DRAFT EIS

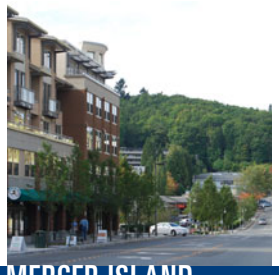
EAST LINK PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Appendix H4

Historic and Archaeological Resources Technical Report


SEATTLE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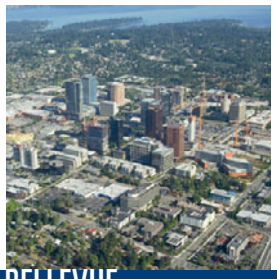
BELLEVUE


OVERLAKE


REDMOND

SOUNDTRANSIT
CENTRAL PUGET SOUND
REGIONAL TRANSIT AUTHORITY

Washington State
Department of Transportation

U.S. Department of Transportation
Federal Transit
Administration

December 2008

SOUNDTRANSIT

SOUND TRANSIT EAST LINK PROJECT

Appendix H4

Historic and Archaeological Resources Technical Report

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Appendices

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1.0 Introduction

The East Link light rail system would connect Seattle, Mercer Island, Bellevue, and Redmond, with a length of about 18 miles. This technical report, prepared to support the East Link Project's Draft Environmental Impact Statement (EIS), addresses potential effects on historic and archaeological resources, which include the following: prehistoric and historic-period archaeological sites; districts, buildings, structures, objects, and landscapes; and cultural or traditional places or resources that have value to a community, such as an Indian tribe. Important resources are termed "historic properties" and—because of the inclusion of federal monies or federal licensing and permitting—must be considered by the lead agencies as they make decisions about the East Link Project. Chapter 2 of the Draft EIS provides a description of the East Link Project.

This technical report addresses historic and archaeological resource laws and regulations (Section 2.0) and the methods used for the investigations (Section 3.0). The Federal Transit Administration (FTA), Sound Transit, and the Washington State Department of Transportation (WSDOT) consulted with interested Indian tribes and the Washington State Historic Preservation Officer (SHPO) in the Department of Archaeology and Historic Preservation (DAHP) (as described in Section 4.0). The investigation included information on the natural setting (Section 5.0) and cultural context (Section 6.0) of the study area. The results of work to inventory historic and archaeological resources and determine which are historic properties appear in Section 7.0. Potential project effects are discussed in Section 8.0, potential mitigation measures in Section 9.0, and cumulative effects in Section 10.0. Section 11.0 lists the references cited in this report. Four appendices contain information on the archaeological survey (Appendix A), the inventory of historic buildings and structures (Appendix B), consultation documentation (Appendix C), and reports from previous cultural resource management studies (Appendix D). Inventory forms for each building or structure have been submitted to the DAHP database.

Several cultural resource management specialists from Historical Research Associates, Inc. (HRA) contributed to this study, including Gail Thompson, Ph.D., principal investigator and report author. Ann Gillespie, M.A., conducted historical research and inventoried and evaluated the historic buildings and structures. Gretchen Kaehler, M.A., directed the archaeological survey and analyzed archaeological information.

2.0 Laws and Regulations

2.1 Federal Laws and Regulations

Federal laws and regulations apply because FTA is the lead agency for Sound Transit's East Link Project. WSDOT is a cooperating agency, and the Washington SHPO is a consulting party. The National Historic Preservation Act of 1966 (NHPA), as amended, and the National Environmental Policy Act of 1969 (NEPA) provide for the consideration of historic properties; the FTA's guidance follows federal regulations for these laws. NHPA Section 106 states that any federal or federally assisted project or any project requiring federal licensing or permitting must consider the project's effects on historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP or National Register). Regulations governing the Section 106 review process are contained in the Code of Federal Regulations (CFR) Title 36, Part 800: "Protection of Historic Properties." Properties include historic and prehistoric archaeological sites, as well as districts, buildings, structures, objects, and landscapes. The NHPA also provides for consultation with American Indian groups when proposed projects might affect cultural or traditional places or resources that have value to an Indian tribal group derived from the role the property plays in the community's historically rooted beliefs, customs, and practices (NHPA Section 101). These regulations encourage coordination with the environmental review process required by other statutes, including Section 4(f) of the U.S. Department of Transportation Act of 1966.

Regulations in 36 CFR 800 provide a step-by-step process for satisfying the Section 106 requirements. There are four steps: 1) initiate consultation with regulatory agencies, concerned Indian tribes, and other interested parties; 2) identify historic properties; 3) assess adverse effects; and 4) resolve adverse effects. Significant properties are evaluated in consultation with the Washington SHPO in the DAHP and must qualify for listing in the NRHP by being at least 50 years old in most cases and by meeting specific eligibility criteria and standards of integrity (36 CFR 60.4). The current investigation is designed to identify prehistoric and historic-period archaeological sites, historic buildings and structures, districts, and traditional cultural properties (TCPs) and to evaluate their National Register eligibility to the extent feasible using reconnaissance-level data. To consider the potential concerns of Indian tribes, the investigation also uses the following regulations:

- American Indian Religious Freedom Act of 1978
- Executive Order (EO) 13007 (access to and/or ceremonial use of sacred sites by Indian religious practitioners)

2.2 Washington State Laws

The State Environmental Policy Act (SEPA), Revised Code of Washington (RCW) 43.21C, and implementing rules contained in the Washington Administrative Code (WAC) 197-11 require the identification of historic, archaeological, and cultural resources listed in or proposed for national, state, and local registers, and the identification of measures to reduce or control effects on these resources. RCW 27.44 (Indian Graves and Records) protects Indian burials, while RCW 27.53 (Archaeological Sites and Resources) protects archaeological sites. RCW 76.09 (Confidentiality of Information) provides for the confidentiality of information on archaeological sites. WSDOT's Environmental Procedures Manual (M31-11, March 2006) Section 456, "Historic, Cultural, and Archaeological Resources," and DAHP's survey and inventory standards both address the methods for cultural resource studies.

2.3 Municipal Regulations

The City of Seattle adopted additional specific environmental policies and procedures in the Seattle Municipal Code (SMC 25.05) while implementing SEPA. Procedures related to historic properties and archaeological sites need to comply with the Landmarks Preservation Ordinance (SMC 25.12), and resources that meet criteria for landmark designation must be identified. Properties eligible for city landmark designation must be at least 25 years old and meet at least one of six criteria of significance. The Seattle Landmarks Preservation Board conducts formal reviews to designate city landmarks. Altering landmarks requires a certificate of approval from

the Landmarks Commission or another applicable commission, such as the Pioneer Square Preservation Board. The City's historic preservation officer may require specific mitigation measures when a proposed project is located adjacent to or across the street from a designated landmark, or when a site of potential archaeological significance is affected.

The City of Mercer Island's Ordinance No. 05C-09 (amending Ordinance No. 02-16) contains provisions for historic designation of private and municipal properties 50 years of age or older within the city limits. The City of Redmond's Ordinance No. 2224 contains provisions for historic preservation, including a Redmond Heritage Resource Register, administered by the Landmarks and Heritage Commission. Designation requires that a structure be at least 40 years of age and meet other criteria established by the commission; archaeological sites also are eligible for designation. The property owner must apply to the commission to modify or demolish listed landmarks.

The City of Bellevue has no preservation ordinance. King County's Ordinance No. 20.62 requires the County to maintain a list of landmarks within the unincorporated areas and for some municipalities with which the County has formulated agreements. The County has no agreement with the City of Bellevue.

3.0 Methods

The FTA, Sound Transit, and WSDOT consulted with the Washington SHPO in the DAHP, local jurisdictions, and Indian tribes during the investigations concerning historic and archaeological resources. Project cultural resource specialists prepared a statement about the methods that would be used to inventory and evaluate historic properties and to determine potential project effects and mitigation measures. Sound Transit provided the methods statement to DAHP and the Snoqualmie and Muckleshoot Indian tribes for review and discussed the methods during consultation meetings and field trips.

3.1 Area of Potential Effects

Sound Transit, FTA, and WSDOT consulted with and received concurrence from the SHPO on the Area of Potential Effects (APE) used for the project (letter of July 13, 2007, from DAHP to FTA). Sound Transit determined and mapped an APE for both archaeological resources and historical buildings and structures. The APE is the area within which an undertaking may cause direct or indirect changes to the character of any historic properties. The APE for archaeological resources is limited to the portion of the project where ground-disturbing activities will be conducted, such as areas for demolition, construction, staging, equipment storage locations, and stormwater management facilities per 36 CFR 800.16[d]. For the archaeological resource investigation, the vertical APE might vary according to construction practice—deeper for excavation areas and shallower for at-grade construction, depending on the geomorphology of the landform where the project element occurs.

The APE for historical buildings and structures is one block (approximately 200 feet) on each side of the centerline of the project routes (i.e., a total corridor width of approximately 400 feet). The APE extends approximately 200 feet from the outer limits of station locations and maintenance facilities. The APE also includes the area one block from where tunnel alternatives could disturb the surface or have the potential for other surface effects, depending on terrain and local land use. Uniquely, for bored or mined tunnel construction, the APE for noise, vibration, and settlement effects is 100 feet on each side of the route centerline (i.e., a total corridor width of approximately 200 feet).

3.2 Data Collection

Information regarding resources in the East Link Project APE that have already been identified, evaluated, and recognized was gathered from established lists—the NRHP, the Washington Heritage Register (WHR), the DAHP, and local landmark or historic designations. Online register lists for the King County Historic Preservation Program and the City of Seattle were checked. Sound Transit reviewed the methods and results of cultural resource management reports for previous surveys conducted near the APE. Information regarding existing historic or prehistoric archaeological and traditional cultural resources in the project APE was gathered to help characterize the types of resources that might be found and to identify areas that possess a high sensitivity for containing such sites. Sources of this information included historical maps, ethnographic literature, local histories, General Land Office Survey maps, and the files and site records of the Washington DAHP. Sound Transit mapped the locations of known archaeological sites, ethnohistoric places, and historical buildings and structures.

Other sources included fire insurance maps, historical photographs, building permits, assessors' records, and oral histories. Locations for this information included the University of Washington, Seattle Public Library, the Museum of History and Industry, and the Washington State Archives Puget Sound Region Branch at Bellevue Community College. In addition, Sound Transit contacted the Eastside Heritage Center, advocates for historic preservation, and private-sector experts.

Research was conducted to determine the soil types, geomorphologic setting, and age of landforms involved, as well as the extent of modern disturbance. The research established the potential for encountering buried prehistoric and historic archaeological sites, increasing the likelihood that existing sites would be identified

during reconnaissance. It is possible, however, that one or more subsurface sites might not be discovered before construction.

Tribal consultation was the most important method for gathering data pertinent to identifying TCPs within the APE. Another method consisted of research into ethnographic sources that discuss Indian place names, especially the geographical data that T.T. Waterman prepared for the Puget Sound area in the 1920s (Hilbert, et al., 2001; Waterman, 1920). During consultation, Sound Transit, FTA, tribal representatives discussed protocols to protect culturally sensitive information from broad public distribution. If TCPs were to exist within the APE and interested tribes were concerned about maintaining the confidentiality of culturally sensitive information, then Sound Transit and FTA would avoid placing information specifically identifying the resource in the EIS.

3.3 Archaeological Study

3.3.1 Archaeological Sensitivity Mapping

Sound Transit mapped the potential for prehistoric and historic-period archaeological sites to occur in the APE and reviewed information gathered about environmental features, known archaeological resources, and the patterns of prehistoric, ethnographic, and historic use of the area. Sound Transit then studied maps and conducted a vehicle reconnaissance of the alternatives. Sound Transit archaeologists developed a set of criteria for identifying areas with a high sensitivity for containing archaeological sites, excluding locations with apparently severe disturbance, such as along Interstate 90 (I-90) in Segment A. High-sensitivity zones were identified areas where the potential for archaeological resource findings is high. The high-sensitivity areas are as follows:

- Areas within about 0.25-mile of water body confluences, especially water bodies with anadromous fish runs
- Areas within about 0.25-mile of water bodies
- Areas within about 0.25-mile of freshwater resources
- Areas on higher ground, such as terraces above water bodies
- High areas that provide protection and/or visibility, such as bluff tops
- Areas on General Land Office (GLO) plats and/or Sanborn Fire Insurance Maps that show historical land use

Copies of the sensitivity maps are provided in Appendix A and are discussed in Section 7.1.2 below.

3.3.2 Archaeological Survey

Sound Transit selected a number of tracts for archaeological survey, favoring locations with high sensitivity for containing archaeological sites but including some areas of low sensitivity. Survey tracts focused on land that is publicly owned and in open land use to facilitate access, views of the ground surface, and the possibility of digging shovel test probes. These locations were dispersed among the alternatives as practical.

A crew of four archaeologists conducted the survey, walking pedestrian transects at intervals appropriate for each alternative and level of existing urban development, generally about 10-meter (33-foot) intervals. The survey was generally limited to surface investigation except for alluvial sediments or relatively shallow historical fill. In such areas, Sound Transit excavated shovel probes and screened the soils through quarter-inch hardware mesh. The shovel probes were placed judgmentally and excavated to sterile materials where practical. Any prehistoric or historic-period archaeological sites were mapped, photographed, and recorded using Washington Archaeological Site Inventory forms. The archaeologically sensitive areas and those areas listed or determined to be eligible historic resources within the study area's APE are shown in Appendix A, Exhibits A-1 through A-5. Maps of archaeological survey tracts and summary information on shovel probes are provided in Appendix A and discussed in Section 7.1.3 below.

3.4 Inventory of Buildings and Structures

Sound Transit historians conducted a literature and records search and a field survey of historic buildings and structures in the East Link APE, using the year 2016 as a baseline, recording buildings in the APE that would be 50 years old by then, and thus eligible for listing in the NRHP if they retained integrity and met one or more of

the eligibility criteria. For buildings in the City of Seattle, Sound Transit used the local age criterion of 25 years, and for buildings in the City of Redmond, 40 years. The City of Mercer Island uses an age of 50 years and the City of Bellevue has no local historic preservation ordinance. An age criterion of 50 years old by 2016 was used for the City of Bellevue.

The historians drove along the alternative routes on several occasions between September 2006 and October 2007. Using lists compiled from records searches, including maps of parcels with buildings identified in King County Tax Assessor's data that met the age criteria, existing historic property inventory forms, NRHP nomination forms, and published sources, the historians compiled a master list of historic resources within the East Link APE. The historians briefly surveyed these areas in September and December 2006 to search for buildings and structures that would clearly be of concern in initial evaluations of project alternatives and returned to the study area in February, April, May, and September through October 2007 for systematic inventory along the alternatives.

The historians entered basic information on historic properties into Washington State DAHP Historic Property database inventory forms along with a recommendation about whether the buildings were eligible for listing in the NRHP, WHR, or local jurisdiction register, where they existed. Where structures appeared to meet NRHP or local jurisdiction landmark criteria of integrity and significance, historians collected or prepared complete inventory forms. A list of inventoried buildings and structures is provided in Appendix B and discussed in Section 7.3 below.

3.5 Evaluation of Register Eligibility

Prehistoric and historic-period archaeological sites, TCPs, and buildings and structures are called "historic properties" if they are listed in or eligible for the NRHP. To be eligible, a property must be at least 50 years old or be exceptionally important and meet one or more of the criteria for evaluation as outlined in 36 CFR 60.4: The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, or association; and

A. *That are associated with events that have made a significant contribution to the broad patterns of our history; or*

B. *That are associated with the lives of persons significant in our past; or*

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

D. *That have yielded or may be likely to yield, information important in prehistory or history.*

Certain properties are unlikely to qualify, including cemeteries, birthplaces and graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years. The application of the criteria considerations is discussed in 36 CFR Part 63.

Properties can be eligible for the NRHP at the national, regional, or local level. Landmark registers for the cities of Seattle, Mercer Island, and Redmond use criteria similar to those for the NRHP, although the age criterion for the City of Seattle is 25 years and for the City of Redmond it is 40 years.

Sound Transit and FTA submitted the database of inventory forms to DAHP for review of preliminary determinations about NRHP eligibility. Similarly, the agencies submitted the forms to the cities of Seattle, Mercer Island, and Redmond for reviews of eligibility determinations. Only these local jurisdictions can determine landmark status after their formal review; therefore, apparent eligibility for local landmark status was based solely on the professional judgment of East Link and local jurisdiction staff and is not to be considered an official determination. DAHP reviewed the inventory forms and made determinations of National Register eligibility for the properties (Letters from DAHP to FTA of November 16, 2007 and February 20, 2008). The City of Redmond provided a letter regarding the National Register eligibility of properties within the City's jurisdiction (Letter from City of Redmond to Sound Transit of November 19, 2007), and the City of Mercer Island concurred with the

project inventory and lack of National Register-eligible properties within its jurisdiction (Letter from Mercer Island to Sound Transit of January 22, 2008). The result was a list of existing and newly recommended historic properties in the APE that could be affected by one or more of the project alternatives.

3.6 Approach to Effects Analysis

The analysis for construction effects and operations effects follows the standard approach for historic properties, including buildings and structures, prehistoric and historic-period archaeological sites, and TCPs. The Advisory Council on Historic Preservation's regulations implementing NHPA Section 106 create a process by which federally assisted undertakings are reviewed for their effects on properties listed in, or eligible for listing in, the NRHP.

After the resource is identified and evaluated, the next step is to apply the Criteria of Adverse Effect. These criteria are used to determine whether the undertaking could change in any way the characteristics that qualify the property for NRHP inclusion. If the undertaking could diminish the integrity of such characteristics, then it is considered to have an adverse effect. Adverse effects include, but are not limited to, the following:

- Demolition or alteration of the property
- Alteration of the property's setting
- Introduction of visual, audible, or atmospheric elements that are out of character with the setting of the historic property
- Physical encroachment upon an archaeological site

During preparation of the Final EIS, documentation for submittal to the local jurisdictions would be provided on any building over the jurisdictions' age criteria to be demolished by the preferred alternative. Cumulative effects are discussed using readily available information on past, present, and foreseeable projects.

3.7 Potential Mitigation Measures

When an undertaking is found to have an adverse effect, Section 106 requires consultation with the Washington SHPO in the DAHP, affected Indian tribes, and other interested parties regarding appropriate avoidance or mitigation measures. Some typical mitigation measures include modifying the undertaking through redesign, reorientation, or other similar changes; relocating the historic properties; documenting buildings or structures that must be destroyed or substantially altered; and implementing data recovery of archaeological or architectural information and materials. Sound Transit and FTA consulted with SHPO about potential mitigation measures for historic properties.

The product of consultation when there is a finding of adverse effect is an agreement document (Memorandum of Agreement [MOA] per 36 CFR 800.6[c]) that contains stipulations specifying measures to be implemented that would avoid or mitigate the adverse effects.

4.0 Agency and Tribal Consultation

Sound Transit consulted with the Washington DAHP, local jurisdictions, and Indian tribes during its historic and archaeological resources investigations. Sound Transit coordinated with staff members at the cities of Bellevue, Mercer Island, Redmond, and Seattle. Consultation with DAHP and other agencies clarified the applicable federal, state, and local legal and regulatory requirements for any archaeological sites and/or TCPs identified within the East Link APE.

Sound Transit and FTA sought government-to-government consultation with the Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Suquamish Tribe, Duwamish Tribe, Tulalip Tribes of Washington, and Yakama Nation, initially providing information by mail. The initial letters served to identify which tribes wished to participate in consultation, to establish a protocol, and to identify the appropriate tribal representatives with whom to consult. Meetings were held with Snoqualmie and Muckleshoot tribal representatives to discuss the project, its potential effects on archaeological sites and TCPs, and whether the tribes would like to make field trips to the study area and provide members for the archaeological field crew.

Sound Transit and FTA solicited information from the tribes about the presence of any known archaeological sites and TCPs that might be affected by future construction of a preferred alternative. Although it was acknowledged that certain information might be culturally sensitive and might not be willingly shared with outsiders, Sound Transit and FTA have stated their willingness to find appropriate ways of identifying general zones of traditional cultural sensitivity.

Table 4-1 lists the letters that resulted from agency and tribal consultation. Copies of letters appear in Appendix C.

TABLE 4-1
Consultation Summary

Date	Form	Participants	General Topic(s)
August 24, 2006	Letter	FTA/Sound Transit to Tulalip, Duwamish, Muckleshoot, Yakama, Snoqualmie, and Suquamish tribes	Opening consultation with tribes
December 19, 2006	Submittal of cultural resources methods statement to DAHP and ACHP, tribes and US Bureau of Indian Affairs for review	Sound Transit and DAHP	Historic, archaeological, and cultural resources methods statement sent to DAHP for review
January 2, 2007	Letter	From Matthew Sterner, DAHP, to James Irish, Sound Transit	Review comments on proposed resource study methods statement
July 3, 2007	Letter	FTA to DAHP	Requesting concurrence on APE for historic properties
July 13, 2007	Letter	DAHP to FTA	Concurring in APE for historic properties
July 18, 2007	Letter	FTA to DAHP	Requesting concurrence in determinations of NRHP-eligibility for historical resources
November 16, 2007	Letter	DAHP to FTA	Providing determinations of National Register eligibility for historic properties
November 19, 2007	Letter	City of Redmond to Sound Transit	Concurring with Local Register eligibility recommendations
November 19, 2007	Letter	Snoqualmie Tribe to ST	Requesting ST to clarify position about BNSF corridor.
January 9, 2008	Letter	FTA to DAHP	Requesting review and concurrence of additional historic properties
January 22, 2008	Letter	City of Mercer Island to Sound Transit	Concurring with Local Register eligibility recommendations
February 20, 2008	Letter	DAHP to FTA	Providing determinations of NRHP eligibility for additional historic properties
May 27, 2008	Letter	City of Seattle to Sound Transit	Providing determinations of eligibility for Seattle Landmark Ordinance

5.0 Environmental Context

5.1 Natural Setting

The East Link Project would be located in the central portion of the Puget Sound Lowland, generally running east and northeast across a series of north-south trending uplands and water bodies, from Seattle east across Lake Washington and Mercer Island, along Mercer Slough, across the Bellevue upland, and into the Sammamish River Valley to Redmond. Drainages that would be crossed include Puget Sound, the Duwamish River estuary, Lake Washington, Mercer Slough, Sturtevant Creek, Lake Bellevue, Kelsey Creek and its tributaries, the Sammamish River, and Bear Creek. Ground surface elevations generally range within 500 feet above sea level. Summary information on environmental factors that would affect the resource and land use of prehistoric and historic-period residents can help identify areas sensitive for archaeological resources, as well as the types of resources that could be present.

Late Pleistocene glaciation and post-glacial alluvial processes shaped the landforms in the project vicinity, starting by about 18,000 years before present[1] (B.P.) (Porter and Swanson, 1998). As the glaciers melted, plant and animal communities became established and able to support prehistoric gathering, hunting, and fishing, with a tundra environment becoming established by about 15,000 B.P. and a forest-parkland environment about 14,000 B.P. (Brubaker, 1991; Whitlock, 1992). In the latter environment, species included scattered trees of lodgepole pine (*Pinus contorta*), alder (*Alnus rubra*), and Douglas fir (*Pseudotsuga menziesii*); and shrubs, bracken fern (*Pteridium aquilinum*), and grasses (Whitlock, 1992). Climatic conditions warmed and dried, even more so than today, expanding the forest-parkland environment until about 7,000 B.P. (Barnosky, et al., 1987).

Climatic conditions similar to the present became established by about 6,000 B.P. Western hemlock (*Tsuga heterophylla*) and successional Douglas fir dominated the forested uplands, while western red cedar (*Thuja plicata*) were found along the stream banks, and marshes occurred in low-lying areas (Brubaker, 1991; Whitlock, 1992). Deer (*Odocoileus* sp.) and elk (*Cervus canadensis*) were probably more abundant in stream valleys than upland forests. Environments along water bodies generally supported more varied plant and animal resources useful to humans, including wetland plants, waterfowl, and large and small game. Mercer Slough and its tributaries (Kelsey Creek and Sturtevant Creek), and the Sammamish River and its tributary (Bear Creek) have supported a variety of abundant resources, including a combination of anadromous Chinook (*Onchorynchus tshawytscha*), coho (*O. kisutch*), and sockeye (*O. nerka*) salmon (Williams, et al., 1975), as well as resident fish and freshwater mussels.

5.2 Geomorphic Setting

The most recent glacial advance, the Vashon stage of the Fraser glaciations, formed most of the present geologic and topographic conditions (Jacobs Associates, 2007:3). The ice sheet deposited a mixed assemblage of lacustrine deposits, outwash, glaciomarine drift, and till. Erosion and deposition have influenced the preservation of the glacial deposits, covering them in places with recent stream and river alluvium. The general environments for the deposition of archaeological remains include the tops of glacial deposits, where archaeological materials would be found within a short distance beneath the ground surface; stream deposits, where the materials could be buried to some depth; and river deposits, where they could be buried deeply. In addition, modern fill, often topped by asphalt, concrete, or gravel, occurs throughout the project vicinity to varying depths. This fill could cover archaeological resources and may contain some historic-period remains. Where developers scraped glacially derived or shallow alluvial soils before placing fill, they likely destroyed or disturbed any archaeological deposits that may have been present. In Downtown Bellevue, for example, project geotechnical work revealed fill to between about 8.5 and 10 feet below ground surface in six borings, underlain by glacial till or outwash, and with glacial till to about 10 feet in one boring and outwash to about 6 feet in another (Jacobs Associates, 2007).

[1] Before present is an archaeological term that considers radiocarbon dating at a specified point in time. Standard practice is to make time relative to January 1, 1950.

The Seattle earthquake fault zone includes the area around I-90 from Seattle to south Bellevue (Jacobs Associates, 2007:5). It is west trending and about 4 to 6 kilometers (2.5 to 3.75 miles) wide. Quaternary sediment has been folded and faulted along the zone. This fault has been the source of prehistoric and historic-period earthquakes that have affected human use of the project vicinity and archaeological sites located there. An earthquake about 1,000 to 1,100 years ago caused 23 feet of surface displacement (Jacobs Associates, 2007:5). Deposits in Redmond's Marymoor Park suggest that land at the north end of Lake Sammamish near the project vicinity dropped by 3 feet or more and a large wave from the lake washed north into the Sammamish River valley, covering the river's floodplain and archaeological sites located there (Lewarch, et al., 2000:9).

The East Link alternatives traverse areas of glacially derived soils throughout most of Segments B, C, and D, except where the alternatives are located near streams or wetland areas. In particular, Segment B soils tend to be formed on terraces along or near Mercer Slough. By contrast, much of the Segment E soils consist of Sammamish River alluvium.

6.0 Cultural Context

This section discusses the previous cultural resource management studies, prehistory, ethnography, and history of the project vicinity.

6.1 Previous Cultural Resource Management Studies

Numerous cultural resource management investigations have taken place in the project vicinity, as listed in Appendix D. Most of the studies have been conducted for transportation-related projects, although others include the Sammamish River Trail and park developments, commercial and residential developments, fiber optic cables and communication towers, and study of an archaeological site in Marymoor Park. The City of Bellevue conducted a survey of its historic properties in the 1990s (Tobin and Pendergrass, 1997). The studies have recorded few NRHP-eligible historic properties and none within the East Link Project APE.

6.2 Prehistory

Most archaeologists agree that human occupation and the use of inland western Washington has been continuous from approximately 10,500 years ago. The earliest sites consist of lithic scatters, possibly including leaf-shaped projectile points, which may be the remains of broad-spectrum foraging camps or hunting and gathering activity areas. Over time, changing aboriginal technology and site locations suggest increased sedentism and specialization in the use of particular environments and resources (Ames and Maschner, 1999; Samuels, 1993).

Several chronological sequences describe the timing and nature of cultural change in the Pacific Northwest. Table 6-1 shows a regional chronology for the Pacific Northwest coast based on the work of Ames and Maschner (1999) that divides prehistoric occupation into five developmental periods. In general, Ames and Maschner's model suggests a shift from small groups relying on generalized hunting and gathering to larger groups with increasing social complexity and specialized reliance on aquatic resources. The prehistoric periods are described below.

TABLE 6-1
Ames and Maschner's (1999) Model of Prehistoric Change in the Puget Basin

Dates	Period	Land Use	Settlement	Subsistence	Technology
14,000 BC to 10,500 BC	Paleoindian	Generalized marine, littoral, and/or terrestrial	Short-term use of pit houses and shelters	Generalized marine, littoral, and/or terrestrial	Stone; bone, antler, and perishable materials likely
10,500 BC to 4,400 BC	Archaic	Generalized littoral, neritic, and terrestrial	Short-term use of pit houses and shelters	Generalized littoral, neritic, and terrestrial	Stone; some bone and antler; other perishable materials likely
4,400 BC to 1,800 BC	Early Pacific	Littoral, neritic, and terrestrial	Increased sedentism in seasonal villages	Increased focus on littoral resources and expanded use of neritic resources	Increase in ground stone, bone, antler, and perishable materials
1,800 BC to AD 200/500	Middle Pacific	Neritic, littoral, and terrestrial	Winter villages of plank houses and seasonal camps	Increased focus on marine and riverine resources; food storage technologies developed	Decrease in stone; diversification of tools and tackle of bone, antler, and perishable materials
AD 200/500 to c. AD 1775	Late Pacific	Neritic, littoral, and terrestrial	Large permanent villages and special use sites	Specialized marine, riverine, littoral, and terrestrial resource use and management; extensive food storage.	Tools and tackle of bone, antler, and perishable materials; very little stone

6.2.1 Paleoindian (14,000 BC to 11,000 BC)

The Paleoindian period includes the earliest evidence of movement of peoples from eastern Siberia onto the North American continent. Currently a few small sites with tool assemblages dominated by basalt cobble choppers, flaked scrapers, and finely crafted fluted lanceolate Clovis projectile points characterize the period. These artifacts suggest a highly mobile and opportunistic culture adapted to the rapidly changing environments and ocean levels that followed the retreat of the glacial ice caps.

6.2.2 Archaic (10,500 BC to 4,400 BC)

Continued tectonic activity and fluctuation of ocean levels have contributed to the paucity of information regarding this period. Sites in the Pacific Northwest tend to consist primarily of surface scatters with shallow buried components. Time-sensitive lithic tools provide the only chronological reference, because little organic material has survived. Large bifacial, leaf-shaped artifacts dating from 7,000 BC to 4,300 BC dominate assemblages (known as Old Cordilleran) of this period. Subsistence strategies during this period include flexible technologies and broad skill sets applied to the exploitation of neritic (i.e., the ecological zone of the continental shelf extending from low tide to a depth of about 100 fathoms [about 180 meters]), littoral (i.e., the region of the shore of a lake, sea, or ocean), and terrestrial (i.e., land) resources. The archaeological record suggests populations were small, mobile, and did not develop technologies to store food.

6.2.3 Pacific (4,400 BC to About AD 1775)

The Pacific period is divided into the Early, Middle, and Late (described below), terminating around AD 1775 with the first European-introduced smallpox epidemic. In general, hunter-gatherer cultures increased in complexity during this period, with intensified use of specialized resources, settlement in permanent village sites, and the development of social stratification.

6.2.3.1 Early Pacific (4,400 BC to 1,800 BC)

The Early Pacific, also described as the Cascade Phase (Suttles and Lane, 1990), includes the first clear indication of the use of specialized resources such as camas (*Camassia quamash*) and shellfish. This phase is characterized by an overall increase in food production with a focus on intertidal resources, as illustrated by numerous shell midden sites. These sites also indicate an increase in sedentism.

6.2.3.2 Middle Pacific (1,800 BC to AD 200/500)

A few coastal Washington sites characterize the Middle Pacific. These sites include large shell middens, remains of large rectangular cedar plank houses, and large canoes. The tool assemblages reveal an increase in complexity and an array of tools manufactured from antler and bone. Subsistence strategies include an intensification of fishing technologies and a growing reliance on food storage.

6.2.3.3 Late Pacific (AD 200/500 to About AD 1775)

Because sites dating to the Late Pacific are more common and have been studied more intensively, this period is better understood that the previous ones. Villages often consisted of large cedar plank houses, with ceremonial, artistic, and utilitarian artifacts. Items made of bone, antler, and wood largely replaced chipped stone tools. Both terrestrial and marine resources supplemented intense use of specific resources, such as salmon and root crops.

6.2.4 Project Vicinity Prehistory

Several prehistoric archaeological sites have been recorded in the project vicinity, and one has received extensive study. Table 6-2 summarizes information on these sites, most of which are located in the Sammamish River Valley or along its tributaries. A cluster of sites has been recorded in Marymoor Park along the upper Sammamish River, in the vicinity of the historic confluence of Bear Creek and downstream from the historic shoreline of Lake Sammamish. The sites include 45KI9A/9B (called the Marymoor Site) and 45KI10, recorded as a result of University of Washington archaeological studies in the area. Sites 45KI266, 45KI492, and 45KI493 also were recorded in Marymoor Park, encountered during excavations for utilities.

The reasons for the cluster of prehistoric sites in Marymoor Park likely include the local diversity of stream, lake, marsh, and upland environments, which provided abundant salmon and other fish, plants, waterfowl, and mammals. In addition, the park has saved the area from wholesale development, while requiring archaeological

survey and monitoring of excavations within the park. This has provided some protection for the sites, as well as the means for finding and investigating them. The sites have received varying degrees of disturbance from historical and modern activities.

Marymoor Site locus 45KI9A has received the most study. Two layers of dark midden soil with thermally altered rock, bone, and shell fragments, and artifacts that include projectile points, large blades, and microblade cores, scrapers, gravers, choppers, flake tools, quartz crystals, and pieces of ocher pigment characterize the deposits. Two radiocarbon dates suggest occupation, hunting, and fishing around 2,500 years B.P. (Greengo, 1968; Greengo and Houston, 1970). Nearby, locus 45KI9B appears to have been used later; its assemblage of ground stone adze blades, barbed projectile points, worked and unworked bone, earth oven, stone pendant, and salmon and mollusk remains suggest occupation, fishing, woodworking, hunting, and plant processing (Greengo and Houston, 1970).

Site 45KI10 was recorded as a small, disturbed site with basalt blades, corner- and side-notched projectile points, scrapers, choppers, cores, flakes, and thermally altered rock (Greengo, 1968). Three other prehistoric archaeological sites have been recorded in Marymoor Park. Site 45KI266 consisted of prehistoric fire pits and lithic artifacts; originally recorded in 1966, the site was reported destroyed in 1984 (Elvidge, 1984). Sites 45KI492 and 45KI493 consist of prehistoric burn features and stone flakes, with radiocarbon dates of 3,220 – 3,060 B.P. and from 2,370 –2,230 B.P. to 2,600 – 2,460 B.P., respectively (Nelson, 2000).

Site 45KI8 was recorded north of Marymoor Park, along the Sammamish River at Redmond (Greengo, 1966 and 1968); it is discussed in Section 7.1.1 below. Sites 45KI466 and 467 near the confluence of Bear and Evans creeks, were recorded during monitoring for excavations associated with the Millennium Corporate Center (Norman, 1999a and 1999b). Located close to the creek confluence, 45KI466 consists of a possible prehistoric campsite and historic road bed. Prehistoric artifacts included basalt, jasper, and petrified wood flakes, chunks, cores, and chipped cobbles, while historic-period artifacts included crushed rock, clear and green flat glass, coal slag, and metal fragments. Located south and west of the creek confluence, 45KI467 consists of a prehistoric lithic and historic debris scatter, with a small lanceolate projectile point of petrified wood, a jasper flake fragment, and two pieces of amethyst bottle glass.

Archaeological survey for a residential development recorded 45KI718, a lithic scatter located on a terrace above a tributary to Kelsey Creek, south of the East Link Project vicinity (Cooper, 2005). Investigations there recovered a Cascade projectile point, a chipped stone biface, and several other chipped stone artifacts in a disturbed context.

TABLE 6-2
Previously Recorded Prehistoric Sites

Site Number and Name	Landform	Description	Reference
45KI8	Along Sammamish River banks, near mouth of Bear Creek	Prehistoric lithic scatter with large stemmed projectile point, two small leaf-shaped points, basalt blade fragment, adze blade fragment; historic whetstone fragment; also reported fluted point; disturbed context; location could not be verified in East Link Project fieldwork	Greengo 1968; Greengo and Houston, 1970
45KI9A&9B Marymoor Site	Sammamish River banks	Prehistoric midden with a variety of lithic artifacts, thermally altered rock, and bone and shell fragments	Greengo, 1968; Greengo and Houston, 1970
45KI10	Sammamish River bank/ terrace	Small prehistoric site with basalt blades, corner- and side-notched projectile points, scrapers, choppers, and fire-cracked rock; also two basalt cores and flakes of basalt, cryptocrystalline silicate, and an unidentified material; disturbed context	Greengo, 1968; Greengo and Houston, 1970
45KI266	Sammamish River valley	Prehistoric fire pits and lithic artifacts; reported about 1979; destroyed by 1984	Elvidge, 1984
45KI466 Bear/Evans Creek Site	Confluence of Bear Creek and Evans Creek; also on upper terrace	Possible prehistoric campsite and historic road bed; basalt, jasper, and petrified wood flakes, chunks, cores, and chipped cobbles (13 artifacts); crushed rock, clear and green flat glass, coal slag; metal fragments	Norman, 1999a and 1999b
45KI467 Union Hill Road Site	Upper/Pleistocene terrace	Prehistoric lithic and historic debris scatter, with small lanceolate projectile point of petrified wood, jasper flake fragment, two pieces of amethyst bottle glass	Norman, 1999a and 1999b

TABLE 6-2
Previously Recorded Prehistoric Sites

Site Number and Name	Landform	Description	Reference
45KI492	Sammamish River Valley	Prehistoric burn feature, basalt cobble spall, cryptocrystalline silicate interior flake, and fire-modified rock; charcoal date of 3,220 – 3,060 B.P.	Nelson, 2000
45KI493	Sammamish River Valley	Prehistoric burn feature, two cryptocrystalline silicate interior flakes; charcoal dates of 2,370 – 2,230 B.P. and 2,600 – 2,460 B.P.; disturbed context	Nelson, 2000
45KI718 Eastern Terrace Site	Terrace above tributary to Kelsey Creek	Prehistoric lithic scatter with Cascade point, biface, and other chipped stone of cryptocrystalline silicate (11 artifacts); disturbed context	Cooper, 2005

6.3 Ethnography

The project vicinity is located in the aboriginal territories of the Duwamish and Sammamish (Haeberlin and Gunther, 1930; Suttles and Lane, 1990). These groups spoke the Lushootseed or Puget Salish language. People lived in winter villages generally located where rivers and streams entered Puget Sound and lakes such as Lake Washington and Lake Sammamish, or at stream confluences. A village was located either at the confluence of Mercer Slough with Lake Washington, or along the slough (Hilbert, et al., 2001:95).

Winter villages consisted of longhouses built from split cedar planks placed on wooden frames, ranging from one to several houses that sheltered one or more extended family groups. In the villages, people lived during the winter using food and other supplies collected throughout the year and supplemented with fresh foods available nearby. They made and repaired tools, clothing, and other necessary materials in winter, and pursued ceremonial and social activities. Families left their winter villages during the warmer months to fish, collect plant foods and materials, and hunt foods for immediate use and storage for the next winter. They often met other families and groups at locations with abundant resources, and traveled and traded with others. During these months, people camped in portable shelters made of mats stretched over pole frameworks (Haeberlin and Gunther, 1930; Suttles and Lane, 1990).

People gained their subsistence by fishing, collecting plant products, and hunting. Catching salmon in water bodies within the East Link Project vicinity was an especially important economic activity, using many devices such as weirs and spears, traps, and dip nets. Freshwater fish included trout and others from streams and lakes. Eels and freshwater mussels also came from streams. Plants used for food, medicines, and technological activities included shoots, camas bulbs, roots such as wapato, and berries. Cedar trees provided materials for houses, canoes, mats, baskets, rope, and clothing. People used bows and arrows, pitfalls, and snares to hunt large and small game, often catching waterfowl in aerial nets. The Duwamish and Suquamish also collected resources from Puget Sound, including shellfish, seals, and fin fish (Haeberlin and Gunther, 1930; Suttles and Lane, 1990).

Background research reveals Indian place names for villages and other uses occur along the Segment B alternatives in the vicinity of Mercer Slough, and along the Segment E alternatives in the vicinity of the Sammamish River. The place names correlate with areas analyzed as archaeologically sensitive. A promontory along Lake Washington just west of the Mercer Slough confluence was called *Tl³utsa³lus* ("tying a mesh"). *Sa'tsakaL* ("water at head of a bay"), the place name for Mercer Slough, represents an old village site, where the people were called *Sa'tsakalEbc*. It was reported to have been the staging place for the native attack on Seattle in January 1856 (Hilbert, et al., 2001:95). The place was also important in mythology (Hilbert, et al., 2001:46, 95).[2]

The place name for the Sammamish River was *sts!ap* ("crooked," "meandering") and for Redmond was *TL³oq³* ("crowded in, poked in"), while *Ceqos-a'lt^{u}* ("a high place with a house on it"), denoted a creek entering the Sammamish River "from the east below Redmond" (Hilbert, et al., 2001:112). While maps of this downriver location should indicate north of Redmond, the maps of place names show this and a creek called *Tuba'hal*

[2] Orthographic symbols such as ³, ^{u}, and ! used in archaeological names indicate sounds unique to the Lushootseed language.

("broad") to be located south of Redmond (Hilbert, et al., 2001:112). Possessing a number of upper branches, this was probably Bear Creek.

The earliest effects of Euroamerican contact appeared in Northwest Indian communities before the Euroamericans themselves. Researchers have not yet determined when epidemic diseases first appeared, but Lewis and Clark estimated that smallpox predated their 1805-1806 trip to the lower Columbia River area by about 30 years. Repeated epidemics of various diseases continued to drastically decrease populations (Noel, 1980:66), reducing many by two-thirds or more (Boyd, 1985:398).

Alcohol, disease, and dislocation from traditional territories disrupted the social and political organization of the groups. Euroamericans often hired Indians to act as guides, as transporters of goods and messages, and to hunt, fish, cut timber, and tend herds and crops, all of which took Indian people away from their traditional subsistence-oriented activities (Suttles and Lane, 1990). Reduction of Indian populations also brought changes in subsistence patterns.

In 1855, Washington Territorial Governor Isaac Stevens negotiated the Treaty of Point Elliott with a number of groups, including the Duwamish, Snoqualmie, and Sammamish tribes. The United States intended for the Duwamish Tribe to move to the Port Madison Reservation and the Snoqualmie Tribe to move to the Tulalip Reservation, while the Sammamish Tribe could go to either reservation (Ruby and Brown, 1992:72-73). Although some Indians moved to these reservations or to the Muckleshoot Reservation, others remained near their traditional settlements. The federal government recognized the Snoqualmie Tribe in 1999, but the Duwamish are not yet federally recognized.

6.4 History

The East Link Project would run from the historic International District of Seattle east through the Mount Baker District, across once-rural areas of Mercer Island and Bellevue, and into the historic small town of Redmond. By 1876, 3,400 people lived in the City of Seattle and 250 of them were Chinese. A small area on Washington Street between 2nd Avenue and 3rd Avenue became the City's earliest China Town. Seattle was one of two main ports of entry for Japanese immigrants during the 1880s, with the 1890 census listing 360 Japanese in Washington, most living in Seattle. The Japanese community grew next to that of the Chinese on Washington Street and spread south past Jackson Street to Weller Street. When the City filled the tide flats south of Jackson Street in 1909, using debris from the Jackson and Dearborn Street regrades, the Chinese community, which had supplied much of the labor for these efforts, moved south to the newly filled area.

Filipinos came to Seattle in large numbers during the early decades of the twentieth century. By 1930, the Filipino population in Seattle had outgrown the Chinese population. At the same time, African Americans also settled in the Central District of Seattle in large numbers. Restrictive covenants prevented these ethnic and racial groups from buying land in many Seattle neighborhoods, prohibitions that encouraged the growth of what would become Seattle's International and Central districts (Chin, 2001). Seattle's International District is a National Register Historic District and a City of Seattle Landmark District based on its historic character and because it is the only pan-Asian American community on the United States mainland (Chin, 2001:10).

Logging started early in the vicinity of Seattle, and the Mount Baker District featured saw and planing mills along its shoreline in the 1890s. Only a few families built houses there before 1905, however, because a small number of individuals and companies owned most of the land, and because people thought of the area as too distant from Seattle. The City's annexation of Mount Baker in 1907 encouraged growth during the early twentieth century, and landowners platted most of the neighborhood by 1910. The Mount Baker Park Improvement Club discouraged the construction of buildings other than single-family residences and enforced restrictive covenants that prohibited selling property or renting apartments to non-whites or recent immigrants. These restrictions continued until after World War II (Tobin, 2004).

A government land survey named Mercer Island after pioneer Thomas Mercer in 1860. The island's first post office, in the early settlement called East Seattle, opened in 1904. Passenger ferries connected the island with Seattle and Bellevue until the first bridge opened in 1923, which allowed vehicle traffic between Mercer Island and Bellevue. Population increased dramatically, and in 1924 the name of the settlement changed to Mercer Island. The island remained relatively rural until 1940, when the increasing population of Mercer Island and the resulting vehicle traffic necessitated construction of the Lake Washington Floating Bridge and the replacement of

the East Channel Bridge. The population grew from 1,200 to 4,500 between 1940 and 1950 and then nearly doubled in the next 3 years. Voters rejected the first referendum on incorporation in 1945 and the next in 1953. In 1960, Mercer Island finally incorporated as a city and the downtown business district incorporated as a town—both named Mercer Island. This situation continued for a decade until the two governments merged in 1970.

The first settlers, William Meydenbauer and Aaron Mercer, both arrived in the area that would become Bellevue in 1869. Each settled in a coastal area that would come to bear his name, Meydenbauer on the bay and Mercer to the south along the slough. Isaac Bechtel purchased land near the current downtown area in 1883, working with his sons to log and clear the land. By 1890, shingle mills and a sawmill had begun operation and settlers had moved onto the cleared land. By 1900, the area had 400 residents. At that time, the Hewitt Lumber Company employed hundreds of men to log timber from the Wilburton vicinity, near the present day intersection of 116th Avenue SE and SE 8th Street, west to Lake Sammamish and south to Kennydale (Wilma, 1999). They hauled the logs overland and floated them down the Mercer Slough.

Before the Lake Washington Ship Canal opened in 1917, Mercer Slough included several boat landings and extended north nearly to Main Street where a lumber mill operated at the community of Wilburton (Krafft, 1991). Operation of the Ship Canal lowered the level of Lake Washington, destroying the navigability of Mercer Slough and creating new farmlands in the rich bottomland soil. Residents grew holly trees, azaleas, bulbs such as daffodils and iris, and berries.

Post-World War II population growth spurred the development of Bellevue. Developer Kemper Freeman opened Bellevue Square, the first shopping mall on the Eastside, in 1946. In 1952, Roxbury Homes purchased 80 acres that had been a filbert farm, platting the area as "Surrey Downs Addition No. 1." The residential subdivision eventually included about 200 houses, with the optimism of the period showing in the modern Northwest design of the houses. The City of Bellevue incorporated in 1953 (Stein, 1998).

Luke McRedmond, who came to the United States from Ireland, established the City of Redmond. He first settled in Seattle in 1865 and then staked a claim just north of Lake Sammamish in the early 1870s. McRedmond started a dairy farm and founded the Seattle and International Railroad. He was involved in the Black Diamond coal mines, and served as justice of the peace and the first postmaster, changing the community's name from Willows to Redmond. McRedmond's daughter Emma, born in Seattle in 1869, served as Redmond's postmistress for years, beginning at the age of 16. In 1898 she married William White, who would become a justice of the Washington State Supreme Court; their house is one of the oldest extant buildings in Redmond (Hanscom, 1979).

The Seattle, Lake Shore and Eastern Railway incorporated in 1885. By 1889, Redmond had a train station with both freight and passenger service. Although there was some logging in the area before operation of the railroad, those efforts were limited. The first sawmill began operation about 1890. Local logging increased as companies used the freight service to ship their lumber, allowing the logging companies and mills to employ hundreds of men (Bagley, 1929:849). Redmond's hotels and restaurants benefited from the passenger service. Trains stopped in Redmond twice each day, serving schoolchildren, businessmen, people who shopped in Seattle, and the postal service, among others (MacIntosh, 1999b). In 1892, the Northern Pacific Railroad acquired the Seattle, Lake Shore and Eastern, operating the line until 1970, when the Burlington Northern purchased it. The railroad depot in Redmond, which had been open since 1889, closed in 1970 and was demolished in 1972 (MacIntosh, 1999a). Many of the oldest buildings in Redmond are located near the former location of the depot.

Three historical resources in or near the APE have been recorded as archaeological sites: the Frederick Winters House, located along Bellevue Way SE and discussed in Section 7.3.2 below, is recorded as 45KI606; the Seattle, Lake Shore and Eastern Railroad grade, which runs through Redmond, is recorded as 45KI451; the Moore Farmstead, located north of Redmond, is recorded as 45KI543.

7.0 Affected Environment

7.1 Archaeological Properties

7.1.1 Previously Recorded Archaeological Sites

Only one archaeological site has been recorded near the project vicinity. Site 45KI8 was recorded in 1966 (Greengo, 1966). The site was said to be located along the Sammamish River and near an old confluence of Bear Creek near the Redmond Way Alternative (E1). The site was described as consisting of scattered artifact finds along the river for about one-half mile, including some finds in dredged material located on the west bank of the river. A fluted projectile point, which usually denotes ancient occupation, was said to have been found at the site in about 1941. The condition of the site in 1966 was reported as "completely worked over on surface—no midden visible" (Greengo, 1966).

7.1.2 Results of Archaeological Sensitivity Mapping and Implications for Archaeological Resources

The application of the landform criteria for archaeological sensitivity (see Section 3.3.1) identified several portions of the alternatives as having high sensitivity for prehistoric archaeological sites, while use of the historical criterion did not identify areas with a high sensitivity of historic-period archaeological sites. Examination of land patents and early GLO survey maps did not reveal historical building sites within the APE, and early agricultural use often did not leave archaeological deposits at locations removed from building sites. Historical uses revealed by the Sanborn Fire Insurance maps recorded commercial and industrial uses such as an automobile repair shop in Bellevue and railroad tracks and a nearby depot in Redmond. These uses are well documented in the historical record, but no early tenements, apartments, small stores (that may have had living quarters), hotels, or other buildings that might have resulted in archaeological remains and contributed important information to the historical record were found on the Sanborn Maps.

Appendix A, Exhibits A-1 through A-5, shows areas judged to have high prehistoric archaeological sensitivity for the project alternatives. Segment A was not mapped because almost all the APE was previously disturbed for the construction of I-90, no archaeological sites could be expected there, and the project would be constructed on I-90. A small portion of the I-90 Alternative (A1) occurs on the east bank of Lake Washington in an area considered to have high sensitivity for archaeological remains. Table 7-1 summarizes the lengths of high-sensitivity APE within each of the East Link alternatives (also see Exhibits A-1 through A-5 in Appendix A).

All of the Segment B alternatives (except for the portion of the Bellevue Way Alternative [B1] where it follows Bellevue Way NE) have a high sensitivity for archaeological resources because of their proximity to Mercer Slough, especially its confluence with Lake Washington, and to the Kelsey Creek and Sturtevant Creek confluences. The area has been extensively developed, with considerable disturbance to native soils that could have disrupted or destroyed archaeological deposits. These landforms have a high sensitivity for archaeological resources, although none may be found or be intact if identified. The portion of all Segment B alternatives along the I-90/Bellevue Way off-ramp is judged sensitive because even though it follows I-90, it is located on old shoreline. The BNSF Alternative (B7) is located on uplands east of Mercer Slough. The Segment B alternatives range from 1.51 to 2.63 miles of high archaeological sensitivity, with the Bellevue Way Alternative (B1) having the least and the BNSF Alternative (B7) the most.

Most of Segment C is highly developed. Portions of Segment C alternatives have a high sensitivity for archaeological resources because they travel along or near Sturtevant Creek or other freshwater resources. Portions of the Bellevue Way Tunnel Alternative (C1T) and the 106th NE Tunnel Alternative (C2T) pass Lake Bellevue and cross Sturtevant Creek, where archaeological resources could be buried within the floodplain. The segments range from 0.02 mile to 0.84 mile of high-sensitivity APE.

TABLE 7-1
Lengths of Alternatives with High Sensitivity for the Potential Occurrence of Archaeological Resources [a]

Alternative	Length of High Archaeological Sensitivity (in miles)
B1, Bellevue Way	1.51
B2A, 112th SE At-Grade	2.15
B2E, 112th SE Elevated	2.15
B3, 112th SE Bypass	2.28
B7, BNSF	2.63
C1T, Bellevue Way Tunnel	0.84
C2T, 106th NE Tunnel	
C2T from Courthouse (B2A)	0.96
C2T from 112th SE (Elevated) (B2E)	1.38
C2T from I-405 (B3)	1.34
C2T from I-405 (B7)	1.36
C3T, 108th NE Tunnel	
C3T from Courthouse (B2A)	0.12
C3T from 112th SE (Elevated) (B2E)	0.54
C3T from I-405 (B3)	0.50
C3T from I-405 (B7)	0.52
C4A, Couplet	
C4A from Courthouse (B2A)	0.58
C4A from 112th SE (Elevated) (B2E)	0.58
C4A from I-405 (B3)	0.52
C4A from I-405 (B7)	0.54
C7E, 112th NE Elevated	
C7E from Courthouse (B2A)	0.52
C7E from 112th SE (Elevated) (B2E)	0.52
C7E from I-405 (B3)	0.45
C7E from I-405 (B7)	0.48
C8E, 110th NE Elevated	
C8E from Courthouse (B2A)	0.22
C8E from 112th SE (Elevated) (B2E)	0.52
C8E from I-405 (B3)	0.43
C8E from I-405 (B7)	0.47
D2A, NE 16th At-Grade	
D2A from NE 12th (C3T, C4A, C7E, C8E)	0.47
D2A from BNSF (C1T, C2T)	0.49
D2E, NE 16th Elevated	
D2E from NE 12th (C3T, C4A, C7E, C8E)	0.47
D2E from BNSF (C1T, C2T)	0.49
D3, NE 20th	**0**
D3 from NE 12th (C3T, C4A, C7E, C8E)	0.47
D3 from BNSF (C1T, C2T)	0.49
D5, SR 520	
D5 from NE 12th (C3T, C4A, C7E, C8E)	0.56
D5 from BNSF(C1T, C2T)	0.58
E1, Redmond Way	1.75
E2, Marymoor	1.59
E4, Leary Way	1.57

[a] The sensitivity zones are shown on Exhibits A1 through A4 in Appendix A

The Segment D alternatives also are located in heavily developed areas. Portions of the Segment D alternatives have a high sensitivity for archaeological resources where they cross streams such as the West Tributary of Kelsey Creek. In addition, part of the SR 520 Alternative (D5) follows uplands above the Sammamish River floodplain; such locations were often attractive for Native American groups to process resources, camp, and even live for longer time periods. The segments range from 0.02 mile to 0.48 mile of high-sensitivity APE.

The Segment E area is less heavily developed and retains more green space. The Segment E alternatives are considered to have a high sensitivity for archaeological resources, especially near the crossings of Bear Creek and the Sammamish River, where some terraces are present and where archaeological resources may be buried within flood deposits. The alternatives range from 1.57 to 1.75 miles of high-sensitivity APE.

7.1.3 Results of Archaeological Survey

The archaeological survey took place during the last week of February 2007, with a field director and a crew of four persons. The work included 15 survey tracts. Within each survey tract, the crew walked defined paths or transects and recorded observations, conducting shovel probes depending on subsurface conditions and screened materials. Six survey tracts were located in the archaeologically sensitive portions of Segment B, five in Segment D, and four in the archaeologically sensitive portions of Segment E. Two survey tracts in Segment D were placed in areas considered to have low archaeological sensitivity to control for the bias inherent in focusing the survey on high-sensitivity areas. No tracts were placed in Segments A or C because heavy development and other characteristics provide few areas of high archaeological sensitivity.

The archaeological survey of the Segment B tracts encountered areas of historical disturbance, heavy vegetation, water near or at the ground surface, and some modern debris. Survey tracts in Segment D also showed considerable disturbance, while those in Segment E encountered fill covering the native soils up to about 1 meter (3.28 feet) deep. Sound Transit searched for traces of previously recorded prehistoric archaeological (Site 45KI8) in Segment E, but the work encountered no evidence of the site. It is difficult to tell whether the site still exists because the areas have been eroded, dredged, rip-rapped, and filled.

The survey located no prehistoric or historic-period archaeological remains, even though such materials and sites could be found buried, particularly along the Segment B and E alternatives. Although past development has likely damaged or destroyed archaeological sites, some important remains could exist.

7.2 Traditional Cultural Properties

FTA and Sound Transit sought government-to-government consultation with the Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Suquamish Indian Tribe, Duwamish Tribe, Tulalip Tribes of Washington, and Yakama Nation, initially providing project information by mail. Meetings were held with Muckleshoot and Snoqualmie tribal representatives to discuss the East Link Project and its potential effects on archaeological sites and TCPs. Consultation with the tribes revealed no TCPs in the project vicinity.

7.3 Historic Buildings and Structures

The historical records search identified several properties listed in the NRHP, the WHR, or local registers. The field survey and preparation of inventory forms took place primarily from February through June, 2007, and September through October, 2007. Sound Transit's research and field survey inventoried 377 buildings and structures (including one potential historic district with a number of contributing elements) in the APE, with 11 either listed in the National Register (and automatically part of the WHR) or recommended to be eligible. FTA's eligibility determinations were based on criteria for listing in the NRHP and the Washington DAHP (which houses the SHPO).

FTA and Sound Transit would not nominate properties for listing in the National Register, but Section 106 of the NHPA requires federal agencies to take into account the effects of their actions on properties that are determined eligible as well as those that are listed. The consent of private property owners is needed before their properties can be listed. As discussed in Section 3.5 above, properties to be listed or considered eligible for the National Register normally must be 50 years old, must meet one of four criteria for listing, and must retain their integrity. Most of the properties inventoried for the project did not qualify for the National Register.

Table 7-2 summarizes the results of the inventory, which is discussed by segment and alternative in the sections below. A list of inventoried properties is included in Appendix B, along with maps of their parcel locations.

Table 7-3 summarizes the properties listed or recommended as eligible for listing in the NRHP (and thus also eligible for the WHR). Historic resources are described by alternative following the table. Because landmark register criteria for the cities of Seattle, Mercer Island, and Redmond are similar to those of the NRHP, these properties are also recommended as eligible for the local registers. DAHP reviews NRHP recommendations for concurrence, and the local jurisdictions review local landmark register recommendations.

TABLE 7-2
Buildings and Structures Inventoried for Each Segment

Segment	Number Inventoried	Number Recommended Not Eligible	Number Listed or Recommended Eligible for the NRHP
A, Interstate 90	61	56	5
B, South Bellevue	105	103	2
C, Downtown Bellevue	162	129	1 (a potential historic district containing 35contributing elements)
D, Bel-Red/Overlake	22	21	1
E, Downtown Redmond	27	25	2
Total	377	334	11

TABLE 7-3
List of Historic Properties

Segment	Field No. and Map ID	Property Name/Type	Address	Register Status
A, Interstate 90	376	Publix Hotel (Seattle Chinatown NRHP/ International Special Review Historic District)	504 Fifth Avenue South	Contributing element to NRHP and Seattle Special Review historic districts
A, Interstate 90	132	Immigrant Station and Assay Office	815 Airport Way South	NRHP, WHR, eSL
A, Interstate 90	303	Jose Rizal 12th Avenue South Bridge	12th Avenue South crossing of South Dearborn Street	NRHP, WHR, eSL
A, Interstate 90	166	Will H. Thompson House	3119 S. Day Street	NRHP, WHR, SL
A, Interstate 90	304	Mount Baker Ridge Tunnel and Eastern Portals	East end of I-90 tunnel	NRHP, WHR, SL
A, Interstate 90	156	Endresen Residence	1402 32nd Avenue S	eSL
A, Interstate 90	133	Romaine Electric	1101 Airport Way S	eSL
B, South Bellevue	16	Frederick Winters House	2102 Bellevue Way SE	NRHP, WHR
B, South Bellevue	63	Pilgrim Lutheran Church	10420 SE 11th Street	eNRHP, eWHR
C, Downtown Bellevue	various (see Exhibit 7-8)	Surrey Downs Potential Historic District	Between 108th Ave. and 112th Ave. SE, south of Main Street	eNRHP, eWHR
D, Bel-Red/Overlake	104	Former Bellevue Fire Station	14822 NE Bellevue-Redmond Road	eNRHP, eWHR
E, Downtown Redmond	112	Justice William White House	Leary Way NE and NE 76th Street	eNRHP, eWHR, RHL
E, Downtown Redmond	114	Bill Brown Saloon Building	7824 Leary Way NE	RHL, eNRHP, eWHR
E, Downtown Redmond	118	Dudley Carter/Haida House	Sammamish Slough Park	RHL

NRHP – National Register of Historic Places
WHR – Washington Heritage Register
SL – Seattle Landmark
RHL – Redmond Historic Landmark
e – determined eligible

7.3.1 Segment A

Work in the City of Seattle portion of Segment A inventoried 61 properties, of which 5 are listed in the NRHP and 2 are also eligible for listing as Seattle Landmarks (City of Seattle Letter to Sound Transit, May 2008). The APE crosses a corner of the Seattle Chinatown NRHP Historic District (listed in 1986). This area is also part of the Seattle International Special Review District. One building that contributes to both districts, the Publix Hotel (Exhibit 7-1), is located within the APE. The architect was J. L. McCauley, who also designed the Rainier Heat and Power Company that was located immediately south of the hotel. The building was originally a workmen's hotel with three wings containing 211 single rooms and 12 street-level retail bays.

EXHIBIT 7-1
Publix Hotel

The United States Immigrant Station and Assay Office Building (also referred to as the INS Building) (Exhibit 7-2) is listed in the NRHP. However, it is not considered eligible as a potential City of Seattle Landmark. The federal government constructed the building in 1931. James Wetmore, acting supervising architect and designer of many federal buildings during this period, approved the plans for the building. The architecture is a combination of elements from the Neo-classical and Mediterranean styles. The building was Seattle's third immigration building and second assay office. Because the Chinese Exclusion Acts limited immigration to the United States, and Chinese people of this period typically arrived with poor documentation, most of the immigrants detained in the building were Chinese males. The Immigration and Naturalization Service was still using the building and the detention facilities within it when the building was listed in the NRHP in 1979. The first assay office in Seattle opened in 1898 during the Klondike Gold Rush. Although the amount of gold processed in Seattle dropped steeply within a decade, the federal government kept an assay office in Seattle until 1955 (Lee and Mathison, 1978). The building is not used at present.

The City of Seattle constructed the 12th Avenue South Bridge (Exhibit 7-3) in 1911 after removing a portion of northern Beacon Hill to decrease the grade of S Dearborn Street. One of Seattle's numerous regrading projects, the Dearborn Street work accomplished the City's goal of creating a route from Puget Sound to Lake Washington at a grade of 5 percent or less. The bridge replaced the section of 12th Avenue S that was removed during regrading, maintaining accessibility to the northern part of Beacon Hill (Phelps, 1978:23). The bridge was listed in the NRHP in 1982 based on its engineering design.

EXHIBIT 7-2
United States Immigration Station and Assay Office Building

EXHIBIT 7-3
12th Avenue South Bridge

The Mount Baker Ridge Tunnels and Eastern Portals (Exhibit 7-4) are listed in the NRHP and are a Seattle Landmark. WSDOT constructed the tunnel, which consists of two parallel sections, in 1940. Because Mount Baker Ridge consists of blue glacial clay, the Highway Department avoided explosives and drilling in favor of excavating both tunnels with an electric shovel. The tunnels' architects designed an impressive gateway to the City of Seattle by combining Art Deco elements and stylized Native American motifs (Soderberg, 1980b). Although the tunnels were an engineering feat, the 1982 NRHP listing focuses on their striking ornamentation.

The Will H. Thompson House (Exhibit 7-5) was listed in the NRHP in 1979 based on its architectural style and contribution to Seattle history; the property is also a Seattle Landmark. Ernest MacKay constructed the building in 1894 and lived in it until 1897. Will H. Thompson and his wife purchased the house at public auction in 1897, with members of their family living there until 1917. After their son Maurice sold the house, it served as a sanitarium and then a rooming house for women. The La Turner family purchased the house in the 1970s and reversed many of the changes made by the sanitarium and rooming house owners (Kreisman, 1979). The building

is one of the oldest surviving houses and one of the few examples of the Queen Anne architectural style to survive in the Mount Baker Neighborhood.

In addition, the City of Seattle has determined that the Endresen Residence at 1402 32nd Avenue and the Romaine Electric building at 1101 Airport Way may be eligible for City Landmark status, per May 27, 2008, correspondence.

The inventory of Segment A in the City of Mercer Island identified 13 properties, none are listed or eligible for the NRHP, WHR, or local register.

EXHIBIT 7-4
Mount Baker Ridge Tunnel

EXHIBIT 7-5
Will H. Thompson House

7.3.2 Segment B

BNSF Alternative (B7). No historic properties were recorded within the APE of the BNSF Alternative (B7).

Bellevue Way Alternative (B1), 112th SE At-Grade Alternative (B2A), 112th SE Elevated Alternative (B2E), and 112th SE Bypass Alternative (B3). The Frederick Winters House (Exhibit 7-6) was listed in the NRHP in 1992, based on its Spanish Eclectic architecture and its association with developments in the bulb-growing and floriculture industry in King County and Washington State. The National Register listing includes 50 feet of landscaping around the house, which includes a portion of the parcel along Bellevue Way. Frederick and Cecilia Winters purchased 10 acres of land along Mercer Slough in 1920, and 4 years later they purchased additional acreage to expand their business. During the late 1920s, a period of rapid growth for bulb farms in Washington, the Winters built a new home for their family. They sold the surrounding lands during the 1930s when it proved too swampy for growing bulbs and sold the house in 1943. The subsequent owners lived in the house until the 1980s (Krafft, 1991), when the City of Bellevue acquired the house. The City of Bellevue restored the house during the 1990s, making it the headquarters of the Bellevue Historical Society.

EXHIBIT 7-6
Frederick Winters House

Bellevue Way Alternative (B1). The Pilgrim Lutheran Church (Exhibit 7-7) was completed in 1965. An outstanding example of Neo-Expressionist architectural style, the building is characterized by a geometric shingled roof that is both varied and dramatic. The roof forms a shed over most of the church and an angular cone rising to the steeple. Extending well beyond the building, the roof shelters brick walls, large windows, and walkways. The roofline also ties the church visually to the adjacent church hall. The design firm Grant, Copeland, Chervenak and Associates won awards for several of their local projects. The building is eligible for the National Register and the WHR based on architectural excellence.

EXHIBIT 7-7
Pilgrim Lutheran Church

7.3.3 Segment C

Bellevue Way Tunnel Alternative (C1T). No historic properties were recorded within the APE of the Bellevue Way Tunnel Alternative (C1T).

106th NE Tunnel Alternative (C2T), 108th NE Tunnel Alternative (C3T), Couplet Alternative (C4A), 112th NE Elevated Alternative (C7E), and 110th NE Elevated Alternative (C8E). DAHP determined 35 houses would be contributing elements to the potential historic district within the project APE. Exhibit 7-8 shows where in the project vicinity Sound Transit inventoried properties and which of those properties are recommended as contributing properties. Exhibits 7-9 through 7-12 demonstrate the representative examples of these residences. A district is a concentration of buildings or other properties that may or may not be individually eligible for the National Register but are linked by one or more features that define their character. To be considered eligible as part of the potential Surrey Downs historic district, the houses needed to fit one of the architectural styles discussed below and not have undergone substantial modification (on the exterior) since their construction. Sound Transit researched the history of the subdivision, inventoried buildings in the APE, and recommended 35 as contributing properties. Table 7-4 summarizes information on the contributing properties, and Appendix B, Exhibit B-7, shows their locations and potential district boundaries across the APE. Sound Transit did not establish full boundaries for the potential district because it extends beyond the project APE.

Roxbury Homes constructed the subdivision in two stages, platted as Surrey Downs No. 1 and No. 2. For the first stage, the company purchased a few designs from Mithun & Nesland, a Seattle architectural firm, and adapted them to the varied topography of the subdivision, making aesthetic changes so that the houses built from the same design would not be identical. These Northwest Modern style designs (16 houses) included one-story houses with carports and two-story houses with garages located beneath the living space. Some of the one-story house designs featured a pitched roof that evoked a front-gabled house, with the house located under one pitch and the carport under the other. In other cases, the house extended under both sides of the roof, while the carport roof extended into the driveway. Some of the two-story houses showed a similar front-gabled appearance while others had flat or nearly flat roofs. Other contributing houses include split-level (11 houses) and ranch styles (8 houses).

Properties that contribute to the potential historic district feature open plans, large areas of glass, and extensive use of wood. Hardwood floors and exposed beams characterize the house interiors, while the exteriors show wood siding, exposed rafters, and wooden roof supports. Skylights supplement the windows, which are plentiful and large, maximizing the amount of light admitted. Roxbury Homes chose pleasing color combinations, allowed wood grains to show through treatments, and left many of the existing trees on the lots. All of these factors contribute to the unity of design and quality that distinguishes this portion of the subdivision.

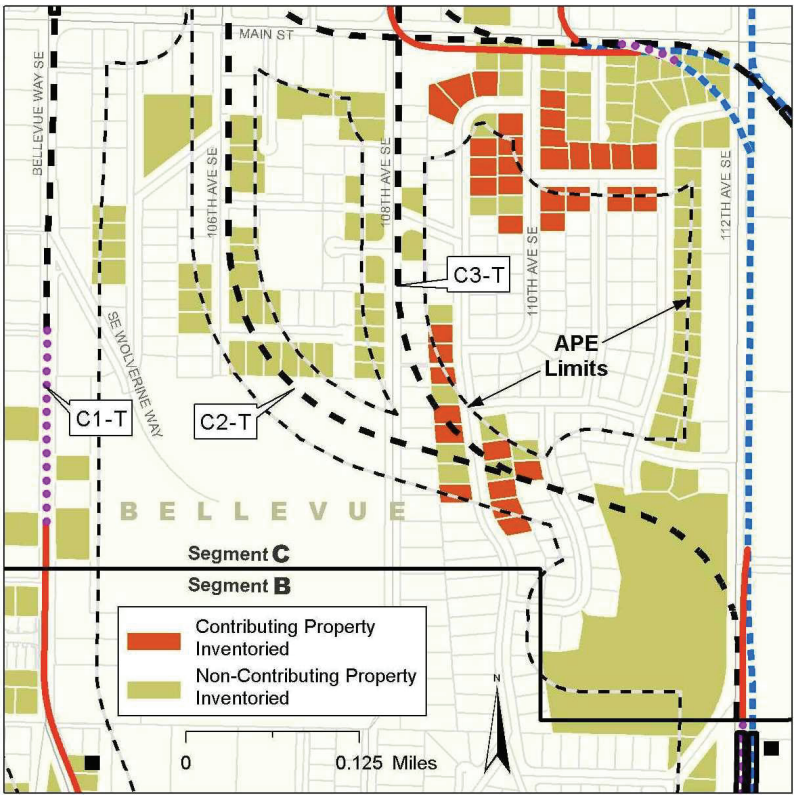

EXHIBIT 7-8
Contributing Properties for the Potential Surrey Downs Historic District

EXHIBIT 7-9
West Side of 109th Avenue Showing Mithun & Nesland Designs
in Potential Surrey Downs Historic District

EXHIBIT 7-10
Mithun & Nesland Design at 11022 SE 2nd Street in Potential Surrey Downs Historic District

EXHIBIT 7-11
Split-Level Style at 301 109th Avenue SE in Potential Surrey Downs Historic District

EXHIBIT 7-12
Ranch Style at 204 110th Place SE in Potential Surrey Downs Historic District

TABLE 7-4
Contributing Properties to Potential Surrey Downs NRHP Historic District

Field Number and Map ID	Address	Style and Year Built
291	88 110th Avenue SE	Northwest Modern, 1954 [a]
1	106 110th Avenue SE	Ranch, 1954
123	114 110th Avenue SE	Ranch, 1954
119	122 110th Avenue SE	Northwest Modern, 1954 [a]
297	115 110th Avenue SE	Northwest Modern, 1954 [a]
298	121 110th Avenue SE	Northwest Modern, 1954 [a]
299	125 110th Avenue SE	Ranch, 1954
300	214 110th Avenue SE	Northwest Modern, 1955 [a]
301	203 110th Place SE	Northwest Modern, 1954 [a]
317	215 110th Avenue SE	Northwest Modern, 1955 [a]
319	204 110th Place SE	Ranch, 1954
320	11005 SE 2nd Street	Ranch, 1954
321	11014 SE 2nd Street	Ranch, 1954
120	11022 SE 2nd Street	Northwest Modern, 1954 [a]
322	11030 SE 2nd Street	Ranch, 1954
323	11040 SE 2nd Street	Ranch, 1954
302	11039 SE 2nd Street	Northwest Modern, 1954 [a]
292	10904 SE 1st Street	Northwest Modern, 1955 [a]
325	10910 SE 1st Street	Ranch, 1955
296	10915 SE 1st Street	Northwest Modern, 1954 [a]
293	103 109th Avenue SE	Northwest Modern, 1955 [a]
294	114 109th Avenue SE	Northwest Modern, 1955 [a]
295	122 109th Avenue SE	Northwest Modern, 1955 [a]
121	128 109th Avenue SE	Northwest Modern, 1955 [a]
359	241 109th Avenue SE	Split Level, 1961
360	301 109th Avenue SE	Split Level, 1961
361	313 109th Avenue SE	Split Level, 1961
363	401 109th Avenue SE	Split Level, 1961
365	409 109th Avenue SE	Split Level, 1961
366	412 109th Avenue SE	Split Level, 1961
370	428 109th Avenue SE	Split level, 1961
371	431 109th Avenue SE	Split Level, 1961
372	436 109th Avenue SE	Split Level, 1962
373	442 109th Avenue SE	Split Level, 1962
375	423 110th Avenue SE	Split Level, 1961

[a] Mithun & Nesland, Architects

7.3.4 Segment D

NE 16th At-Grade Alternative (D2A), NE 16th Elevated Alternative (D2E), and SR 520 Alternative (D5). No historic properties were recorded within the APE of these alternatives.

NE 20th Alternative (D3). The former Bellevue Fire Station (Exhibit 7-13) on Bellevue-Redmond Road, constructed in 1960, is a good example of Populuxe architecture. The nearly flat roof has eaves with a wide overhang. The roof silhouette, which is thicker at the center, gives the impression that the roof curves upward at the outer edges. The style is reminiscent of 1950s aerodynamic styling. The building is currently used for the City of Bellevue's vehicle storage.

EXHIBIT 7-13
Former Bellevue Fire Station on Bellevue-Redmond Road

7.3.5 Segment E

Redmond Way Alternative (E1), Marymoor Alternative (E2).Leary Way Alternative (E4). The Justice William White House and the Bill Brown Saloon Building are designated as Redmond Heritage Landmarks. Historians recommended the two Redmond Heritage Landmarks as eligible for listing in the NRHP (and therefore also for the WHR). SHPO concurred with the recommendations.

The Justice William White House (Exhibit 7-14) is significant because its owners, William and Emma White, both played important roles in the history of Redmond and western Washington. William White moved to Seattle from West Virginia in 1870. He served as prosecuting attorney of the Third Judicial District, represented King County in the Territorial Legislature, and then served as United States attorney for the territory until statehood in 1889. In 1890, the governor appointed White to the Washington State Supreme Court. In 1898, White married Emma McRedmond, daughter of one of Redmond's founders and its namesake, Luke McRedmond. Emma McRedmond served as the town's postmistress for years, beginning when she was 16. She was among the first women to run for statewide office and organized the Women's Democratic Club. In 1900, Emma and William White moved into the 14-room house that they built on a portion of Luke McRedmond's original claim. They set aside a part of the house as a hotel because it was conveniently located close to the railroad line and the passenger depot, giving guests easy access. Justice White died in 1914, and the family lost the house to foreclosure in 1932. It then became the clubhouse for a golf course located south of the house (Hanscom, 1979). The golf course has since become the site of the Redmond Town Center shopping center, and an architecture firm occupies the house.

The Bill Brown Saloon Building (Exhibit 7-15) is significant because of its association with the man who was mayor of Redmond from 1919 to 1948. Beginning well before he became mayor, Brown operated a variety of businesses. In 1910, he constructed his first building at Leary and Cleveland, a wood-frame structure that housed his saloon. Brown tore it down 3 years later and constructed the brick building that stands on the corner today. When it opened, the building housed the saloon, a drugstore, and a barbershop, with an upstairs gathering space for community events. When prohibition closed the saloon, Brown explored other businesses, including an auto stage line and a logging company. Beginning about 1915, the building's second floor served as an unofficial Redmond City Hall (Hardy, 2001).

The Dudley Carter/Haida House is a City of Redmond historic landmark, and the City considers it to be eligible for listing in the National Register. It was constructed by nationally known, Canadian-born artist Dudley Carter following methods of the Haida First Nation. However, based on DAHP's review, the Haida House did not meet the eligibility requirements for the National Register.

EXHIBIT 7-14
Justice William White House

EXHIBIT 7-15
Bill Brown Saloon Building

7.3.6 Maintenance Facility Surroundings

No historic properties have been recorded at the alternative maintenance facilities.

8.0 Environmental Effects

Project operation and construction could affect historic properties directly or indirectly. The Criteria of Adverse Effect are discussed in Section 3.6 above. Direct effects are those caused by the project while the project is under way and in the location of the project, while indirect effects are those reasonably foreseeable effects caused by the action at a later time or at a distance that is farther removed from the project location, per 40 CFR 1508.8. The following sections discuss the potential effects of project operation and construction on archaeological sites, TCPs, and historic buildings and structures.

The No Build Alternative would not affect any historic properties.

8.1 Archaeological Sites

Studies to date have identified no prehistoric or historic-period archaeological sites in the APE. The single historically recorded prehistoric site, 45KI8, could not be verified during the current survey. The location of the many portions of the project within areas not considered sensitive for the occurrence of archaeological sites or in high-sensitivity areas that have received previous disturbance makes it unlikely, although not impossible, that the project would affect important NRHP-eligible archaeological sites. It is possible that one or more archaeological sites may exist beneath the ground surface in areas where project excavation would take place. The Segment B and E alternatives are more sensitive for containing archaeological sites than the other segments. The 112th SE At-Grade (B2A), 112th SE Elevated (B2E), 112th SE Bypass (B3) and BNSF (B7) alternatives are near Mercer Slough and its adjacent terraces; the Redmond Way (E1), Marymoor (E2), and Leary Way (E4) alternatives are near the Sammamish River valley and its adjacent terraces.

8.2 Traditional Cultural Properties

Consultation with the tribes has identified no information regarding traditional cultural properties that would be affected by the East Link Project.

8.3 Historic Buildings and Structures

8.3.1 Effects During Operation

8.3.1.1 Segment A

Operation of Segment A is not anticipated to affect the five historic properties identified there. The Publix Hotel would not be affected by the addition of the project to the transit tunnel. The INS Building is situated at the east edge of the APE, and considerable traffic associated with the 5th Avenue S/I-90 ramp is already present. The addition of an at-grade project on the east side of 5th Avenue S is not expected to contribute to or adversely affect the setting of the building.

The operation of the project along I-90 at-grade beneath the 12th Avenue South Bridge also would not adversely affect the setting of the bridge, because the project is within the boundaries of the existing I-90 roadway. The Will H. Thompson House sits above the Mount Baker Ridge Tunnels, where the trains would run. The project is anticipated to have no vibration or other effects on the Will H. Thompson House. Finally, operation of the project would not affect the portals of the Mount Baker Ridge Tunnels, which have been identified as the property's character-defining feature.

8.3.1.2 Segment B

Sound Transit situated the Bellevue Way (B1), 112th SE At-Grade (B2A), and 112th SE Bypass (B3) alternatives to avoid adverse effects on the Frederick Winters House for the operation of the at-grade project. While these alternatives would impact the larger parcel upon which the Frederick Winters House is located, no impact to the delineated historic boundary of the house would occur. The Bellevue Way Alternative (B1) and 112th SE At-Grade Alternative (B2A) are located at-grade in the center of the roadway and therefore no visual, noise, or

vibration impacts are anticipated. The 112th SE Elevated (B2E) alternative is elevated to the far side of Bellevue Way, away from the Frederick Winters House and placed up against the adjacent ridge, also avoiding adverse effects on the property. For all alternatives, expansion of Bellevue Way was limited to the existing right-of-way line at the historic boundary associated with the Frederick Winters House so that there would be no adverse effect on this historic property.

Operation of the at-grade Bellevue Way Alternative (B1) in the center of South Bellevue Way is not anticipated to adversely affect the Pilgrim Lutheran Church, which is located just west of the street on the southern portion of the property, although South Bellevue Way would be realigned up to 10 feet into the property for a distance of roughly 250 feet. The location already experiences the visual and noise effects of heavy street traffic and no additional impacts are expected to occur. Access from SE 11th Street to the church would not be disrupted. Additionally, an underground stormwater detention vault would be constructed at the northeast corner of the property in the parking area, but operation of this facility would not adversely affect the Pilgrim Luther Church. Vibration effects are not expected to reach the church.

The BNSF Alternative (B7) has no historic properties within the APE.

8.3.1.3 Segment C

The Bellevue Way Tunnel Alternative (C1T) has no historic properties.

Operation of the 106th NE Tunnel Alternative (C2T) and the 108th NE Tunnel Alternative (C3T) would have no visual effects on properties that contribute to the potential Surrey Downs historic district within the APE. Vibration and noise effects are also not anticipated during operation.

Operation of the Couplet Alternative (C4A) along 112th Avenue NE would avoid adverse effects on properties that contribute to the potential Surrey Downs historic district. Almost all of the contributing properties would be screened by existing vegetation, fences, and other houses. Also, the elevated 112th NE and 110th NE alternatives (C7E and C8E, respectively) are not anticipated to affect properties that contribute to the potential Surrey Downs historic district within the APE because the alternatives are distant enough (at least 200 feet) to avoid visual, noise, and vibration effects.

8.3.1.4 Segment D

The NE 16th At-Grade Alternative (D2A), the NE 16th Elevated Alternative (D2E), and the SR 520 Alternative (D5) have no historic properties.

For the NE 20th Alternative (D3), operation of the alternative in a retained cut near the former Bellevue Fire Station would not result in acquisition of the property or visual, noise, vibration, or other effects on the property. Although the building's parcel is situated inside the APE, the building itself is outside the APE.

8.3.1.5 Segment E

The Bill Brown Saloon Building lies at the northern edge of the APE where the Redmond Way Alternative (E1), the Marymoor Alternative (E2), and the Leary Way Alternative (E4) would pass at a sufficient distant that the building would not be affected. The Redmond Way Alternative (E1) and the Marymoor Alternative (E2) have no other nearby historic properties.

For the Leary Way Alternative (E4), the operation of the project could pass close enough to the Justice William White House to cause an adverse effect on the historic context or to potentially damage the building. Sound Transit has sought advice from the City of Redmond and SHPO about moving the building to a nearby location that preserves its setting, feeling, and association with the BNSF Railway right-of-way, thus avoiding the adverse effect of project operation. FTA and Sound Transit would consult with the City of Redmond, SHPO, and other interested parties to determine a suitable relocation site and draft an MOA on how to avoid adverse effects to the building during transport and reestablishment.

8.3.2 Effects During Construction

Construction effects on historic buildings and structures can include temporary loss of access along with visual effects, noise, vibration, and the dust and debris of construction activities. Sound Transit would implement avoidance measures to minimize these effects; however, some dust and noise are inevitable. These effects would be temporary and would not adversely affect the properties.

8.3.2.1 Segment A

Construction of Segment A is not anticipated to affect the historic properties identified there. The Publix Hotel is located above the transit tunnel, and the INS Building is situated at the east edge of the APE and should not be affected by construction along 5th Avenue S. Construction of the at-grade route beneath the 12th Avenue South Bridge also would not adversely affect that property. Located in the Mount Baker Ridge Tunnel, above which the Will H. Thompson House is situated, project construction would avoid effects on the Will H. Thompson House. Finally, construction would not affect the portals of the Mount Baker Ridge Tunnel, which have been identified as the property's character-defining feature.

8.3.2.2 Segment B

For the Bellevue Way Alternative (B1), the 112th SE At-Grade Alternative (B2A), and the 112th SE Bypass Alternative (B3), construction of the at-grade route located in the center of South Bellevue Way at the Frederick Winters House would have temporary visual and noise effects on the Frederick Winters House that are not considered adverse. The same is true for construction of the 112th SE Elevated Alternative (B2E) guideway on the west side of South Bellevue Way across from the Frederick Winters House. Construction of the underground stormwater detention vault at the northeast corner of the Pilgrim Lutheran Church parking lot would have temporary noise effects on the church, but these effects are not considered adverse.

The BNSF Alternative (B7) has no historic properties within the APE.

8.3.2.3 Segment C

Particular constraints in Segment C would require additional staging areas and potentially more invasive construction methods associated with tunneling. Construction impacts would mostly concern connectors to Segment C alternatives in the vicinity of the potential Surrey Downs historic district. These issues are outlined below.

The 106th NE Tunnel (C2T) and 108th NE Tunnel (C3T) alternatives would involve connectors from the 112th SE At-Grade (B2A), 112th SE Elevated (B2E), 112th SE Bypass (B3), and BNSF (B7) alternatives. The connector from B2A to C2T and C3T would involve boring beneath the potential Surrey Downs historic district, which would avoid access and visual effects. Noise and possible vibration could be noticeable to residents during construction but would not affect the buildings. Although the geotechnical analysis shows that the soils in this area are generally resistant to settlement from ground disturbance, precautions during construction and a careful monitoring program would be incorporated into the construction plan. The connector from B2E to C3T also would involve boring and therefore the above effects would result from this connector as well, thus avoiding adverse access, visual, noise, vibration, or settlement effects to properties in the historic district.

The connector from B2E to C2T would involve cut-and-cover construction. This method would alter access at times during construction and would produce visual, noise, and possible vibration effects. The effects would be temporary and would not affect historic structures. Sound Transit would employ measures to provide alternative access and minimize visual and noise effects through placement of visual or noise barriers where sensitive noise receptors or viewers occur. Soil settlement precautions would also apply to cut-and-cover construction.

For connectors from B2A and B2E to the Couplet Alternative (C4A), construction staging areas would remove properties just north of (but not affecting) properties that form part of the potential Surrey Downs historic district. For connectors from B3 and B7 to C4A, construction staging would involve a smaller area but would still back onto portions of the potential Surrey Downs historic district. There would be no effect on the potential Surrey Downs historic district for connectors from B3 and B7 to the 110th Elevated (C7E) and 112th Elevated (C8E) alternatives.

None of the alternatives or construction staging areas would involve removal of properties that contribute to the historic district, and the removal of the other buildings would not damage the district's setting, feeling, and association. Access to properties in the potential Surrey Downs historic district would be altered at times during construction, and this would produce visual, noise, and vibration effects. The effects would be temporary and would not affect historic structures.

8.3.2.4 Segment D

The NE 16th At-Grade Alternative (D2A), the NE 16th Elevated Alternative (D2E), and the SR 520 Alternative (D5) have no historic properties. For the NE 20th Alternative (D3), construction of the alternative in a retained cut near the former Bellevue Fire Station would not affect the property. Although the building's parcel is situated inside the APE, the building itself is outside the APE.

8.3.2.5 Segment E

The Redmond Way Alternative (E1) and the Marymoor Alternative (E2) would have temporary nose and visual effects on historic properties but would not adversely affect the property or use of the historic properties. Although the Leary Way Alternative (E4) would pass close enough to the Justice William White House to cause an adverse effect, as discussed above, Sound Transit would implement measures in an MOA with the SHPO and the City of Redmond to relocate the building before construction, resulting in no construction effects from the project. No other construction effects on historic properties are expected because of their distance from the alternatives.

8.3.3 Maintenance Facilities

None of the maintenance facilities—116th Avenue (MF1), 124th Avenue NE (MF2), SR 520 (MF3), and Redmond (MF5)—have any historic properties located in their APE; therefore, no historic properties would be affected by the construction of these facilities.

9.0 Potential Mitigation Measures

9.1 Archaeological Sites

The archaeological investigation encountered no archaeological sites, including historically recorded site 45KI8. Past disturbance and fill could have covered the site or could have destroyed or damaged it. Although much of the APE has seen ground disturbance, fill, and development, it is possible that one or more archaeological sites may exist beneath the ground surface in areas where project excavation would take place. Sound Transit will either conduct subsurface testing before construction and/or monitor ground-disturbing activities in archaeologically sensitive areas during construction. An archaeological resources monitoring and treatment plan would be prepared to provide additional information that would guide archaeological monitoring work during East Link construction. FTA and Sound Transit would coordinate with SHPO, the Muckleshoot and Snoqualmie tribes, and other interested parties as appropriate, to review the plan.

If prehistoric or historic-period archaeological sites are encountered, FTA and Sound Transit would coordinate with SHPO, interested Indian tribes, and other interested parties as appropriate about eligibility for listing in the NRHP, project impacts, necessary mitigation and/or other treatment measures.

9.2 Historic Buildings and Structures

If Sound Transit selects the Leary Way Alternative (E4), the agency would move the Justice William White House to avoid adverse impacts on it. FTA and Sound Transit would consult with SHPO, the City of Redmond, and other interested parties to develop an MOA during preparation of the Final EIS to determine a suitable relocation site that preserves the Justice William White House's setting, feeling, and association with the railroad, as well as measures to avoid adverse physical impacts to the building during transport and reestablishment. The house would receive documentation to Historic American Building Survey standards before it was moved.

The relocation of the structure would be done in a way that would maintain the integrity of the building so that it would remain eligible for the NRHP. The relocation would be carried out by qualified architects and engineers in a manner to avoid damage to the building and preserve its eligibility for listing in the NRHP. Sound Transit would seek approval by both the SHPO and the Redmond Landmarks Commission on the details of the relocation plan before work commences.

Pending SHPO concurrence and the determination that no adverse effect would occur, the relocated building would meet the seven aspects of integrity (National Park Service, 1991), defined as follows:

- **Location**: The new site for the building is anticipated to be adjacent to or near the original site. Although the exact location would change, the building would still be located in the same neighborhood and general area.
- **Design:** The building is noted for its intact exterior, which has a high level of integrity. It is considered the best, if not the only, extant example of Queen Anne-shingle style architecture in Redmond (HRA, 2007). None of the architectural features on the building would be affected through the relocation, and no design changes are anticipated as a result of the relocation. Foundations, steps, and porches would be retained or replicated to match the existing conditions.
- **Setting**: The setting of the historic Justice William White House has already been negatively affected by surrounding development. However, the site still maintains its relationship to the railroad, which figured prominently in the early use of part of the house as the Hotel Redmond. Although the house would be displaced from its original site, its relationship to the neighborhood and to the railroad tracks would remain intact. It would be sited to reflect its original orientation, surrounded by low-scale buildings, with a setback from the railroad comparable to its current setback. This would maintain an integrity of setting similar to what it has currently.

- **Materials**: The building is noted for its architectural significance and intact exterior materials, including lapped siding and fishscale, squared, and sawtooth shingles. These important materials would experience no loss of integrity.
- **Workmanship**: The workmanship of this building is evident in its ornate exterior, as well as some of its remaining interior elements. No design changes are anticipated as a result of the relocation. Therefore, the workmanship would experience no loss of integrity.
- **Feeling:** The feeling of the building is embodied in both its visual design and its relationship to the railroad. The relocation would maintain the relationship of the building to the railroad and the surrounding neighborhood. The visual appearance of the building would not be altered. Therefore, the feeling of the site would not suffer a loss of integrity.
- **Association**: The building is also eligible for the NRHP and listed as a City of Redmond landmark for its association with the McRedmond family, Justice William White, and the early development and history of Redmond. This would not be altered by the relocation. The physical features that convey the property's historic character and associations would not be affected.

10.0 Cumulative Effects

Environmental documents for 14 previous projects in the vicinity of the East Link Project were reviewed. For the documents that are available and that discussed the resources, none have identified adverse effects. The East Link Project is anticipated to have no effects on archaeological resources, although this cannot be confirmed until additional survey takes place in high-sensitivity areas of the alternative ultimately selected. Project effects on historic buildings and structures discussed in Section 8 above appear to be minimal. Thus, the East Link Project is expected to have no cumulative effects on historic properties.

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