effects to 45KI958 (the SDOT Maintenance Yard site) and does not discuss eligibility or effect determinations for numerous other potential archaeological resources that may exist throughout the APE. Most notable among these resources are Ballast and Denny Islands, remnants of which

were apparently identified during recent coring in the southern portion of the APE. Also, there is a good discussion of the ethnographic resources that are known within the APE, yet there is no substantive discussion of how these resources will be dealt with either before or during construction.

- Page 10 of the document indicates that additional subsurface archaeological exploration will be conducted prior to construction in "areas identified as highly sensitive." I failed to identify further discussion of these "highly sensitive areas." Sections 6.1.3 and 6.2.3 do not adequately address this issue.
- No justification is provided for the statements made on page 10, lines 1–4.
- No justification is provided for the statements made on page 10, lines 30–33.
- DAHP has significant concerns and questions surrounding the concept and implementation of 'compensation grouting.' While the subject is discussed in the discipline report, the detail of the discussion is not sufficient to adequately explain all of the possible effects that this procedure could have on historical and archaeological resources. Until this topic can be presented to the SHPO and DAHP staff in greater detail, we are not in a position to properly evaluate any or all possible effects that this engineering procedure might have on built-environment properties.
- We also have serious concerns regarding settling and vibration issues as they will affect historic structures during construction. Discussion of these specific issues and methods for monitoring their impacts to historic buildings should be addressed in the document.

We look forward to continuing our discussions regarding the content of the discipline report. Overall, the report is well-written and generally descriptive.

These comments are based on the information available at the time of this review in consultation with and on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Please contact me should you have any specific questions about our request and we look forward to receiving this material.

Thank you for the opportunity to review and comment. If you have any questions, please feel free to contact me.

Sincerely,

Matthew Sterner, M.A.
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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June 24, 2010

Mr. Matthew Sterner
Transportation Archaeologist
Department of Archaeology and Historic Preservation (DAHP)
PO Box 48343
Olympia, Washington 98504-8343

DAHP Log #: **051209-10-FHWA**
Property: **Alaskan Way Viaduct Replacement Project**
Re: **Response to Comments in Letter Dated June 17, 2010**

Dear Mr. Sterner:

Pursuant to 36 CFR 800.2(c)(1), the Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation with you in regards to the SR 99 Alaskan Way Viaduct Replacement Project. This letter is intended to respond to comments outlined in your letter dated June 17, 2010 and to provide clarification as to the path forward discussed in a telephone conversation between us and Connie Walker Gray on June 22, 2010. We thank you for taking the time to review our draft historic, cultural, and archaeological resources discipline report submitted to you on May 24, 2010. We greatly appreciate the comments that you provided in writing and also through telephone conversation. We hope that this letter provides clarification to our initial submittal letter to you dated May 24, 2010.

As mentioned in our original submittal letter, the Alaskan Way Viaduct Replacement Project presents unique challenges in regards to historic properties given that access to archaeological resources is restricted by depth below surface, ground water, existing infrastructure, requirements of existing transportation, the need to maintain existing utility service, and the proposed methods of construction. In addition to these challenges, a portion of the project is design-build, which integrates the final design and the construction phases. For these reasons, we are conducting a phased process for the identification and evaluation of historic properties as specified 36 CFR 800.4(b)(2).

We have identified adverse effects to four historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP). In terms of the built environment, this project alternative would have an adverse effect on the NRHP-eligible Alaskan Way Viaduct and Battery Street Tunnel, as well as the Western Building and Polson Building, which are contributing elements to the Pioneer Square National Historic District. In terms of archaeology, this project alternative would have an adverse effect on the Dearborn South Tideland Site (45KI924).

Additionally, we have identified another archaeological site (45KI958), which we intend to treat as eligible for listing in the NRHP for planning purposes, but have decided not to formally determine

eligible until further testing can be undertaken in concert with construction. We have also identified areas sensitive for potential archaeological resources, including the former landforms of Ballast Island and Denny Island. It should be noted that the project will avoid both of these landforms during construction. Information about the additional site and sensitive areas are detailed in Chapters 4.3.2 and 4.3.3 of our draft historic, cultural, and archaeological resources discipline report, and their treatment is addressed in Chapters 6.1.2 and 6.2.2.

Pursuant to 36 CFR 800.4(b)(2), we believe our historic, cultural, and archaeological resources discipline report establishes "the likely presence of historic properties within the area of potential effects for each alternative or inaccessible area through background research, consultation and an appropriate level of field investigation." In continued consultation with SHPO, DAHP, tribes, consulting parties, and other interested parties, we intend to develop a memorandum of agreement (MOA) pursuant to 36 CFR 800.6. The eventual MOA will resolve identified adverse effects as well as potential adverse effects identified if the Bored Tunnel Alternative is the selected alternative in the Record of Decision.

From our telephone conversation, we understand that you have outstanding concerns in regards to ethnographic and built environment resources. In terms of the ethnographic resources identified in our report, we intend to revise the text to indicate that our identification efforts failed to locate physical remains of these resources and that we are continuing consultation with the tribes in regards to any concerns that they might have in regards to these identified ethnographic locations. We understand that this would satisfy the concern expressed in your letter in regards to these resources.

In terms of built environment resources, we acknowledge that the Rex Land Company (2124 3rd Avenue) and the Royal Typewriter (2221 5th Avenue) buildings are eligible for listing in the NRHP. Connie Walker Gray has provided additional information on the Bianchi Law Firm building (605 Thomas) to Russell Holter, and anticipate his response this week.

Ms. Gray continues to work with Mr. Holter on the remaining Historic Property Inventory (HPI) forms for the 64 newly identified resources within the expanded Area of Potential Effects (APE). Our consultant is revising the field identification number on the forms to avoid duplication. Once we have renumbered all of the forms, location maps, and tables, we will resubmit these materials to your office. At that point, we would appreciate formal concurrence on eligibility from your office as soon as possible.

As you are aware, WSDOT staff, including project structural engineers, will be meeting with you on July 1, 2010 to present information on the program's building settlement survey and the proposed measures—including compensation grouting–for avoiding effects on historic properties as a result of vibration and settlement before, during, and after construction. We will also discuss the steps that will be taken to address unanticipated damage to historic properties.

As we move forward in consultation with DAHP on this project, we are requesting the following actions from you:

- Concurrence on the determinations of NRHP eligibility for all properties within the APE; and,
- Concurrence on the determinations of adverse effect on four historic properties within the APE.

Given the challenges posed by this project and its current alternatives under consideration, our historic, cultural, and archaeological resources discipline report begins our phased process for the identification and evaluation of historic properties. We look forward to continued consultation with you and your office as we start to negotiate an MOA with SHPO, DAHP, tribes, consulting parties, and other interested parties that resolves our adverse effects to the Alaskan Way Viaduct and Battery Street Tunnel, the Western Building, Polson Building, and the Dearborn South Tideland Site (45KI924). We intend for the MOA to also outline the further treatment of archaeological site 45KI958 and the areas identified within the APE as sensitive for potential archaeological resources.

Should you have questions or concerns please contact me at 206.521.5628, email bartoyk@wsdot.wa.gov or Environmental Director WSDOT ESO Mega Projects Allison Hanson at 206.267.6532, email hansona@wsdot.wa.gov.

Sincerely,

Kevin M. Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects

cc: Allyson Brooks, SHPO
Randy Everett, FHWA
Allison Hanson, WSDOT
Scott Williams, WSDOT
Connie Walker Gray, WSDOT

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

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June 28, 2010

Mr. Kevin Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects
999 3rd Avenue, Suite 2424
Seattle, WA 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel (Bianchi Law Firm)
Re: Attachment EZ-2

Dear Mr. Bartoy:

Thank you for contacting our department. We have reviewed the materials you provided. We concur with the findings of your consultant that the Bianchi Law Firm is NOT ELIGIBLE for the National Register of Historic Places under criterion C. As a result of this finding, further contact with us is not necessary. If additional information on the project becomes available, or if any archaeological resources are uncovered during construction, work must stop in the area of discovery and contact the appropriate Native American Tribes and our Department for further consultation.

The project has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act.

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,

Russell Holter
Project Compliance Reviewer
(360) 586-3533
russell.holter@dahp.wa.gov

STATE OF WASHINGTON

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July 1, 2010

Mr. Kevin Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects
999 3rd Avenue, Suite 2424
Seattle, WA 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel Expanded APE
Re: Determined Eligible

Dear Mr. Bartoy:

Thank you for contacting our office. I have reviewed the materials you provided to our office and we concur with your consultant's professional opinion that the following historic properties are eligible to the National Register of Historic Places:

National Bank of Commerce (1100 2nd Ave)
Colski Building
Rivoli Apartments
Donald/Alexandria Hotel
Bell Street Studios
Douglas Hotel
RKO Studios
Lorraine Hotel
MGM-Loews
Adams Apartments
The Two Bells
Ace Hotel
Lexington Concord Apartments
National Bank of Commerce (2401 3rd Ave)
Devonshire Apartments
Grosvenor House

I look forward to further consultation regarding your determination of effect.

We also concur with the consultant's determination that the other 50 properties surveyed in the expanded APE are not eligible for listing to the National Register of Historic Places.

I would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4). These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800.

Please note that DAHP requires that all historic property inventory and archaeological site forms be provided to our office in PDF format on a labeled CD along with an unbound paper copy. For further information please go to http://www.dahp.wa.gov/documents/CR_ReportPDF_Requirement.pdf.
Thank you for the opportunity to review and comment. Should you have any questions, please feel free to contact me.

Sincerely,

Russell Holter
Project Compliance Reviewer
(360) 586-3533
russell.holter@dahp.wa.gov

Cc: Karen Gordon (Seattle)

Washington State Department of Transportation
Paula Hammond
Secretary of Transportation

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July 1, 2010

Dr. Allyson Brooks, Director
Washington Department of Archaeology & Historic Preservation
PO Box 48343
Olympia, WA 98504

Log: **051209-10-FHWA**
Property: **Alaskan Way Viaduct and Seawall Replacement Program**
Re: **Resubmittal of Historic Property Inventory Forms**

Dear Dr. Brooks:

The Washington State Department of Transportation (WSDOT), on behalf of the Federal Highway Administration (FHWA), is continuing consultation on the Alaskan Way Viaduct Replacement Project in downtown Seattle, pursuant to 36 CFR 800.2(c)(1). The purpose of this letter and the attachments therein is to provide your office with updated Historic Property Inventory (HPI) forms that corrects the duplicative Field Site numbers on the form. As indicated in Kevin Bartoy's June 24 letter to your office, we have updated the forms in response to the June 17 letter from Matthew Sterner, as well as in response to a phone conversation with Russell Holter, Michael Houser, and Mimi Sheridan, and me on June 8, 2010. Enclosed please find the updated CD with the database files as well as a revised property summary table. A revised map, for reference, will be emailed to you later today.

I trust that this will satisfy your request for the corrected forms. We now request your prompt concurrence on the remaining Determinations of NRHP Eligibility for the remaining 64 historic resources within the expanded APE.

Thank you for your ongoing interest and participation in this project. If you have additional questions or concerns, please contact me at 206-521-5631, email grayc@wsdot.wa.gov.

Sincerely,

Connie Walker Gray
WSDOT Cultural Resources Specialist

CC: Allison Hanson, WSDOT
Scott Williams, WSDOT
Randy Everett, FHWA

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

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July 8, 2010

Mr. Kevin Bartoy
Cultural Resources Specialist
WSDOT ESO Mega Projects
999 3rd Avenue, Suite 2424
Seattle, WA 98104-3850

In future correspondence please refer to:
Log: 051209-10-FHWA
Property: Alaskan Way Viaduct, Central Waterfront, Deep-Bore Tunnel
Re: ADVERSE Effect

Dear Mr. Bartoy:

Thank you for contacting the Department of Archaeology and Historic Preservation (DAHP). Thank you for your June 24, 2010 letter and the responses to our concerns stemming from our letter of June 17, 2010. Based on your response, we can now concur with your determination that the project, as proposed, will have an Adverse Effect on one or more National Register of Historic Places (NRHP) properties.

We understand that data presented at this time indicates that four NRHP-eligible properties will be impacted as a result of the proposed tunnel alternative. Those properties are: the Alaskan Way Viaduct and Battery Street Tunnel, the Western Building (within the Pioneer Square Historic District), the Polson Building (within the Pioneer Square Historic District), and archaeological site 45KI924 (the Dearborn South Tideland site). We also understand that you plan to treat archaeological site 45KI958 as eligible at this time, although you are choosing to withhold that determination formally pending the outcome of additional archaeological investigation. We also understand that as engineering and design continues on this alternative, our evaluation of impacts to NRHP-eligible properties will continue.

We look forward to further consultation and the development of a Memorandum of Agreement (MOA) to address this Adverse Effect.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available. These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800.

Please note that DAHP requires that all historic property inventory and archaeological site forms be provided to our office electronically. If you have not registered for a copy of the database, please log onto

our website at www.dahp.wa.gov and go to the Survey/Inventory page for more information and a registration form. To assist you in conducting a survey, DAHP has developed a set of cultural resource reporting guidelines. You can obtain a copy of these guidelines from our website. Finally, please note that effective Nov. 2, 2009, DAHP requires that all cultural resource reports be submitted in PDF format on a labeled CD along with an unbound paper copy. For further information please go to http://www.dahp.wa.gov/documents/CR_ReportPDF_Requirement.pdf.

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,

Matthew Sterner, M.A.
Transportation Archaeologist
(360) 586-3082
matthew.sterner@dahp.wa.gov

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ATTACHMENT C

Tables of Ethnographic References

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Exhibit C-1. Ethnographic Locations in the APE Vicinity based on Waterman (2001)

NO.	ORTHOGRAPHY: Waterman 2001 (Lushootseed[1])	TRANSLATION	DESCRIPTION
12	TcƐ'dkedäd	lying curled on a pillow	A small promontory in Ballard, just at the entrance of Salmon Bay, referring to the shape of the sand spit. This area was used to gather clams.
12a	CIlco'lutisd (šilšulucid)	mouth of cilco'l	Where Salmon Bay empties into Shilshole Bay.
13	CIlco'l (šilšul)	like shoving a thread through a bead, threading or inserting something	Metaphorically refers to how the narrow estuary invades the shoreline. Also refers to Salmon Bay and a village on the north side of Salmon Bay inhabited by a Duwamish band called the Cilcol-a'bc (or Shul-shale) Tribe. Salmon Bay was used by Native Americans to access Lake Union and Lake Washington.
14	B1t1da'kt (betetdaq)	a kind of supernatural power	A small creek entering the north side of Salmon Bay, above the Fremont bridge, where shamans held dances. This is the "power," which enabled one to go to the underworld to regain a guardian spirit. (Description does not match map: Fremont bridge crosses the west end of Lake Union not Salmon Bay.).
15	Qw3ɸla'stab	a small bush with white flowers and black berries	A small creek, smaller than the one above, entering the same inlet as above. (Description does not match map: Fremont bridge crosses the west end of Lake Union not Salmon Bay.)
16	Hwiwa'lqu	large, having lots of water	A creek draining down a straight gully into the south side of Salmon Bay from the area around Discovery Park (Fort Lawton).
17	Pka'dzEltcu	thrust far out	West Point; name refers to the way the point juts into the sound.
18	LE'plEpL (Ce□'e?); also La'pub and TcE'tla	rock, boulder	Fourmile rock, a boulder in the water at the foot of Magnolia Bluff. Mentioned in a myth where Sta'kub could take a drag net made of cedar and hazel branches and throw it over this rock while standing on the distant beach.
19	TLo'xwatL-qo	land otter water	A small creek draining down a gully now occupied by a paved road from Fort Lawton, flowing only in wet weather.
20	Silaqwotsid (s?ileq<ucid)	talking; mouth of edge of water	The mouth of the creek draining into Smith Cove.

Exhibit C-1. Ethnographic Locations in the APE Vicinity based on Waterman (2001) (continued)

NO.	ORTHOGRAPHY: Waterman 2001 (Lushootseed[1])	TRANSLATION	DESCRIPTION
21	T3E'kEp (teqep)	aerial net for snaring ducks	A creek flowing into Smith Cove and a camping place where duck snares were set to take advantage of the flyway between Elliott Bay and Lake Union over the low area south of Queen Anne Hill.
22	Baba'kwob	prairie	An open space or series of spaces in the forest near Belltown.
23	Djidjil≅'l3ltc (d>d>elai□)	a little place where one crosses over	A promontory topped by a few trees with a lagoon behind it, an area that is now [redacted] A trail led from the beach on Elliott Bay to the lagoon. There was a village on each side the promontory.
24	Tux pa'ctEb (dexpa□eb)	place for setting things out	A little spit or beach at the edge of the easternmost of the mouths of the Duwamish River.
25	Teta'lks (tetalXqs)	a little strong point	A small promontory on an island. The place is said to have been used as a lookout point by the Indians, who built a stockade there. (Thrush [2002] places this farther south in Georgetown and associates it with the midden found [redacted] Also says it is buried [redacted])
26	Slu'wiL (slu?w≈)	a perforation for a canoe, a short cut, a canoe pass	The slough passing to the south of the island (#25) above. In this case, the word refers to a grassy marsh intersected with channels, into and through which canoes can be pushed.
27	XwEg3 (tetalXqs)	slough	The largest of the branches into which the Duwamish River divides at its mouth.
28	Q3ulg3ula'di (qelqeladi?)	shaggy, tangled; uprooted tree/stump	A place on the shore of the slough (#27) where there were a lot of snags so that no one could land.
29	Ts3E'kas (Ceqas)	muddy; something dirty	Harbor island, a flat surrounded by watercourses and rather marshy. George Si'towaL, an informant, lived in a float house here with his wife until they died in 1920.
29a	Ha3a'pus	none	A small creek draining across a flat on the west side of the Duwamish River.
30	Tul3a'ltu or (Tu?elal?x)	Herring's house; herring house	A village site on the west bank of the Duwamish, at the foot of the bluff of West Seattle.
31	Tua'wi	trout	Longfellow Creek draining into Young's Cove in West Seattle.

Exhibit C-1. Ethnographic Locations in the APE Vicinity based on Waterman (2001) (continued)

NO.	ORTHOGRAPHY: Waterman 2001 (Lushootseed[1])	TRANSLATION	DESCRIPTION
32	CuxutsE'xud (sexu□eXed)	something to split with; by means of splitting	A small creek draining down a little gully near Luna Park in West Seattle.
33	SqwEdqs (sq<edqs)	promontory at, the foot of something; waterfall point	The sand spit under the bluffs of Duwamish Head. Costello gives the name Squducks for this place, translating it "promontory."
34	SbEkwabEqs (sbaq<abqs)	prairies	Alki Point, as the sandy promontory jutting out half a mile from the shoreline had many open places among the trees.
35	Tux qo'tEb (dexquteb)	place of disease	A depression a mile or more inland from Duwamish Head containing a cranberry swamp.
36	T3EsbEd ('tesbid)	a winter house or cold weather place	A small creek south of Alki Point. There was a brickyard at this location.
37	GwEl (Gal)	to capsize, capsize	Another small creek south of #36.
58	Gwa'xwop	outlet	A stream draining Lake Union into Salmon Bay.
59	Ctclwa't-qo (□axadq<u?)	place where one whips the water; whip water, club water	A small creek just east of the railroad bridge in Ballard. People would hit the water with sticks to drive fish into the narrow brook where they were easily captured.
60	StƐ'tciL	a prop	The promontory jutting into the north shore of Lake Union; referring to the way it seems to lean against the opposite shore. Where [redacted] is today.
61	Baqwob (baq<ab)	prairie	An open space near Lake Union, at the north abutment of the Latona Bridge (University Bridge).
62	Waq3e'q3ab (waQwaQab)	frog; like a frog	A small creek entering Lake Union just east of the Latona Bridge (University Bridge).
63	Sqwitsqs (sq<icqs)	little promontory; down river promontory	A small promontory jutting into Lake Union where [redacted]
65	DutLEc	none	Green Lake; where suckers and perch were taken in basket traps. Salmon also spawned here.
139	Swa'tsugwlL (sxaceGi≈)	to lift up a canoe, to shove [a canoe]; to lift a canoe, to pull a canoe	The portage between Lake Union and Lake Washington. Boats would be pushed as far as possible up the creek connecting Lake Union and Lake Washington, then carried the rest of the way.
140	SpaLxad (spa≈Xad)	marsh, wet flats; bog, wetland	The flats at the south end of Lake Union, facing the University of Washington campus.

Exhibit C-1. Ethnographic Locations in the APE Vicinity based on Waterman (2001) (continued)

NO.	ORTHOGRAPHY: Waterman 2001 (Lushootseed[1])	TRANSLATION	DESCRIPTION
141	Sxwuba'bats (saxebabac)	place where jumping occurred; jump over a solid object	A place on the shore of Lake Union, opposite Gas Works Park, where the shore was covered with logs, which one had to jump over.
142	StL3ep (s□'ep)	deep	A place just south of #141 above where the beach is very abrupt.
143	Cta'qwcld (ca?k<Sed)	a trail descends to the water	A place at the south end of Lake Union where a trail from Elliott Bay came down the hill to Lake Union. This is where David Denny's sawmill stood.
144	TL3pe'lgwlL (□'epalg<i≈)	deep for canoes	A bluff at the foot of Lake Union on the southern shore.

[1] These names are written in the font Times Lushootseed, a font specifically designed to write this language.

Exhibit C-2. Locations Named in Archival Sources

NO.	NAME OR TYPE	CITATIONS	DESCRIPTION/COMMENT
1	*Baba'kwob* (see also Muck-Muck-Wum)	Waterman 2001; Dorpat 1984, 2005; Thrush 2002	"Prairie" – also mentioned by Thrush (2002) as being near Bell's house, which was [redacted] Dorpat (2005) quotes Buerge as saying the name refers to the meadows between Queen Anne and Denny Hills, from the bay to Lake Union. Dorpat (1984) places marshes and meadows and a gathering place near Denny's cabin, where the Seattle Center is now (see also #21 below). Dorpat (2005) believes this suggests that the meadows and the beach campsite (Muck-Muck-Wum, see below) are not the same. Native accounts place two medium-sized longhouses here (Dorpat 2005). Thrush (2002) places a group of about 30 camping along the beach in 1856. Dorpat (2005) quotes Buerge as saying two "architectural forms" shown on an 1868 photo of the city are the remains of a longhouse. These remains are on the bluff [redacted] Other accounts (Dorpat 2005) put Curley's band "encamped about one mile north of Seattle" in 1856. Burge, quoted in Dorpat (2005), suggests this may be *Baba'kwob*.
2	Encampment	Dorpat 2005	The site of Denny's House was used as a gathering place for potlatches. According to the 1856 General Land Office (GLO), Denny's cabin was at [redacted] Perhaps related to *Baba'kwob* above.
3	Encampment	Bass 1937	A large Native American camp of several families built near Westlake on the shore of Lake Union, circa 1880. It included a "big house" made of cedar slabs and bark.
4	*ʔaʔkʷsed* Elliott Bay–Lake Union Trail	Dorpat 2005; Waterman 2001	Trail from *Baba'kwob* to Lake Union. Based on an 1879 T-Sheet, may follow Bell Street Ravine to Bell Street, then north to approximately Dexter Avenue. May also follow the wagon road shown on the 1856 GLO. The GLO places it farther northwest. Dorpat quotes Denny as having been led across this trail.
5	Burials	Thrush 2002	Builders and graders unearth several bodies wrapped in cedar bark in Belltown, 1876 and 1878.
6	Encampment	Wilse ca. 1898, n.d.	Photograph from circa 1898 showing Native encampment on the beach in canoes with tents and wood shacks, entitled "Arrival of Indians for hop picking." A copy of the same photo in the Hamilton-Seattle collection is captioned "Canoes & Indians, [redacted] -1882-86."
7	Muck-Muck-Wum, Mukinkum	Dorpat 2005; Bass 1937	Encampment on the beach [redacted] May be the same as *Baba'kwob* (see #1 above). Thrush (2002) says that Mukinkum is an anglicized version of *Babkʷab*.
8	Encampment	Dorpat 2005	Princess Angeline's shack in the 1880s.

Exhibit C-2. Locations Named in Archival Sources (continued)

NO.	NAME OR TYPE	CITATIONS	DESCRIPTION/COMMENT
9	*Bo'lots* or *Bu?lac*	Harrington ca. 1909 cited in Alaskan Way Viaduct DEIS 2004; Thrush 2002	The area from the waterfront "way back" [redacted] perhaps a reference to springs in the area. Thrush (2002) calls this *Bu?lac* and places it [redacted] Also where Denny built his house.
10	Encampment.	Thrush 2002; Bass 1937	Encampment in the 1850s in Arthur Denny's pasture, [redacted]
11	Burial	LAAS 2004	Cites Denny 1909; burial near [redacted]
12	Cemetery	Dorpat 2005; Bass 1937	Described as being on the bluff [redacted] beside the ravine. Early photos and topographic maps show the ravine cutting [redacted] with bluffs on the east and southwest side [redacted] Bass (1937) says that the "high bluff on the south side [redacted] was an Indian burial ground," and that the bluffs have been lowered by grading.
13	Encampment, Tzee-tzee-lal-litch	Bass 1937	According to Bass, there was a spring and a sandy beach [redacted] where the Native Americans camped. Bass says the spot was called Tzee-tzee-lal-litch, although this is what Kellogg (1912) called the encampment farther south (see *Djidjdkila'lltc*, [#20] below).
14	Burial	Dorpat 2005	Dorpat recounts discoveries of Native American burials [redacted]
15	Encampment	Phelps 1855–1856	Native encampment, between Yesler's Mill and the stockade [redacted] Phelps' map marks this as being "Curley Camp." See also Baba'kwob, (#1).
16	Trail	Buerge 1981	Trail from Elliott Bay to Renton.
17	Trail	Kellogg 1912	Trail between Elliott Bay and tidal lagoon, near S. Main Street, between First and Second Avenues.
18	Ballast Island	Dorpat 2005; Bass 1937; Sanborn Map Company 1888, sheet 2; Soule ca. 1891	[redacted] Native Americans would gather here before traveling inland to pick hops (first hops harvested in 1866). After 1900, this island was almost entirely inhabited by S'Klallam people (Thrush 2002).
19	Encampment	Glover 1878	A native encampment on the beach [redacted]

Exhibit C-2. Locations Named in Archival Sources (continued)

NO.	NAME OR TYPE	CITATIONS	DESCRIPTION/COMMENT
20	*Djidjdkila'lltc* Tseettsal-al-ich	Waterman 2001; Phelps 1855–1856; Kellogg 1912; Thrush 2002; Watt 1959	Encampment [redacted] Also shown on Phelps ca. 1856 map and described in a letter by Vivian Carkeek. Watt (1959), in *Four Wagons West,* quotes Denny as seeing the ruins of an Indian hut on the headland south of the stream [redacted] Bureau of Indian Affairs (BIA) records from 1856 also describe an encampment of 40 behind Madam Damnable's (in the same place shown on the Phelps map) (Thrush 2002). See also #13 above.
21	Dancehouse	Crow 1926 cited in the Alaskan Way Viaduct DEIS 2004	May be related to *Djidjdkila'lltc* (#20); reported to be [redacted]
22	Encampment	Thrush 2002	Seasonal hop pickers on the tidelands south of Yesler's mill and the lava beds in the 1880s.
23	Encampment	Kellogg 1912; Thrush 2002	"Back behind the marsh at the beach was an Indian camp and a small stream of fresh water came down from the hill" (Kellogg 1912). Probably [redacted] In 1878, an encampment on a "sand reef" (Thrush 2002) [redacted] at the edge of the sawdust flat (the now-filled lagoon).
24	Landing place	Anderson 1898	Photo shows a Native American woman with a basket standing near a canoe, captioned "This Indian squaw was photographed in 1898 by Oliver P. Anderson about [redacted] " May be posed.

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ATTACHMENT D

SR 99 Coring Program Results for Bored Tunnel Alternative (SRI 2010)

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Attachment D provides the SR 99 Coring Program Results for Bored Tunnel Alternative report used for the analysis discussed in the body of the discipline report. This attachment contains sensitive cultural resources information that is exempt from public disclosure pursuant to provisions of the Public Records Act (RCW 42.56.300). A redacted version of the document is available upon request.

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ATTACHMENT E

SR 99 North Portal Access Archaeological Study (SRI 2010)

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Attachment E provides the SR 99 Alaskan Way Viaduct Replacement Project Archaeological Study report used for the analysis discussed in the body of the discipline report. This attachment contains sensitive cultural resources information that is exempt from public disclosure pursuant to provisions of the Public Records Act (RCW 42.56.300). A redacted version of the document is available upon request.

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ATTACHMENT F

Cumulative Effects Analysis

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CUMULATIVE EFFECTS ANALYSIS

This cumulative effects analysis follows *Guidance on Preparing Cumulative Impact Analyses*, published by Washington State Department of Transportation (WSDOT) in February 2008. The guidance document was developed jointly by WSDOT, Federal Highway Administration (FHWA) – Washington Division, and U.S. Environmental Protection Agency – Region 10. The guidance can be used for FHWA's National Environmental Policy Act (NEPA) compliance (Code of Federal Regulation, Title 23, Part 771) and fulfillment of Washington State Environmental Policy Act (SEPA) requirements for evaluation of cumulative effects (Washington Administrative Code, Section 197-11-792).

The approach provided in the WSDOT guidance calls for early consideration of cumulative impacts while direct and indirect effects are being identified, preferably as part of the scoping process. For analysis, the guidance recommends the use of environmental documents such as discipline reports and other relevant information such as local comprehensive plans, zoning, recent building permits, and interviews with local government. The guidance also advocates a partnership approach among agencies that includes early collaboration and integrated planning activities.

Eight steps serve as guidelines for identifying and assessing cumulative impacts. These eight steps have been used in the following cumulative effects evaluation for the Bored Tunnel Alternative of the Alaskan Way Viaduct Replacement Project (the project). A matrix that identifies projects with the potential for cumulative effects with this project and an assessment of likely contributions to cumulative effects is also included.

Step 1. Identify the resource that may have cumulative impacts to consider in the analysis

Historic, cultural, and archaeological resources

Step 2. Define the study area and timeframe for the affected resource

The Area of Potential Effects (APE) for the Bored Tunnel Alternative begins south of S. Atlantic Street, with the tunnel itself beginning near S. King Street. The tunnel would continue under Alaskan Way S. to approximately S. Washington Street where it would curve slightly away from the waterfront and then run beneath First Avenue beginning at approximately University Street. At Stewart Street, it would travel in a northern direction under Belltown. At Denny Way, the bored tunnel would run beneath Sixth Avenue N., where it would transition to a side-by-side surface roadway at about Harrison Street. Modifications to SR 99 would continue to Roy Street. The APE (see Exhibit 2-1 of the Historic, Cultural, and Archaeological Resources Discipline Report) extends horizontally one block on each side of this route, as well as around staging areas. To account for the removal of the existing

viaduct structure, the APE also extends one block east of Alaskan Way and west to the waterfront piers, between S. Jackson and Battery Streets.

Vertically, the APE includes the entirety of the bored tunnel right-of-way from the ground surface to its maximum depth of excavation at the south and north ends of the tunnel where cut-and-cover trenches would be excavated for the tunnel boring machine (TBM). Above the bored tunnel, the APE would extend only down to the upper 5 feet of Pleistocene deposits. The vertical APE would also include the area beneath the existing viaduct structure and those areas where utilities would be relocated or that would be subject to ground improvements, such as jet grouting.

The timeframe for the affected environment discussion is from the beginning of local human settlement through the end of the construction period. Most effects are construction-related, but some, such as ground improvements and the removal of the viaduct, are permanent conditions.

Step 3. Describe the current health and historical context for each affected resource

The Puget Sound region has been inhabited for approximately 11,000 years, with seasonal and possibly permanent villages occurring in the Program area. Major filling and grading projects have shaped Seattle's topography almost since the arrival of the first American settlers in the 1850s. To facilitate the construction of railroad, roadways, and wharves, numerous hills were leveled, and the soil was used to fill in shoreline areas, largely between 1898 and 1931.

The existing historic, cultural, and archaeological resources are described in Chapter 4 of this discipline report. Historic resources include two national historic districts (Pioneer Square and Pike Place Market) and 21 properties that are listed in the National Register of Historic Places (NRHP). One group of resources (Pioneer Place, Pioneer Building, and Pergola) is a National Historic Landmark. In addition, there are approximately 43 other properties eligible for NRHP listing; of these, 16 have already been designated as Seattle landmarks. The APE includes six recorded archaeological properties, including one Native American site, 45KI456 (*Baba'kwob*), and six historic archaeological sites, 45KI924 (Dearborn South Tideland Site), 45KI930, 45KI942 (W.L. McCabe's Machine Shop), 45KI943 (Dearborn North Tideland Site), 45KI947, and 45KI958. There is also potential for additional archaeological remains, primarily near the original shoreline.

Step 4. Identify the direct and indirect impacts that may contribute to a cumulative impact

- The primary permanent effect of the Bored Tunnel Alternative would be the demolition of the NRHP-eligible Alaskan Way Viaduct and the decommissioning of the Battery Street Tunnel (also NRHP eligible).

- Construction near the south portal (the cut-and-cover tunnel and ground improvements) would affect the western portion of the Pioneer Square Historic District with noise, vibration, increased traffic congestion, and reduced access. These effects are not anticipated to be lengthy enough or severe enough to threaten the continued maintenance and preservation of the buildings.
- The major construction impact would be to the Western Building, which is in the Pioneer Square Historic District. Although actions would be undertaken to minimize potential damage, it is possible the building would have to be demolished. The adjacent Polson Building could also be affected by construction.
- Tunnel construction may potentially cause settlement that could damage vulnerable buildings along the alignment.
- Construction near the south portal would damage an NRHP-eligible archaeological site, the Dearborn South Tideland Site, 45K1924.
- Construction near the north portal would damage 45KI958, which has not yet been evaluated for NRHP eligibility.
- Construction may also adversely affect presently undocumented sites that probably exist near both the south and north portals and along the waterfront.
- Demolition of the viaduct would affect the western portion of the Pioneer Square Historic District with noise, vibration, increased traffic congestion, and reduced access. These effects are not anticipated to be lengthy enough or severe enough to threaten the continued maintenance and preservation of the buildings.

Step 5. Identify other historic, current, or reasonably foreseeable actions that may affect resources

No projects have been identified that are likely to have a cumulative effect on the historic, cultural, and archaeological resources of the area. However, if a project does not intersect federal, state, or local heritage preservation laws, assessment of potential damage to archaeological or historic resources is generally not assessed.

Step 6. Assess potential cumulative impacts to the resource; determine the magnitude and significance

For historic properties, the cumulative impact is expected to be minimal. Construction effects for each project would be short-term and are not expected to significantly affect historic properties. Most of the proposed projects are outside the project area or do not involve building demolition or excavation.

The sum of all archaeological resources is unknown, so cumulative impacts are difficult to quantify. Excavation in certain settings in the APE near the shoreline, on undeveloped parcels, or on fill-protected landforms may result in irreversible loss.

Step 7. Report the results

Although some projects will cause short-term construction impacts near the historic resources, the disruptions are not likely to be of long enough duration to affect the long-term viability and maintenance of the historic properties.

Most projects listed involve ground-disturbing activities that extend less than 5 feet below the existing grade; thus, they would have no effect on Native American–related or historic-period archaeological material. However, as noted below, construction in some areas would have the potential to damage these materials, depending on depth.

Step 8. Assess and discuss potential mitigation issues for all adverse impacts

No mitigation is proposed for the cumulative effects.

The following matrix identifies project-specific potential cumulative effects.

PROJECT-SPECIFIC CUMULATIVE EFFECTS MATRIX

PROJECT	POTENTIAL CUMULATIVE EFFECTS
A. Roadway Elements	
A1. Alaskan Way Surface Street Improvements – S. King Street to Pike Street	No cumulative effect. This section of Alaskan Way is bordered by numerous historic properties, including the Washington Street Boat Landing (NRHP-listed and Seattle landmark) and Piers 54 to 57 (Seattle landmark, NRHP eligible). Between S. King and Columbia Streets, the roadway adjoins the Pioneer Square Historic District and runs through the local historic district. The northern section, near Pike Street, adjoins the Pike Place Market Historic District. If construction takes place at the same time as viaduct demolition, businesses and residents in these buildings may experience longer periods of restricted access during construction of the street improvements, as well as typical construction effects of noise, dust, and traffic congestion. However, it is unlikely that the disruptions would be of long enough duration to affect the long-term viability and maintenance of the historic properties.

PROJECT-SPECIFIC CUMULATIVE EFFECTS MATRIX (CONTINUED)

PROJECT	POTENTIAL CUMULATIVE EFFECTS
A2. Elliott/Western Connector – Pike Street to Battery Street	No cumulative effect. Important historic resources in this vicinity include the Pike Place Market Historic District and several NRHP-listed properties near Battery Street (the Hull Building, the Austin Bell Building, the Barnes Building, and the NRHP-eligible Oregon Hotel). If construction takes place at the same time as viaduct demolition, businesses and residents in these buildings may experience longer periods of limited access during construction, as well as typical construction effects of noise, dust, and traffic congestion. However, it is unlikely that the disruptions would be of long enough duration to affect the long-term viability and maintenance of the historic properties.
A3. Mercer West Project – Mercer Street becomes two-way from Fifth Avenue to Elliott Avenue and Roy Street becomes two-way from Aurora Avenue to Queen Anne Avenue	No effect, because no historic properties will be demolished and no significant excavation is anticipated.
B. Non-Roadway Elements	
B1. Elliott Bay Seawall Project	Although there will be direct effects on the NRHP-eligible seawall and potentially on nearby cultural resources, no cumulative effect is expected. The seawall has been determined to be eligible for listing in the NRHP. Seawall replacement or extensive repairs would potentially make it ineligible for listing. Numerous historic properties are located along the seawall, as on Alaskan Way. The NRHP-listed Washington Street Boat Landing and Piers 54 through 57 (NRHP-eligible and Seattle landmarks) are immediately above the seawall. The southern portion of the seawall is in the local Pioneer Square Historic District. A prolonged period of construction could potentially affect these businesses and property owners severely enough that they would have difficulty properly maintaining their historic properties. These effects could potentially be alleviated by phasing construction and providing building access and business assistance during construction. Seawall replacement may damage deeply buried Native American–related and historic-period archaeological sites on historic beaches and in historic fill.

PROJECT-SPECIFIC CUMULATIVE EFFECTS MATRIX (CONTINUED)

PROJECT	POTENTIAL CUMULATIVE EFFECTS
B2. Alaskan Way Promenade/Public Space	No effects. If construction takes place at the same time as viaduct demolition, businesses and residents in the adjacent historic buildings may experience longer periods of restricted access during construction of the street improvements, as well as typical construction effects of noise, dust, and traffic congestion. However, it is unlikely that the disruptions would be of long enough duration to affect the long-term viability and maintenance of the historic properties. Construction of the waterfront promenade would have no effect on Native American–related or historic archaeological sites if ground disturbance is limited to less than 5 feet below surface.
B3. Transit Enhancements – 1) Delridge RapidRide 2) Additional service hours on West Seattle and Ballard RapidRide lines 3) Peak hour express routes added to South Lake Union and Uptown 4) Local bus changes to several West Seattle and northwest Seattle routes 5)Transit priority on S. Main and/or S. Washington Streets between Alaskan Way and Third Avenue 6) Simplification of the electric trolley system	No effect. Involves little excavation or building demolition.
B4. First Avenue Streetcar Evaluation	No effect. Involves little excavation or building demolition.
C. Projects under Construction	
C1. S. Holgate Street to S. King Street Viaduct Replacement Project	No effect. Will be completed before bored tunnel construction begins.
C2. Transportation Improvements to Minimize Traffic Effects During Construction	No effect. Involves little excavation or building demolition.
D. Completed Projects	
D1. SR 99 Yesler Way Vicinity Foundation Stabilization (Column Safety Repairs)	No effect on historic resources because it involves no demolition.
D2. S. Massachusetts Street to Railroad Way S. Electrical Line Relocation Project (Electrical Line Relocation Along the Viaduct's South End)	No effect on historic resources because it involves no demolition. Already completed, resulting in the identification of an NRHP-eligible site, 45KI924.
E. Seattle Planned Urban Development	
E1. Gull Industries on First Avenue S.	No effect on historic resources because it involves no demolition or significant excavation.

PROJECT-SPECIFIC CUMULATIVE EFFECTS MATRIX (CONTINUED)

PROJECT	POTENTIAL CUMULATIVE EFFECTS
E2. North Parking Lot Development at Qwest Field	No effect on historic properties; the project will be reviewed by the Pioneer Square Preservation Board for compliance with historic district guidelines.
E3. Seattle Center Master Plan (EIS) (Century 21 Master Plan)	No effect, because changes to the center's historic buildings (Seattle landmarks and NRHP-eligible) can be made only with the approval of the Seattle Landmarks Preservation Board. Excavation has already destroyed much, if not all, of the potential for subsurface archaeological sites.
E4. Bill and Melinda Gates Foundation Campus Master Plan	No effect on historic resources because it involves no demolition and excavation has already been completed.
E5. South Lake Union Redevelopment	No effect. Some potential historic properties could be altered or destroyed, particularly for smaller developments. Intersection with original shoreline could damage Native American–related and historic-period archaeological sites.
E6. U.S. Coast Guard Integrated Support Command	No effect on historic resources because the Coast Guard facilities have been determined not eligible for the NRHP. No significant excavation expected.
E7. Seattle Aquarium and Waterfront Park	No effect. Pier 59, part of the Seattle Aquarium, is a Seattle landmark; future alterations will be reviewed by the Seattle Landmarks Preservation Board. Little or no excavation will be done, as it is primarily over water.
E8. Seattle Combined Sewer System Upgrades	No effect on historic resources because it involves no demolition and future work will not be in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
F. Local Roadway Improvements	
F1. Bridging the Gap Projects	No effect. Involves no significant excavation or building demolition.
F2. S. Spokane Street Viaduct Widening	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
F3. SR 99/East Marginal Way Grade Separation	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
F4. Mercer East Project from Dexter Avenue to I-5	No effect. Effects on the NRHP-eligible William L. McKay Building have been mitigated. No significant excavation.
G. Regional Roadway Improvements	
G1. I-5 Improvements	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
G2. SR 520 Bridge Replacement and HOV Program	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
G3. I-405 Corridor Program	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.

PROJECT-SPECIFIC CUMULATIVE EFFECTS MATRIX (CONTINUED)

PROJECT	POTENTIAL CUMULATIVE EFFECTS
G4. I-90 Two-Way Transit and HOV Operations Stages 1 and 2	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
H. Transit Improvements	
H1. First Hill Streetcar	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
H2. Sound Transit University Link Light Rail Project	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
H3. RapidRide	No effect. Involves no significant excavation or building demolition.
H4. Sound Transit North Link Light Rail Project	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
H5. Sound Transit East Link Light Rail Project	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
H6. Washington State Ferries Seattle Terminal Improvements	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project.
I. Transportation Network Assumptions	
I1. HOV Definition Changes to 3+ Throughout the Puget Sound Region	No effect. Involves no significant excavation or building demolition.
I2. Sound Transit Phases 1 and 2	No effect. Involves no significant excavation or building demolition.
I3. Other Transit Improvements	No effect. Involves no significant excavation or building demolition.
J. Completed but Relevant Projects	
J1. Sound Transit Central Link Light Rail (including the Sea-Tac Airport extension)	No effect. Not in the area of immediate impact for the Alaskan Way Viaduct Replacement Project. Impacts to archaeological sites already mitigated.
J2. South Lake Union Streetcar	No effect. Involves no significant excavation or building demolition.
J3. SR 519 Intermodal Access Project, Phase 2	No effect. Impacts to archaeological sites already mitigated.